



FENCE 50

GARDEN AND FENCE SYSTEM

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COMPANY INFORMATION

I. COMPANY HISTORY

Demsaş Metal Inc. was established in 1984 with its 15.000 sqm production area and over 170 employees.

Our Company is working in the field of aluminium profile production and contributing to our country's economy with its exports to more than 30 countries we have achieved to become one of the rare fully integrated aluminium plants in its sector since its establishment.

II. SERVICES

- Hosting all the production levels such as:
 - Drawing stage
 - Extrusion mold design
 - Production of extrusion molds
 - Profile extrusion
 - Surface treatments
 - A) Powder Coating
 - B) Anodising (Polished or Matte)
 - C) Brushed effects
 - D) Heat transfer printing
 - Mechanical treatment
-
- Professional support, consultation and adequate technical advices ensured by our experienced engineering team in profile extrusion.
 - Reliable customer care processing training and technical support.
 - Production of custom length profiles with high quality powder coating and anodising.

III. BASIC VALUES

● VISION

Our aim is to be a leader in the market by providing added value to our customers, shareholders, employees, business partners and society with innovative and creative solutions and to produce according to international standards with an environment- friendly approach. In addition, we aim to create high-performance human resources that are open to learning, development and sharing, adopting all corporate values, thus using all of our capabilities as our capital, creating an environment that promotes long-term relationships.

● MISSION

Demsaş has a mission of establishing direct and transparent communication with its employees, empowering them in line with their capabilities and in a way that they can demonstrate their skills in an efficient manner, take initiatives and produce innovations and create a trust-based working environment. Our company, without compromising its core values, aims to approach its employees and customers from a business ethics, honesty, quality and solution-oriented perspective and thus become the preferred business and solution partner in the market.

COMPANY INFORMATION

● CORPORATE VALUES

Our company's principle values:

- Being honest, confident and transparent company
- Contribute to the success of our customers
- Believe in innovative and dynamic development
- Social responsibility and environmental awareness
- Believe in teamwork
- To prioritize quality at all stages in marketing and production.

● QUALITY POLICY

Our quality policy consists of:

- To ensure customer satisfaction
- Maintaining quality and customer satisfaction in production, marketing, sales and after sales support stages from raw material supply until shipment
- To respect environment, our employees, our solution partners, our shareholders and our customers
- To be the most admired in the sector with managers and employees who adopt continuous improvement oriented values such as education, research and development

● QUALITY AND ENVIRONMENTAL POLICY

Demsaş Metal operates under the principles of 'Total Quality Management'

- All our production processes are carried out according to the principles of TSE (Turkish Standart Institution) and **ISO 9001: 2008 Quality Management System**.
- Our company exhibits a meticulous attitude to comply with international standards in our products and services.
- Improvements in processes that ensure efficiency and reduction of costs are implemented regularly and systematically.

In accordance with its environmental policy, Demsaş Metal has adopted a sensitive attitude to protect the external environment and natural resources.

Our company, employees and solution partners to raise awareness about social responsibility and environmental policy and environmental pollution prevention is adopted as a principle to take measures.

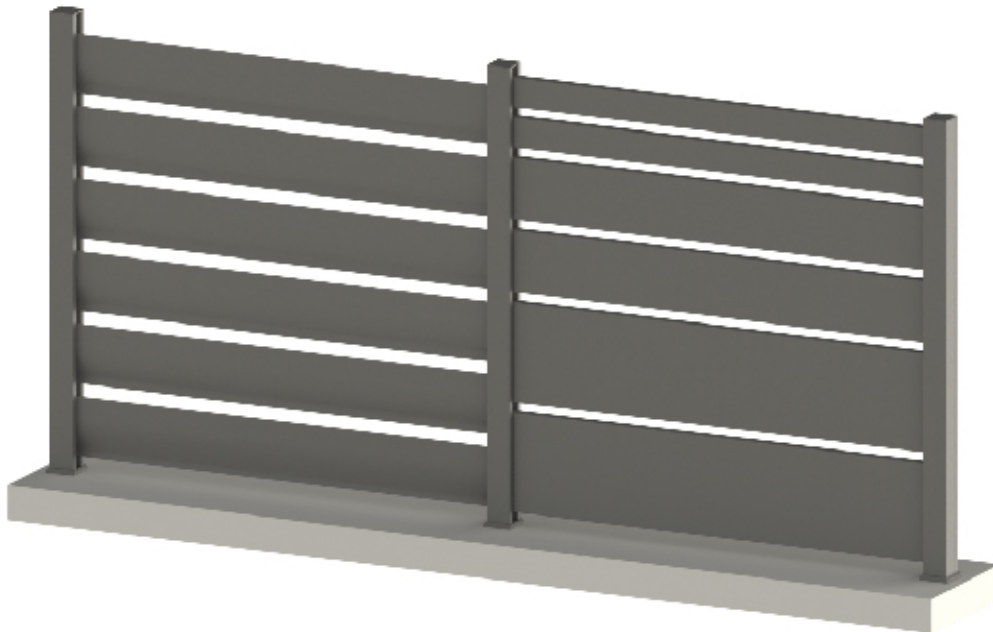
We have already started procedures to reduce our carbon print and achieve to 0% emissions by 2040.



GENERAL INFORMATION
CONCEPT / ADVANTAGES / CERTIFICATES

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General Information

Variety of options available in different colours, that enables you to choose the style that suits your decor, without having to compromise on quality

- Powder coat finishes such as Silver, Antracit Grey or Black
- Anodising
- Wood-look
- It provides additional security, privacy and a barrier between areas. It can contain pets and children and provides a decorative feel
- Aluminium is long-lasting and recyclable material, which means you won't have to worry about replacing your fence any time soon
- No chemicals leach into the surrounding soil from your fence
- Fast and easy installation
- Compatible with most topography
- More secure than some other materials

GENERAL INFORMATION**COMPLIANCE WITH APPLICABLE REGULATIONS**
Production management

Quality Management System is certified in accordance with EN ISO 9001:2008.

Environmental Management System is certified in accordance with EN ISO 14001:2015

Factory Production Control System is certified according to the requirements of EN 15088. All Demsaş Metal profiles are CE marked and in compliance with applicable Europe and Standards.

DEMSAŞ is authorized to use the **QUALICOAT SEASIDE** quality sign for paint, lacquer and powder coating on aluminium for architectural applications.

Occupational Health & Safety Management System is certified in accordance with OHSAS 18001.

PERFORMANCE CHARACTERISTICS OF

Characteristics	Classification / Value	Standard
Air permeability	Up to class 4	EN 1026 / EN 12207
Watertightness	Up to class 9A	EN 1027 / EN 12208
Resistance to wind load	Up to class C4	EN 12211 / EN 12210
Acoustic performance	Up to 38 dB	EN ISO 717-1

GENERAL INFORMATION
CLASSIFICATION OF CHARACTERISTICS
**for windows without resistance to fire and/or smoke leakage characteristics
 accordings to EN 14351-1**

Characteristic / Value / Dimension	Classification / Value										
Resistance to wind load Test pressure P1 (Pa)	npd	1 (400)	2 (800)	3 (1200)	4 (1600)	5 (2000)	Exxxx (>2000)				
Resistance to wind load Frame deflection	npd	A (≤1/150)		B (≤1/200)			C (≤1/300)				
Resistance to snow and permanent load	npd	Declared information on the infill (e.g. type and thickness of glass)									
Reaction to fire	npd	F	E	D	C	B	A2	A1			
External fire performance	npd	According to EN 13501-5									
Watertightness Non-shielded (A) Test pressure (Pa)	npd	1A (0)	2A (50)	3A (100)	4A (150)	5A (200)	6A (250)	7A (300)	8A (450)	9A (600)	Exxxx (>600)
Watertightness Shielded (B) Test pressure (Pa)	npd	1B (0)	2B (50)	3B (100)	4B (150)	5B (200)	6B (250)	7B (300)			
Dangerous substances	npd	As required by regulations									
Impact resistance Drop height (mm)	npd	200	300	450	700	950					
Load-bearing capacity of safety devices	npd*	Threshold value									
Acoustic performance Sound insulation R _w (C;C _w) (dB)	npd	Declared values									
Thermal transmittance U _w (W/(m ² .K))	npd	Declared values									
Radiation properties Solar factor (g)	npd	Declared values									
Radiation properties Light transmittance (τ _v)	npd	Declared values									
Air permeability Max. test pressure (Pa) Reference air permeability at 100 Pa (m ³ /(h·m ²) or m ³ /(h·m))	npd	1 (150) (50 or 12.50)	2 (300) (27 or 6.75)	3 (600) (9 or 2.25)	4 (600) (3 or 0.75)						
Operating forces^b	npd	1				2					
Mechanical strength	npd	1		2		3		4			
Ventilation Air flow exponent n Air flow characteristic K Air flow rates	npd	Declared values									
Bullet resistance	npd	FB1	FB2	FB3	FB4	FB5	FB6	FB7	FSG		
Explosion resistance Shock tube	npd	EPR1		EPR2		EPR3		EPR4			
Explosion resistance Range test	npd	EXR1		EXR2		EXR3		EXR4		EXR5	
Resistance to repeated opening and closing Number of cycles	npd	5000			10 000			20 000			
Behavior between different climates	npd	Under development									
Burglar resistance	npd	1	2	3	4	5	6				

NOTE 1: npd: no performance determined

NOTE 2: The figures in brackets are for information

^a Only if safety device(s) is (are) not provided

^b Manually operated windows only



BUILDING PHYSICS
DIMENSIONING / FORMULAS / EXAMPLES

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ALUMINIUM AS MATERIAL

ALUMINIUM IS VERY YOUNG METAL, EXTRACTED FOR THE FIRST TIME IN 1854. COMMERCIALY PRODUCED AS A PRECIOUS METAL FROM 1886, ITS INDUSTRIAL PRODUCTION FOR CIVIL APPLICATIONS ONLY ACHIEVED WIDE USE IN THE 1950's.

NOW ALUMINIUM PLAYS A KEY ROLE FOR THE SUSTAINABILITY OF NEW BUILDINGS AND THE RENOVATION OF EXISTING ONES. THANKS TO ITS PERFORMANCE, SAFETY AND COMFORT OF NEW BUILDINGS.

ADVANTAGES

DESIGN FLEXIBILITY

The extrusion process offers an almost infinite range of forms and sections, allowing designers to integrate numerous functions into one profile.

LONG SERVICE LIFE

Aluminium building products are made from alloys that are weatherproof, corrosion-resistant and immune to the harmful effects of UV rays, ensuring optimal performance over a very long period of time.

HIGH STRENGTH-TO-WEIGHT RATIO

Thanks to the metal's inherent strength and stiffness, aluminium window and curtain wall frames can be very narrow. Material's light weight makes it easier to transport and handle on-site, reducing the risk of work-related injury.

HIGH-REFLECTIVITY

This characteristic feature makes aluminium a very efficient material for light management. Aluminium shading devices can be used to reduce the need for air conditioning in summer.

FIRE SAFETY

Aluminium does not burn and therefore is classified as a non-combustible construction material (European Fire Class A1). Aluminium alloys will nevertheless melt at around 6500 C, but without releasing harmful gases.

NO RELEASE OF DANGEROUS SUBSTANCES

Several studies have proved that aluminium building products do not present a hazard to occupants or the surrounding environment. Aluminium building products have no negative impact, either on indoor air quality or on soil, surface and groundwater.

OPTIMAL SECURITY

Where high security is required, specially designed, strengthened aluminium frames can be used. While the glass for such applications may well be heavy, the overall weight of the structure remains manageable, thanks to the light weight of the aluminium frames.

BUILDING PHYSICS

ALLOYS

Aluminium in its pure form is a very soft metal. Thanks to the addition of alloying elements such as copper, manganese, magnesium, zinc, etc. and thanks to suitable production processes, the physical and mechanical properties can be varied in a wide range to satisfy the requirements of a large number of different applications.

DEMSAŞ profiles are extruded from the following alloys:

EN AW-1050 (Al 99.5)
EN AW-6060 (Al Mg Si)
EN AW-6063 (Al Mg0,7 Si)
EN AW-6061 (Al Mg1 Si Cu)
EN AW-6005 (Al Si Mg)
EN AW-6082 (Al Si1 Mg Mn)

The most common aluminium alloy which is used by DEMSAŞ is EN AW 6063.

Here are the properties of this alloy:

MATERIAL PROPERTIES

Aluminium alloy	EN AW 6063 F22
Ultimate tensile strength	Rm = 210 N/mm ²
Yield strength	R _{p0.2} = 160 N/mm ²
Modulus of elasticity	Eal = 70 000 N/mm ² = 7.10 ⁹ kg/m ²
Coefficient of thermal expansion	a = 0.023 mm/m .K (up to 1.2 mm/m for difference up to 50°C)

EXTRUSION PROCESS

DEMSAŞ profiles are obtained through extrusion process, which consists of pushing a hot cylindrical bullet of aluminium through a shaped die. The extrusion process offers almost infinite range of forms and sections, allowing our designers to integrate numerous functions into one single profile.

FINISHING

POWDER COATING

It is a type of paint that is applied as a dry powder. Coating is applied on DEMSAŞ profiles electrostatically and then is cured under heat to allow it to flow and form a "skin". DEMSAŞ is authorized to use the quality sign **QUALICOAT SEASIDE** for powder coatings on aluminium for architectural applications. A wide range of colours and gloss levels can be achieved. DEMSAŞ also offers timber imitations painting, in addition to all RAL colors. The technology EZY provides the following colors: Golden Oak, Acero, Betulla, Mogano, Verde Scuro, Wenge, Noce Fiammato, Noce Chiaro, Ciliegio Rosso, Acacia Scuro, Ciliegio Antico, Noce Reale, Ciliegio Reale.

ANODIZING

It is an electrochemical process whereby to reinforce the natural oxide film on the aluminium surface increasing hardness, corrosion and abrasion resistance. Anodizing gives a very decorative silver matt surface finish, and colored can also be obtained by sealing metallic dyes into the anodized layer.

MAINTENANCE

Apart from routine cleaning for aesthetic reasons, DEMSAŞ aluminium profiles do not require any maintenance which translates into a major cost and ecological advantage over lifetime of the product.

RECYCLING

Aluminium scrap can be continuously recycled without any loss of value or properties. In many instances, aluminium is combined with other materials such as steel or plastics, which are most frequently mechanically separated from aluminium before being melted.







PROFILES OVERVIEW









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PROFILES OVERVIEW

	SYSTEM	USAGE	PROFILE	DESCRIPTION	WEIGHT
8422	Fence 50	Foot Post		Fence Footing Profile 50x50 Post Profile for Anchor	0.982 kg/m
8421	Fence 50	Slat Cap		Foot Covering Strip Profile 50mm Cap Profile	0.225 kg/m
8422	Fence 50	Slat Cap		Foot Covering Strip Profile 20mm Cap Profile	0.100 kg/m
8865	Fence 50	Connection Holder		Lamella Connection Profile Lamel Holder Profile	0.424 kg/m





PROFILES OVERVIEW

	SYSTEM	USAGE	PROFILE	DESCRIPTION	WEIGHT
6499	Fence 50	Lamel		20x20x2 Square Tube Profile	0.389kg/m
5502	Fence 50	Lamel		40x20x2 Rectangle Tube Profile	0.605kg/m
2197	Fence 50	Lamel		60x20x1.1 Rectangle Tube Profile	0.463kg/m
6541	Fence 50	Lamel		60x20x2 Rectangle Tube Profile	0.821kg/m
4047	Fence 50	Lamel		80x20x1.3 Rectangle Tube Profile	0.685kg/m
4427	Fence 50	Lamel		100x20x1.3 Rectangle Tube Profile	0.825kg/m
8308	Fence 50	Lamel		125x20x1.3 Rectangle Tube Profile	0.984kg/m
8481	Fence 50	Lamel		200x20x1.5 Rectangle Tube Profile	1.839 kg/m

PROFILES OVERVIEW

	SYSTEM	USAGE	PROFILE	DESCRIPTION	WEIGHT
8591	Fence 50	Lamel		Leaf Profile 125mm Oval Lamel Profile	0.868 kg/m
8806	Fence 50	Lamel		Z Profile 125mm Z Lamel Profile	0.750 kg/m
8718	Fence 50	Lamel		Z Box Profile 133mm Paralel Tube Lamel Profile	0.975 kg/m

PROFILES OVERVIEW - OPTIONAL SOLUTIONS

	SYSTEM	USAGE	PROFILE	DESCRIPTION	WEIGHT
7805	Fence 50	Handrail		Handle Profile 60x25 Upper Handrail Profile	0.720 kg/m
5890	Fence 50	Connection Holder		30x30x2 L Profile	0.786 kg/m
5880	Fence 50	Connection Holder		25x25x2 U Profile	0.383 kg/m
5516	Fence 50	Foot Post		50x50x2 Post Profile For Concrete Square Tube	1.037 kg/m

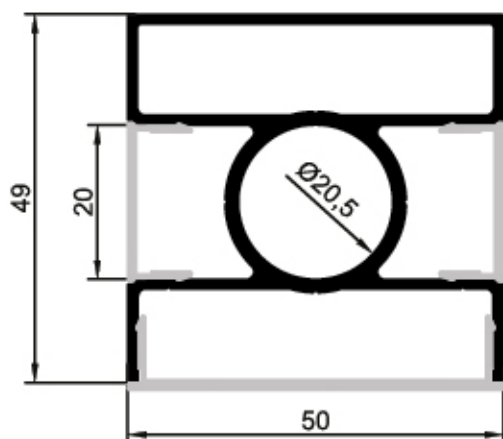


PROFILES 1 : 1

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PROFILES 1 : 1



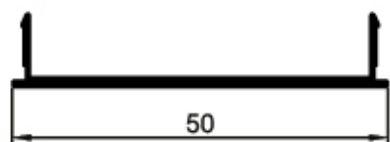
8422

0,982 kg/m



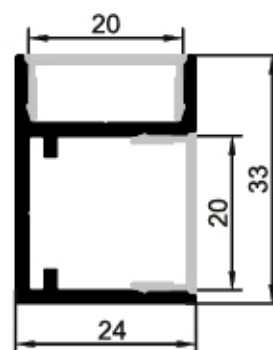
8423

0,100 kg/m



8421

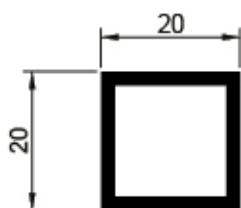
0,225 kg/m



8865

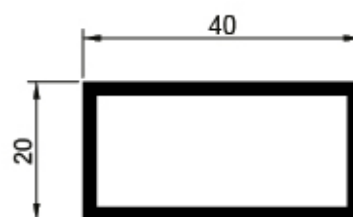
0,424 kg/m

PROFILES 1 : 1



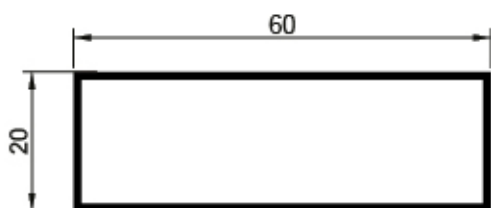
6499

0,389 kg/m



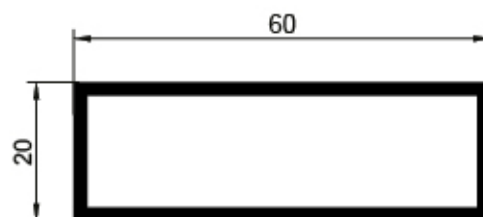
5502

0,605 kg/m



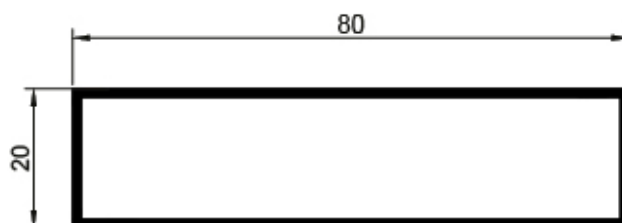
2197

0,463 kg/m



6541

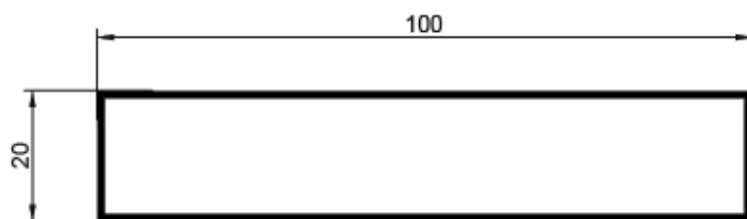
0,821 kg/m



4047

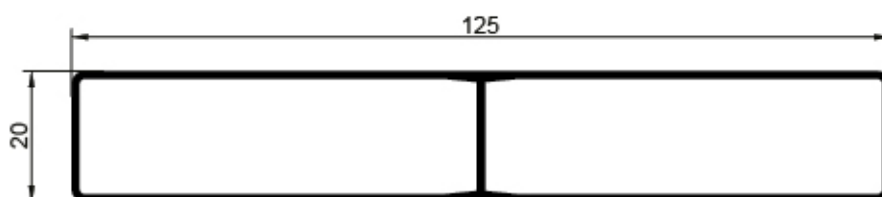
0,685 kg/m

PROFILES 1 : 1



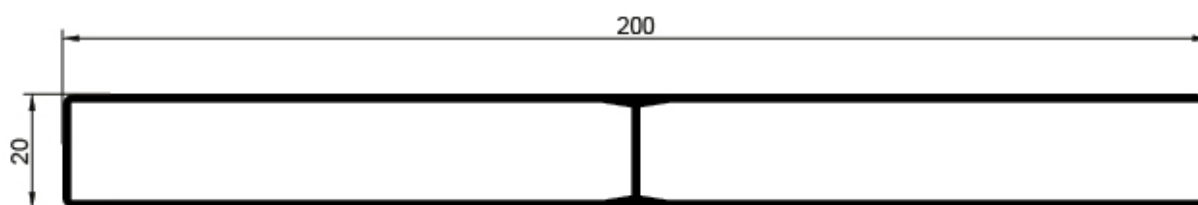
4427

0,825 kg/m



8308

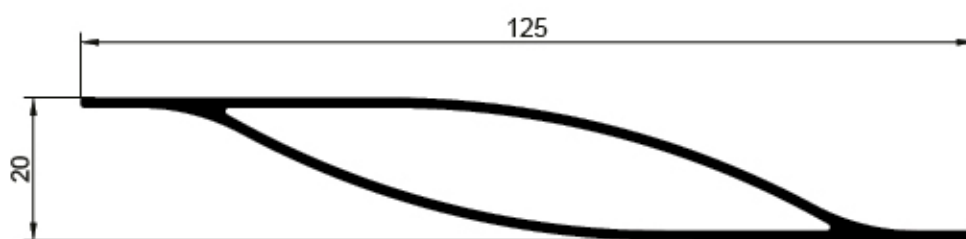
0,994 kg/m



8481

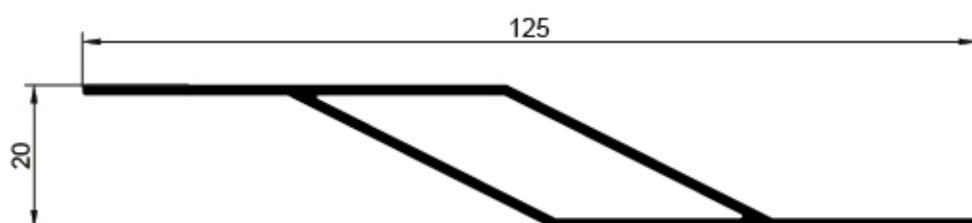
1,839 kg/m

PROFILES 1 : 1



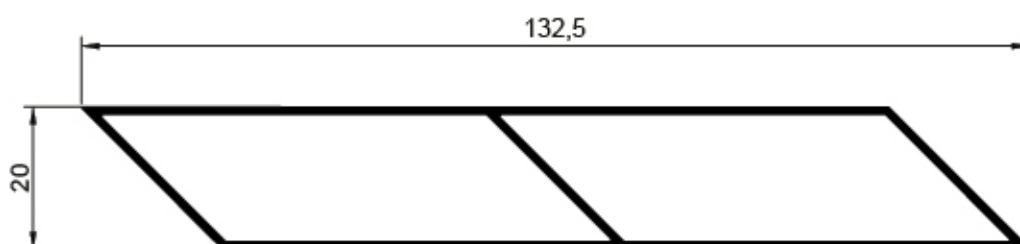
8591

0,868 kg/m



8806

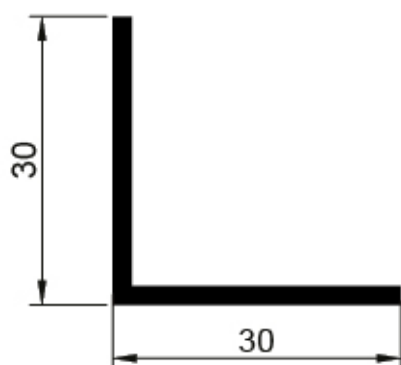
0,750 kg/m



8718

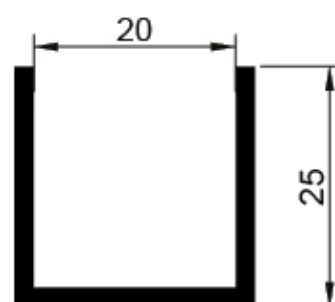
0,975 kg/m

PROFILES 1 : 1 - OPTIONAL PROFILES



5890

0,313 kg/m



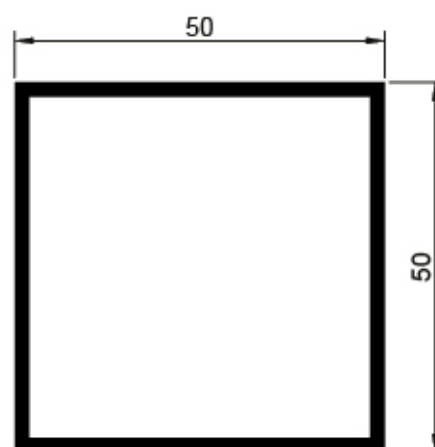
5880

0,383 kg/m



7805

0,720 kg/m



5516

1,037 kg/m

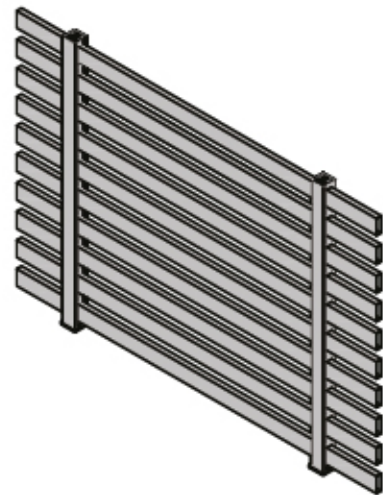
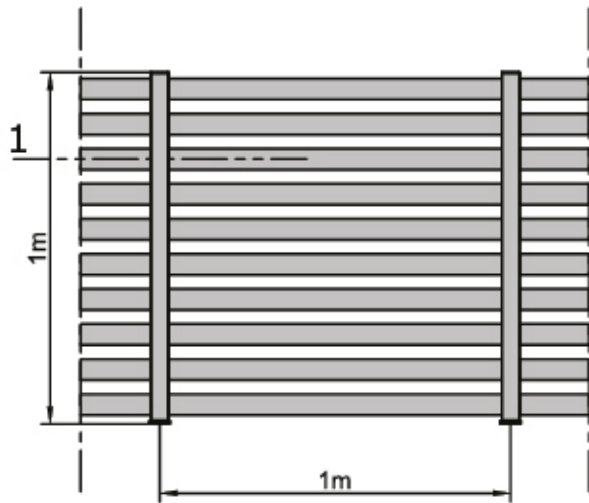


SECTIONS

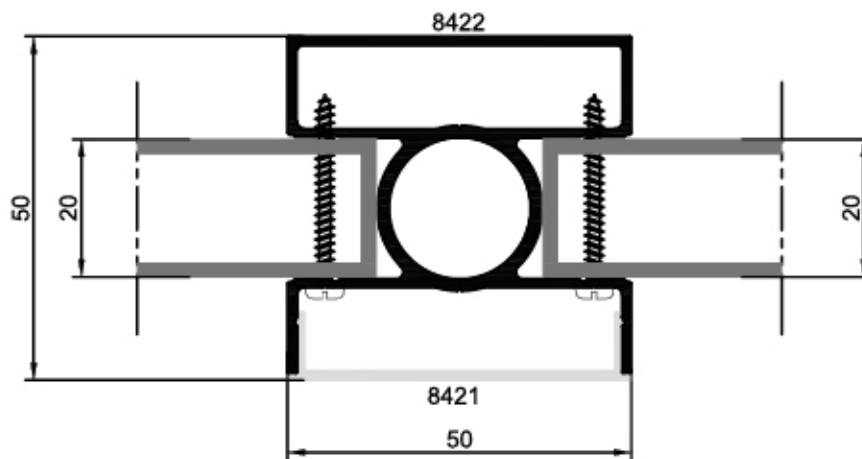
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SECTIONS POST

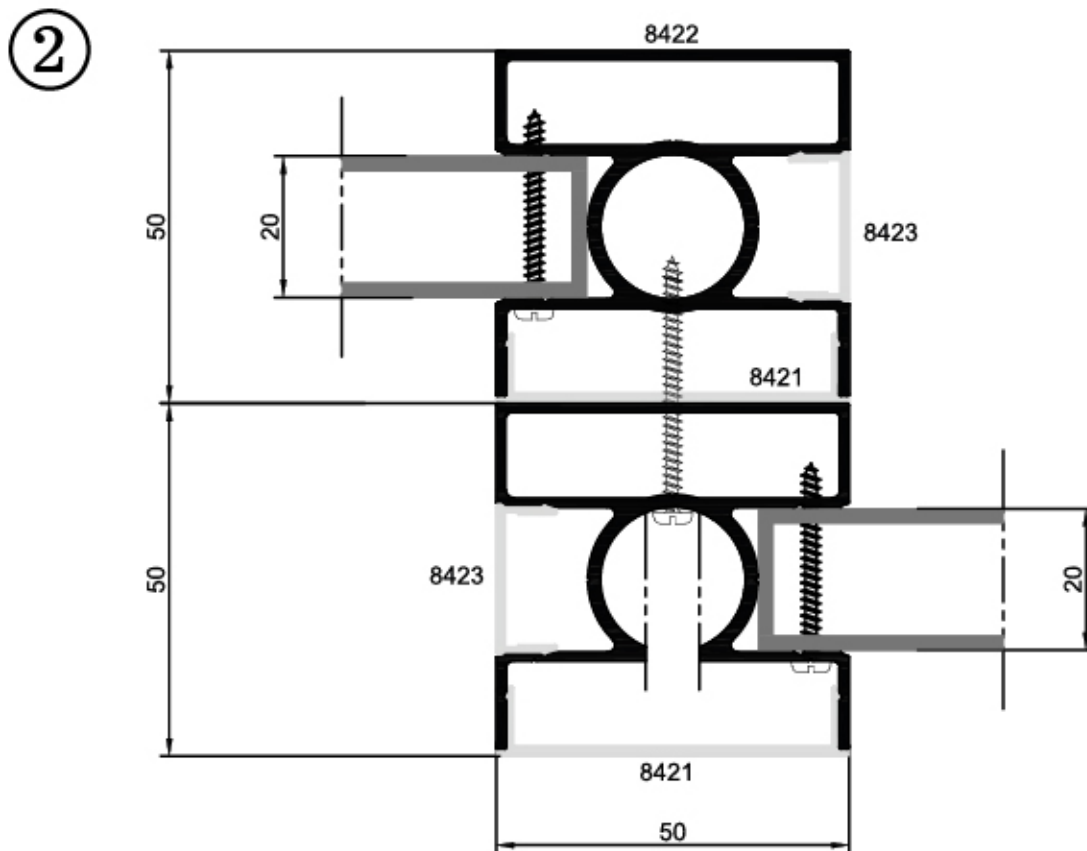
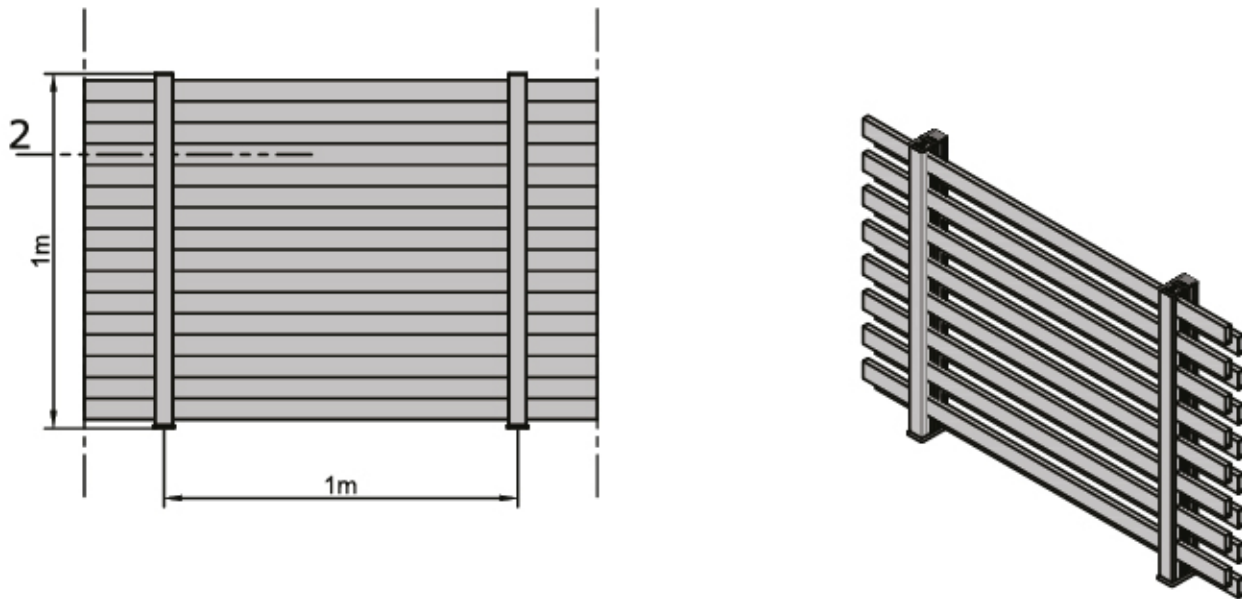


①



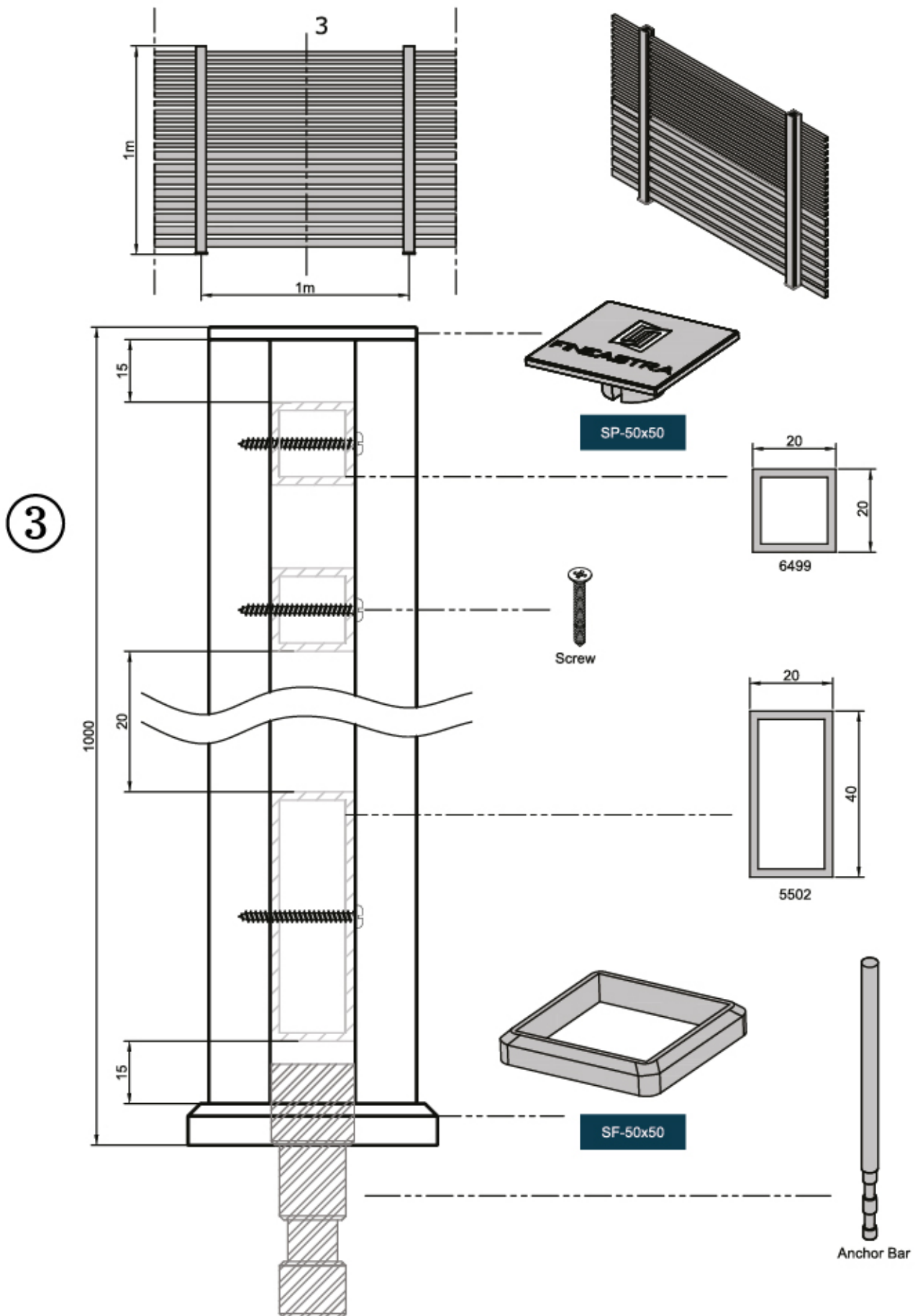
Assembling Possible With All Lamels

SECTIONS POST

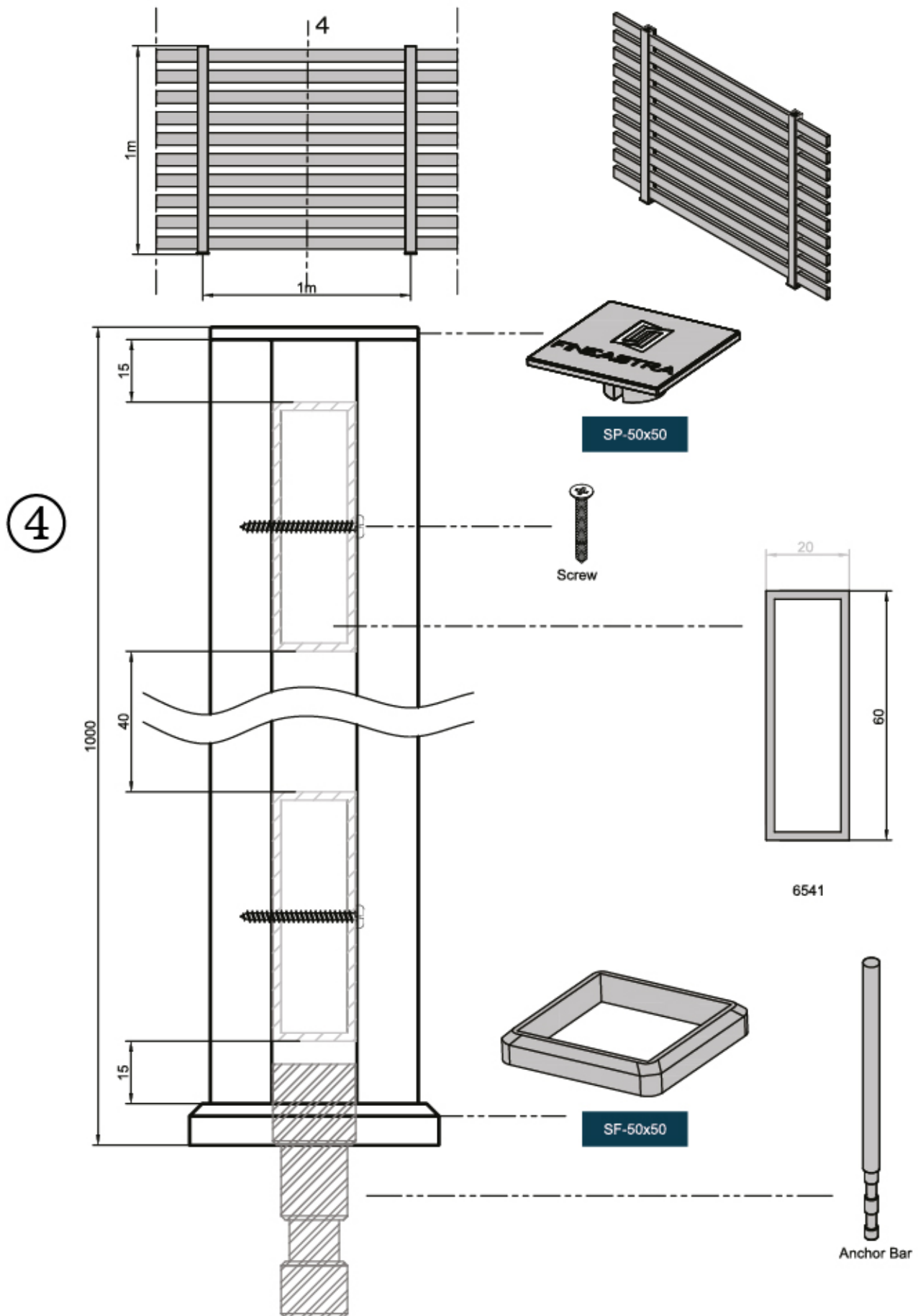


Assembling Possible With All Lamels

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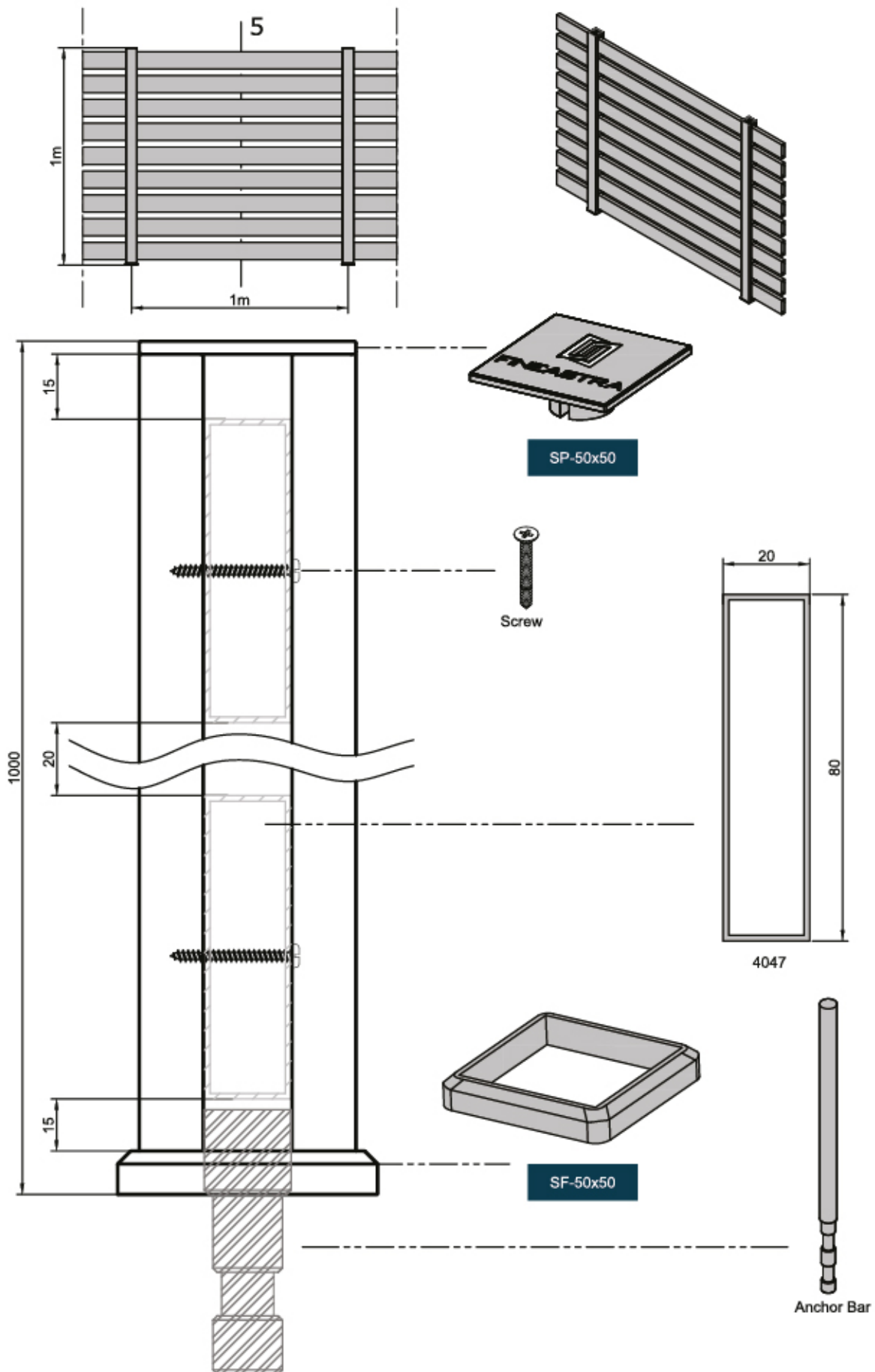


SECTIONSTUBE LAMELS

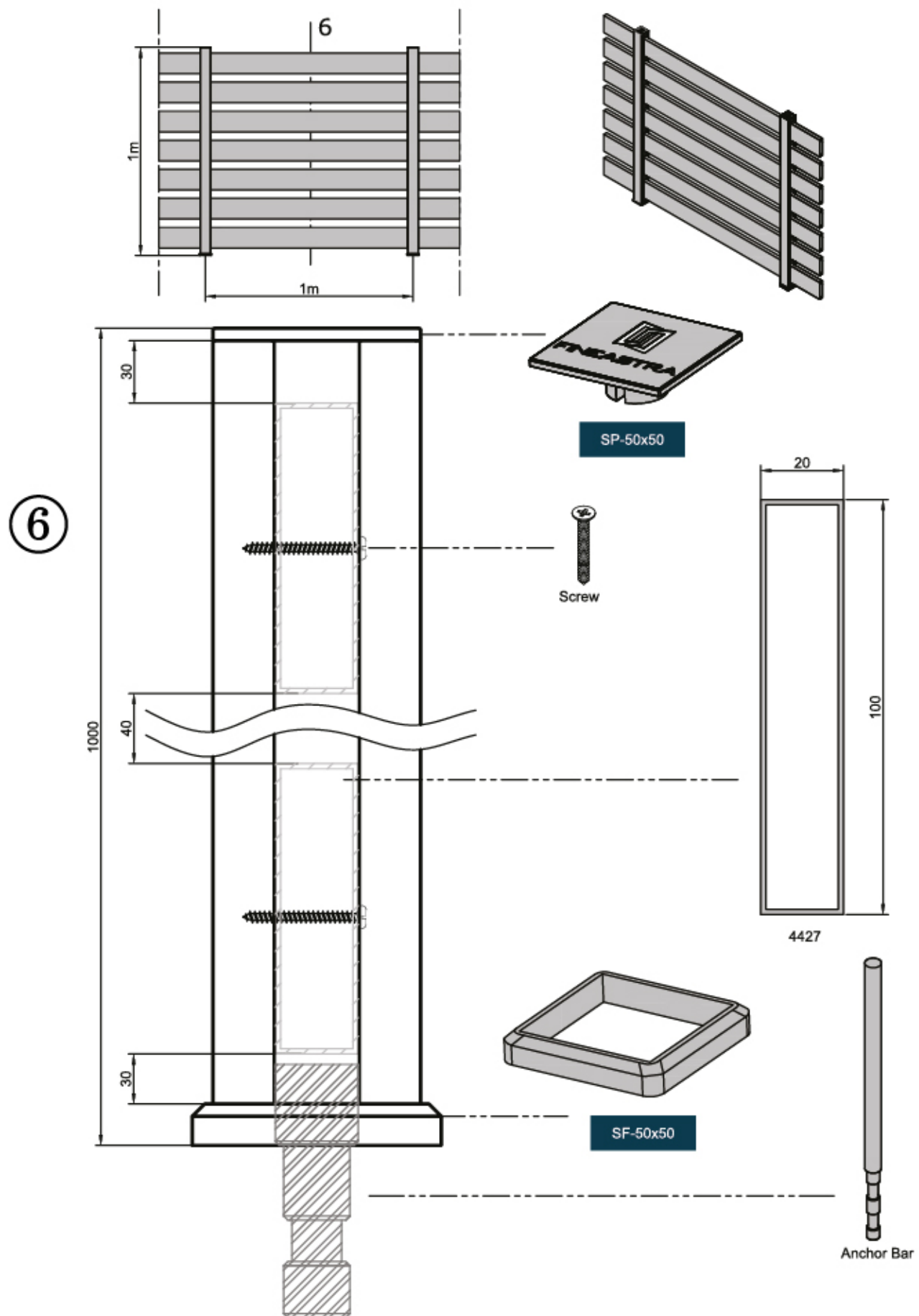


SECTIONS TUBE LAMELS

5

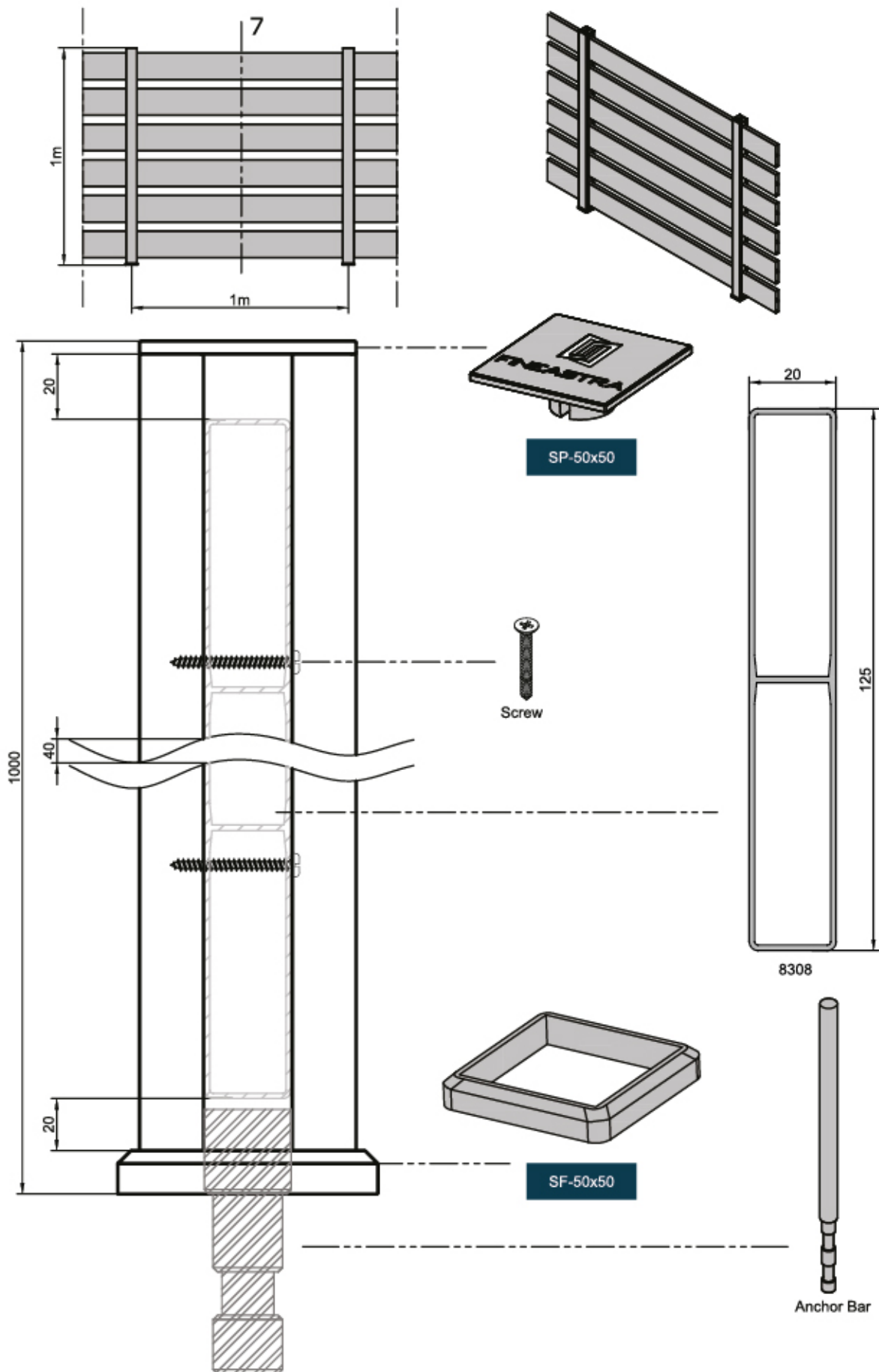


SECTIONS TUBE LAMELS



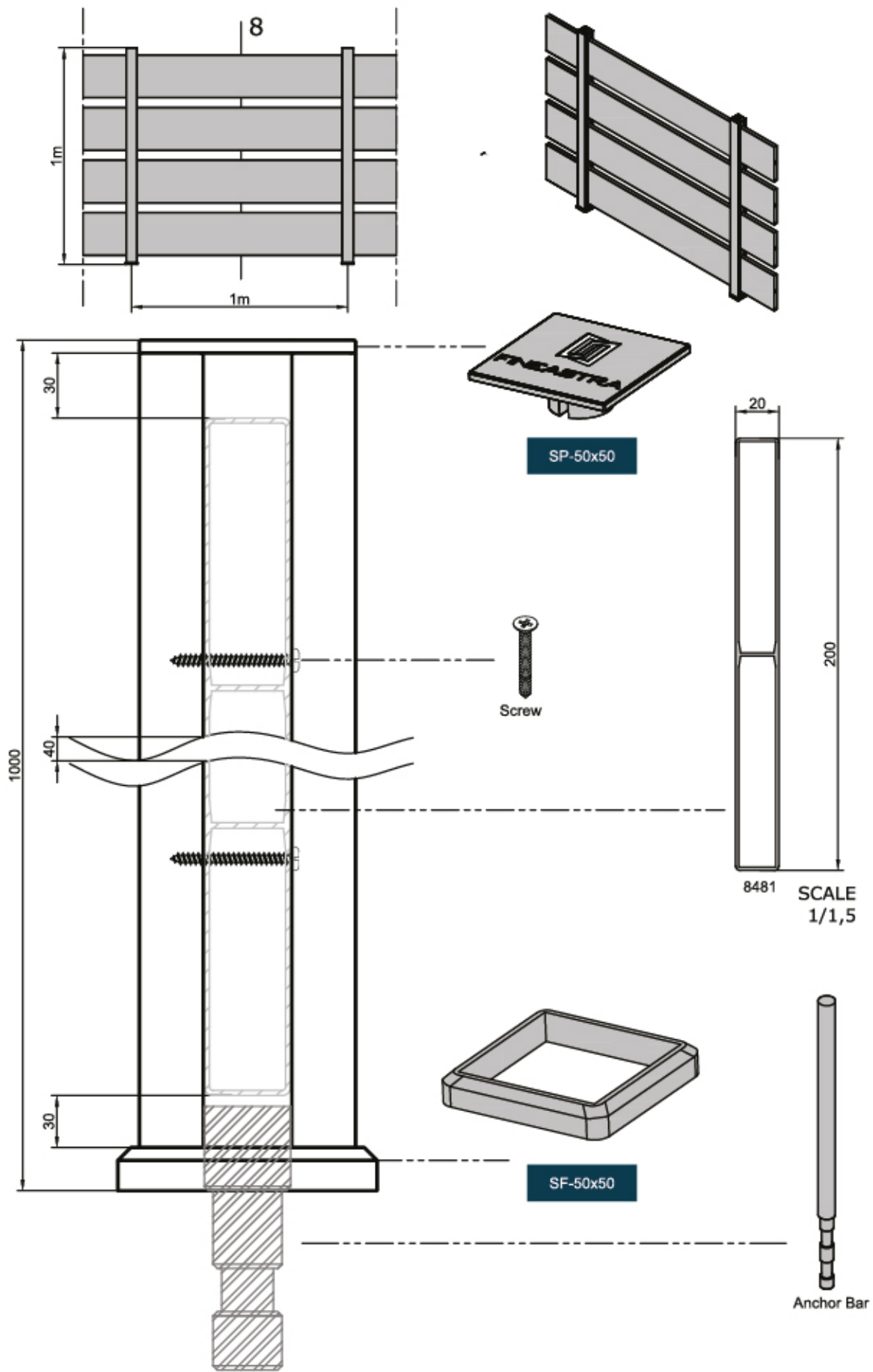
SECTIONS TUBE LAMELS

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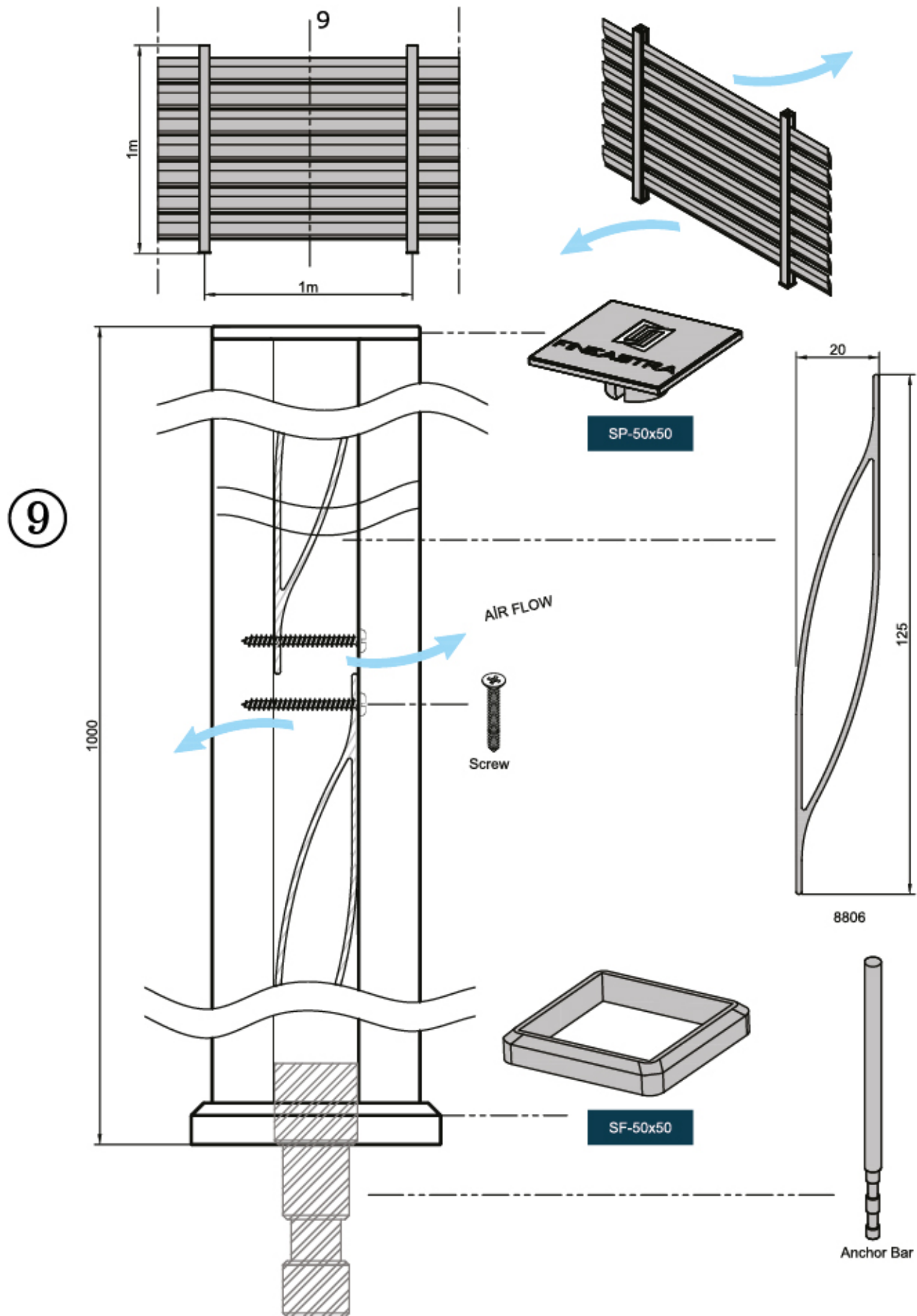


SECTIONS TUBE LAMELS

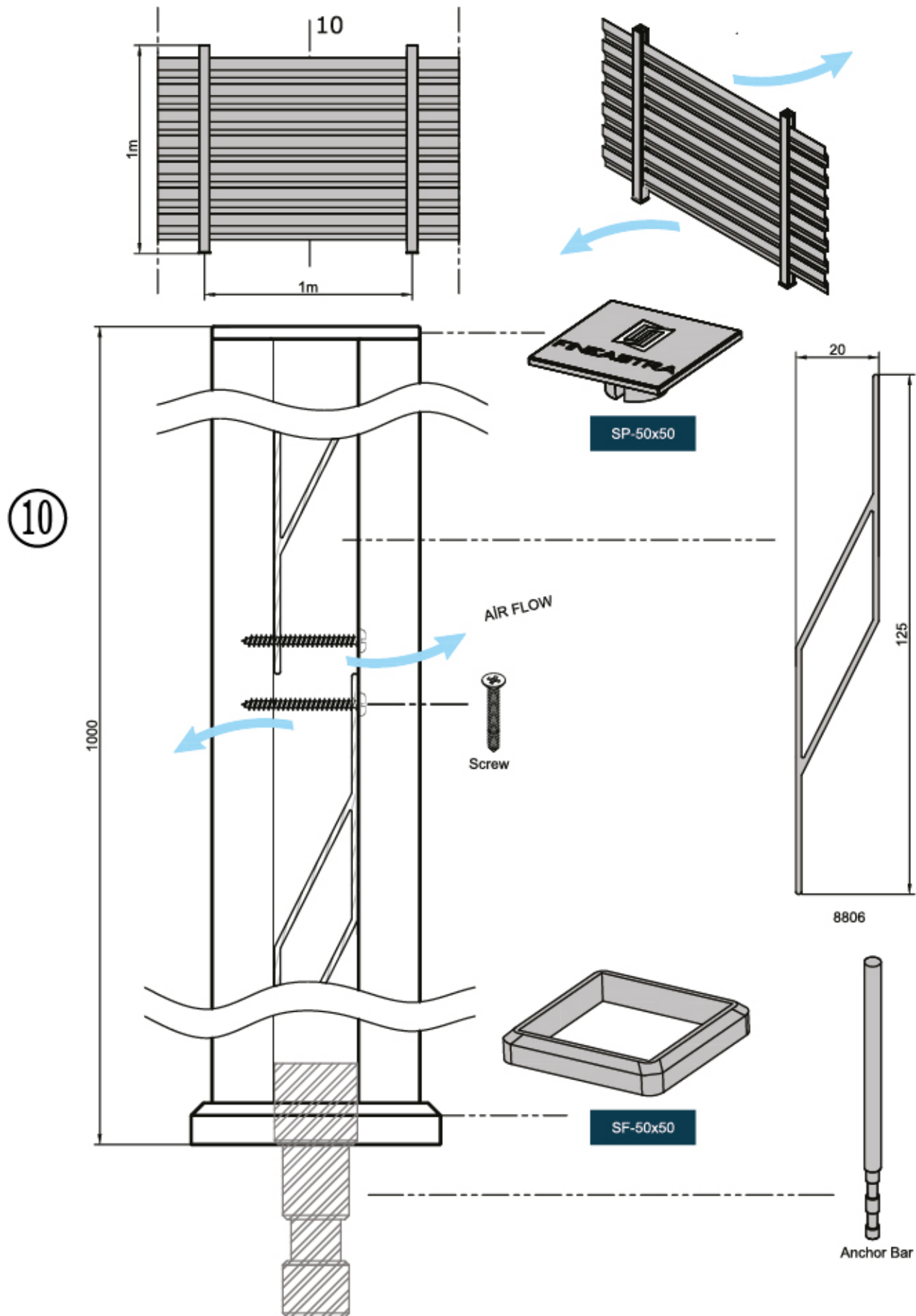
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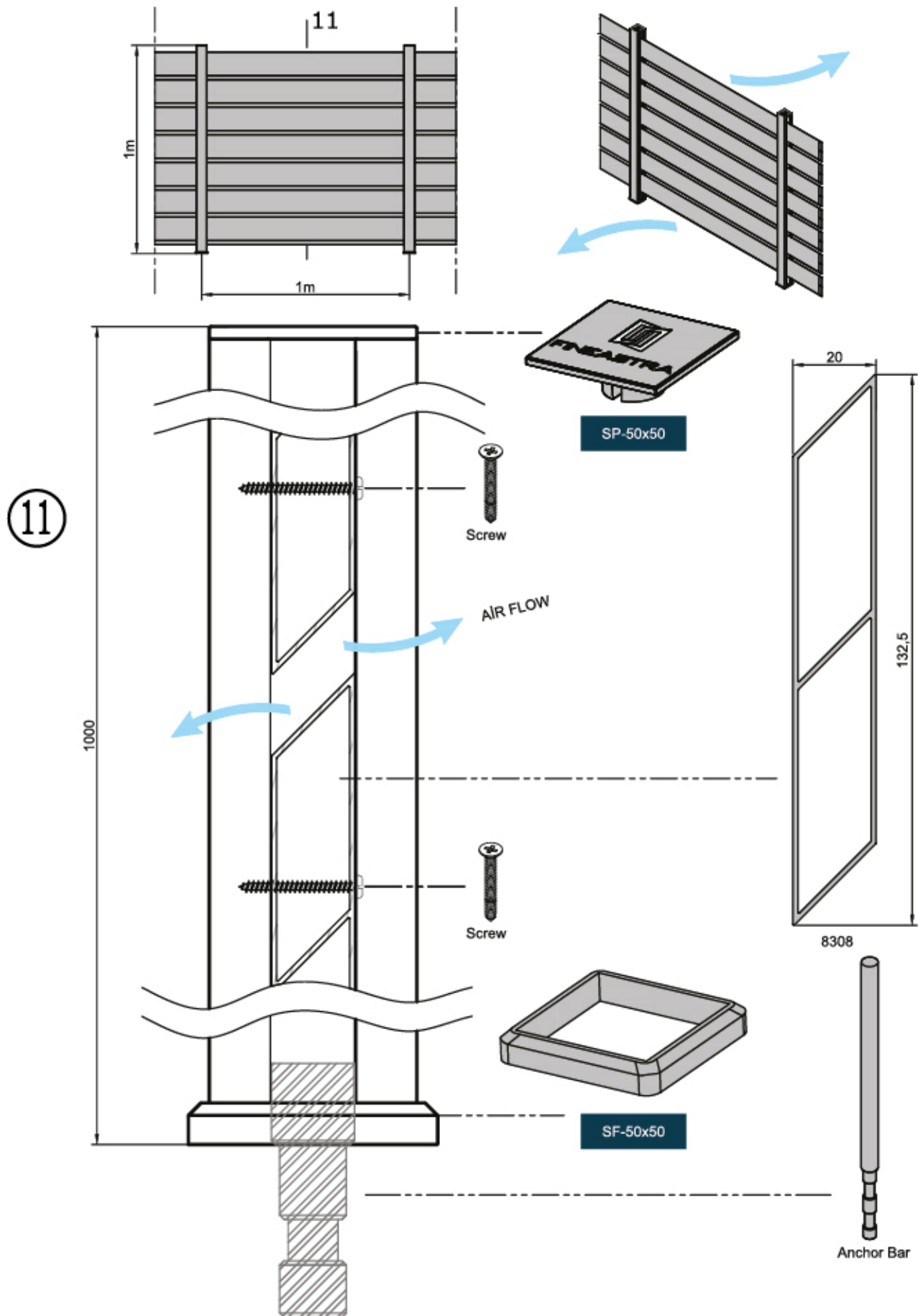
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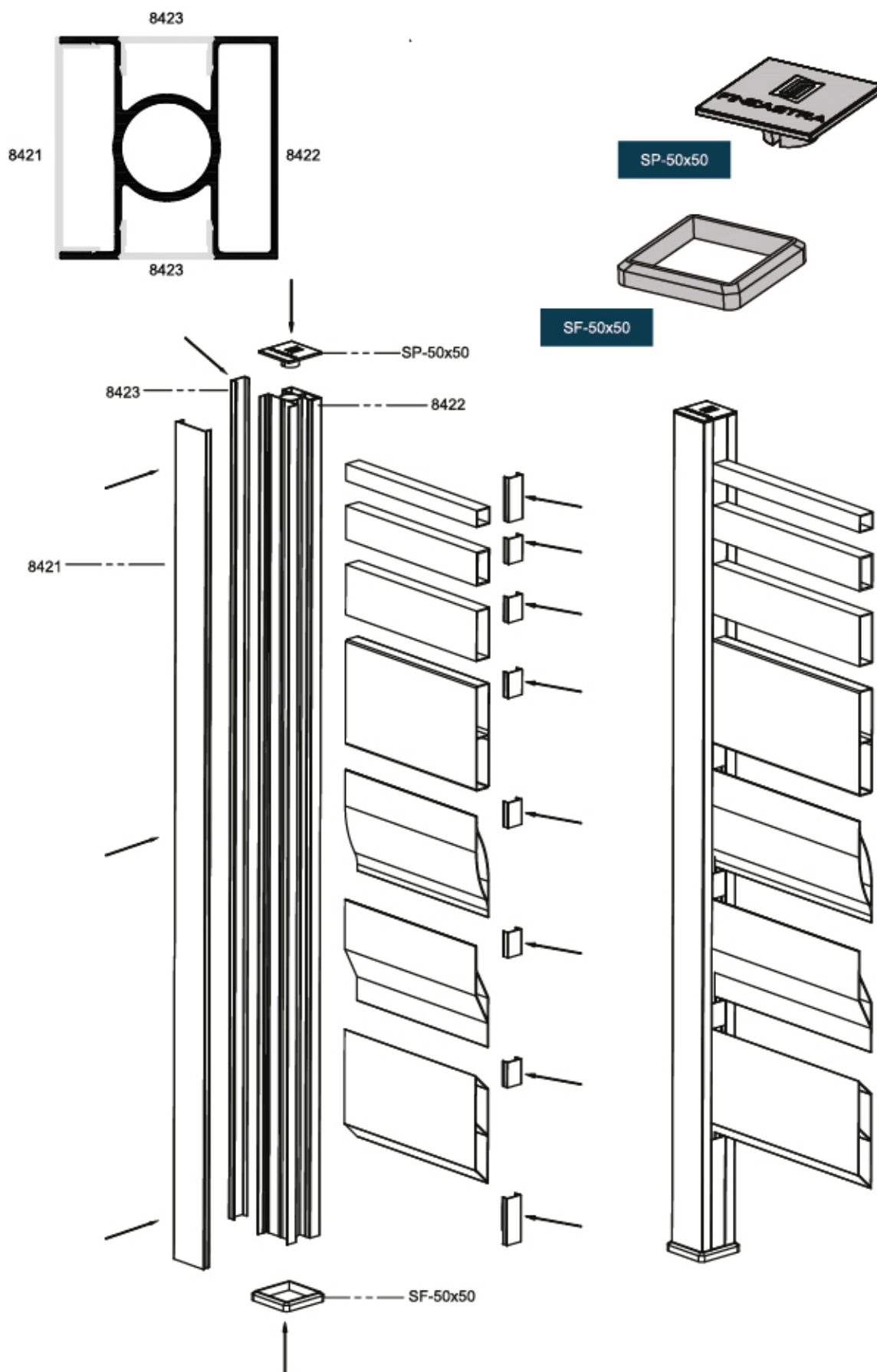
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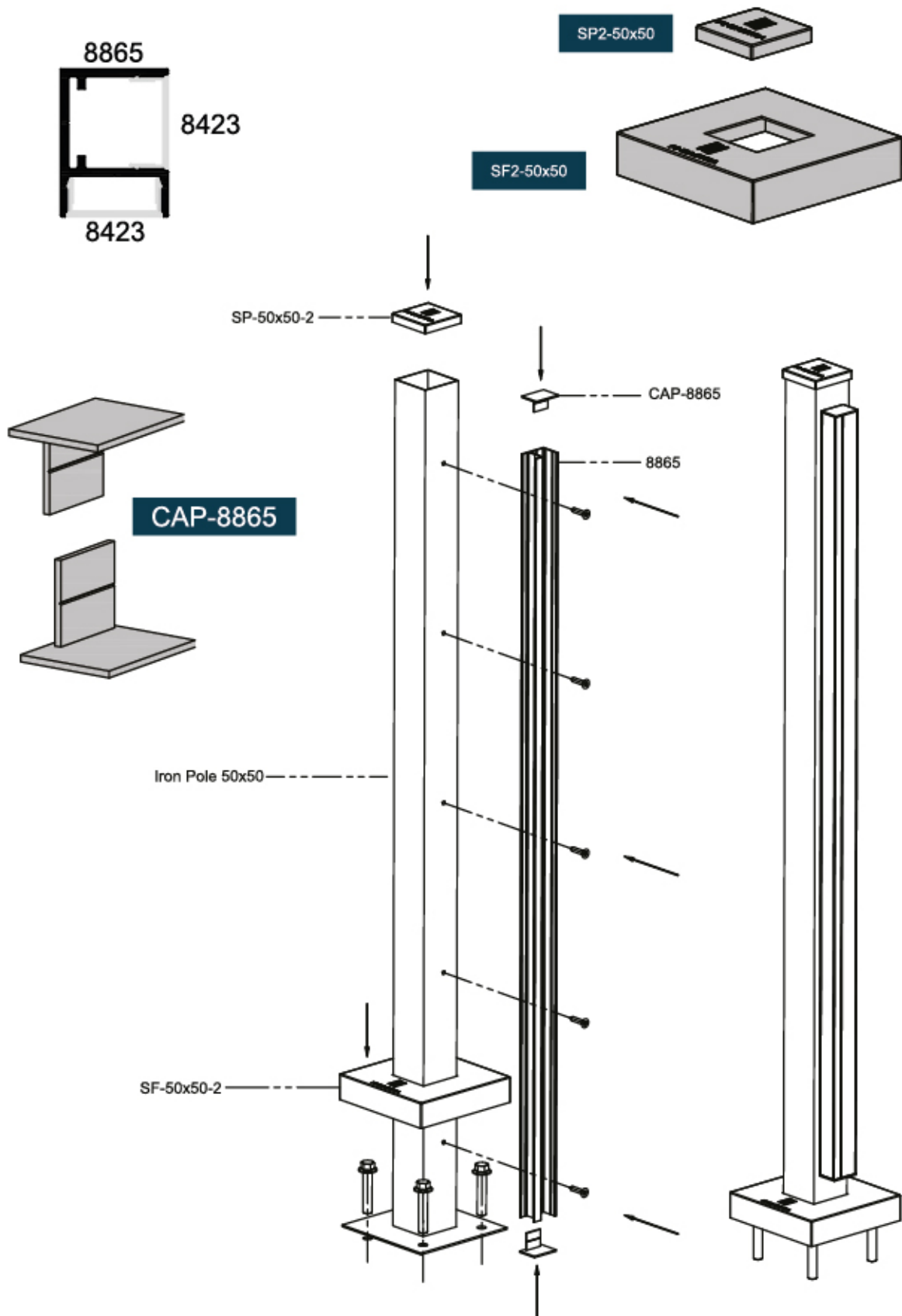
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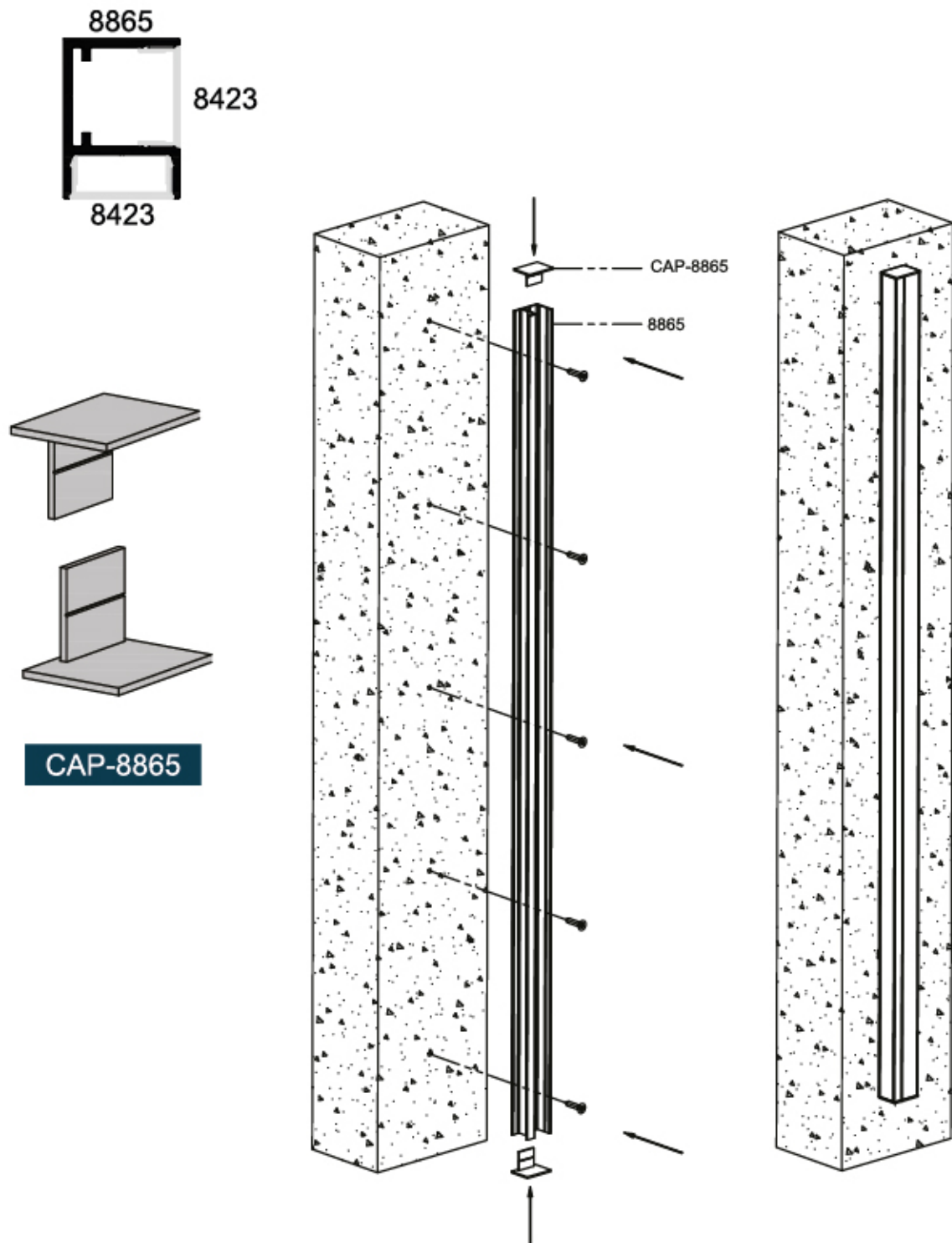
SECTIONS ADDITIONAL PROFILES



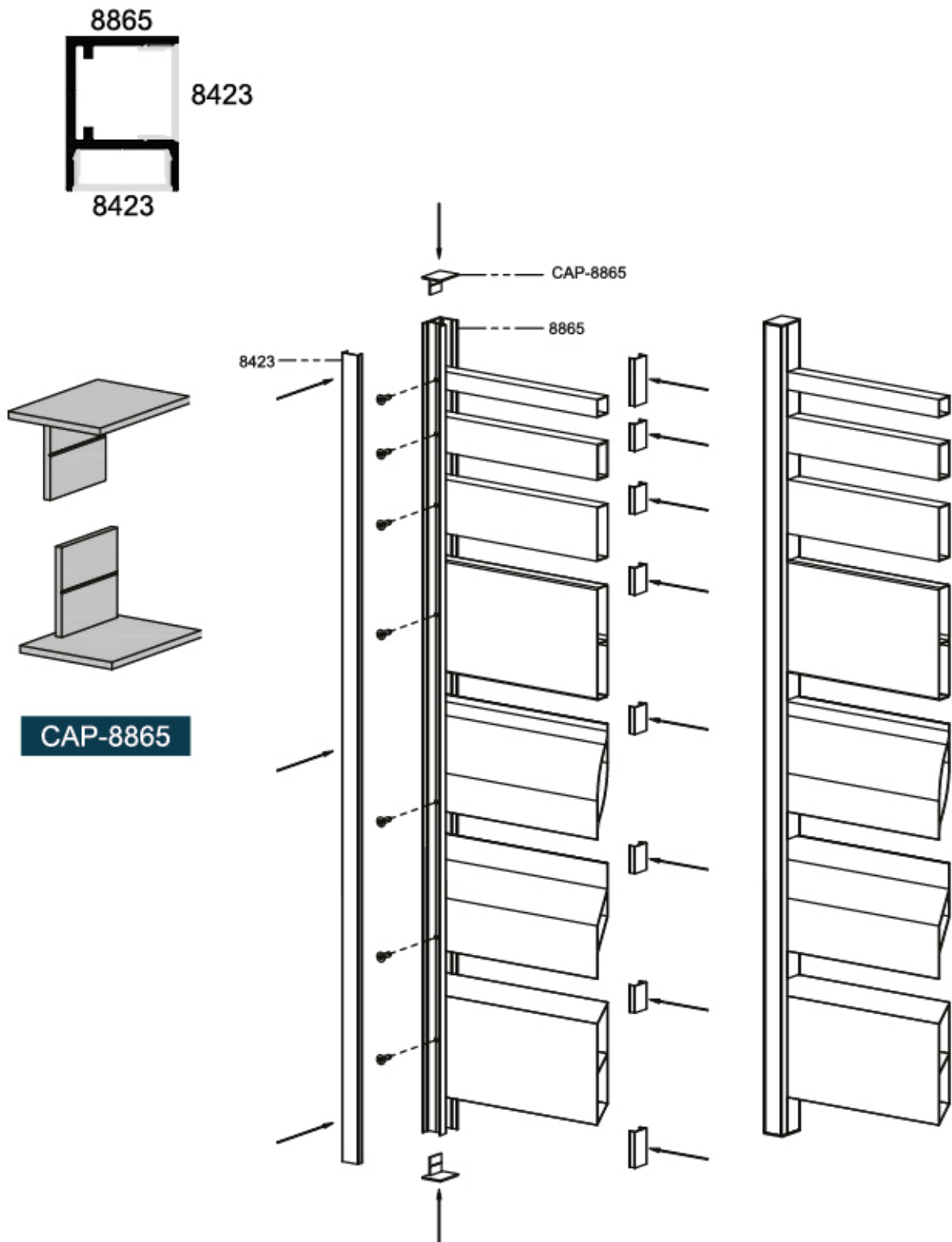
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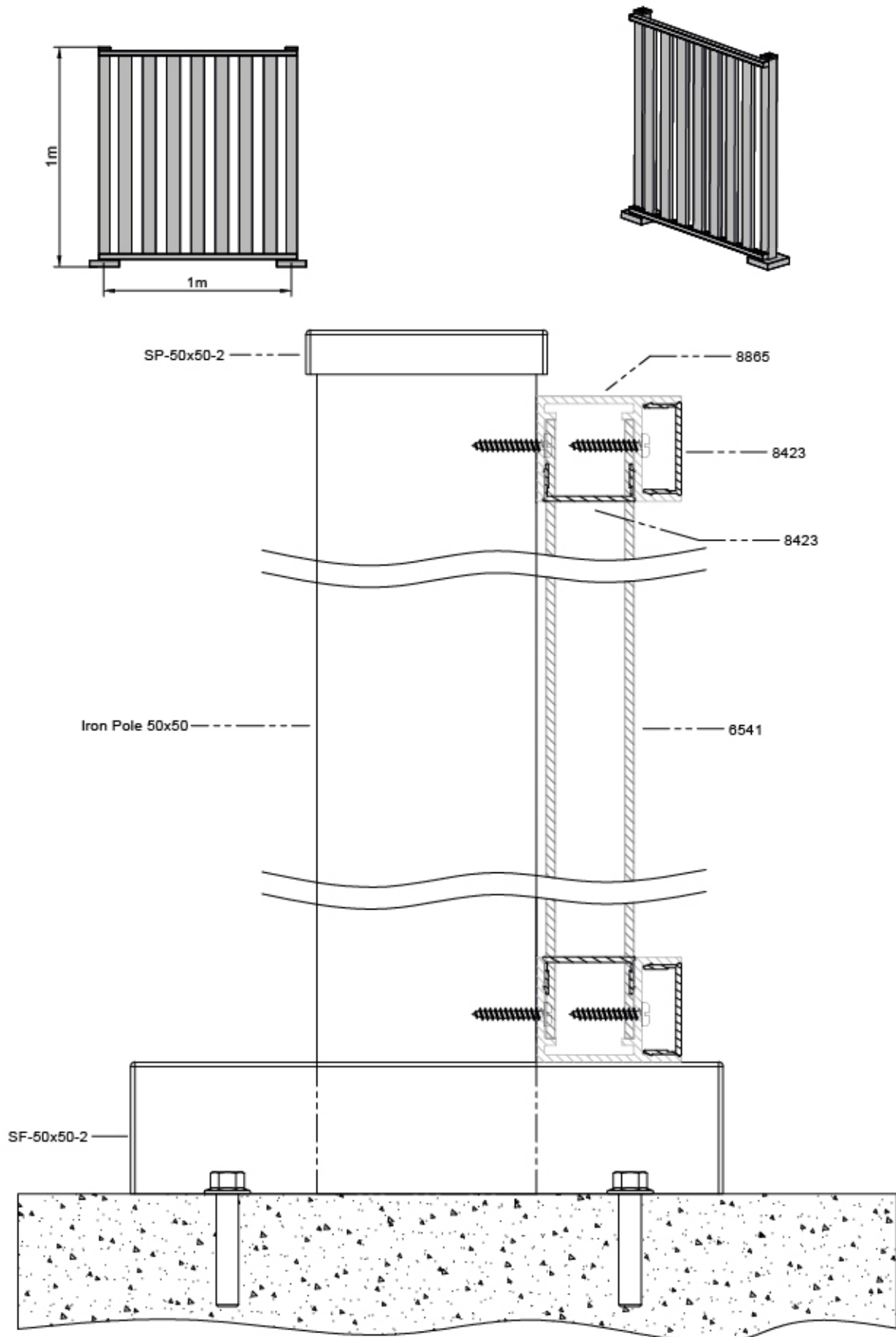
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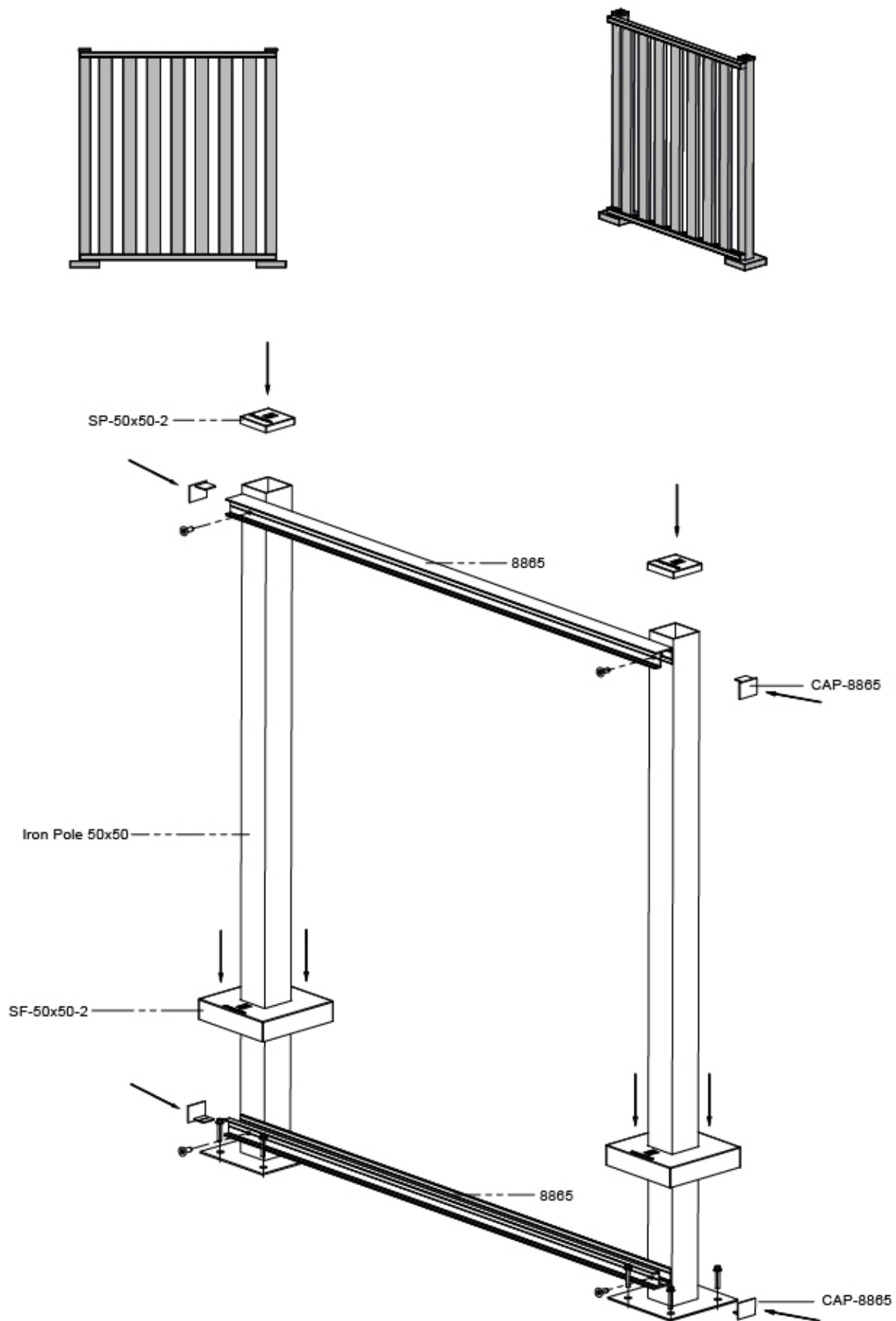
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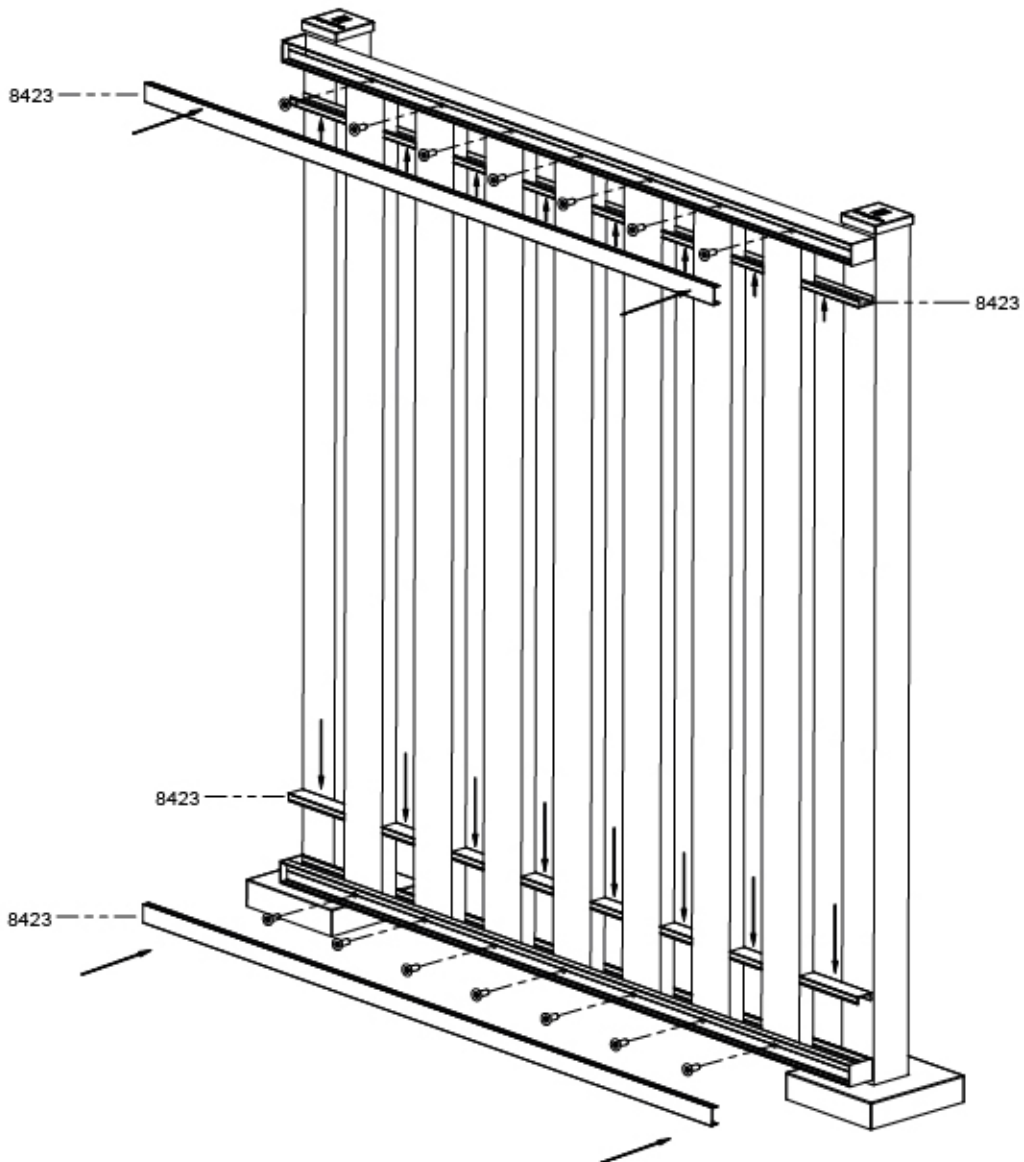
SECTIONS



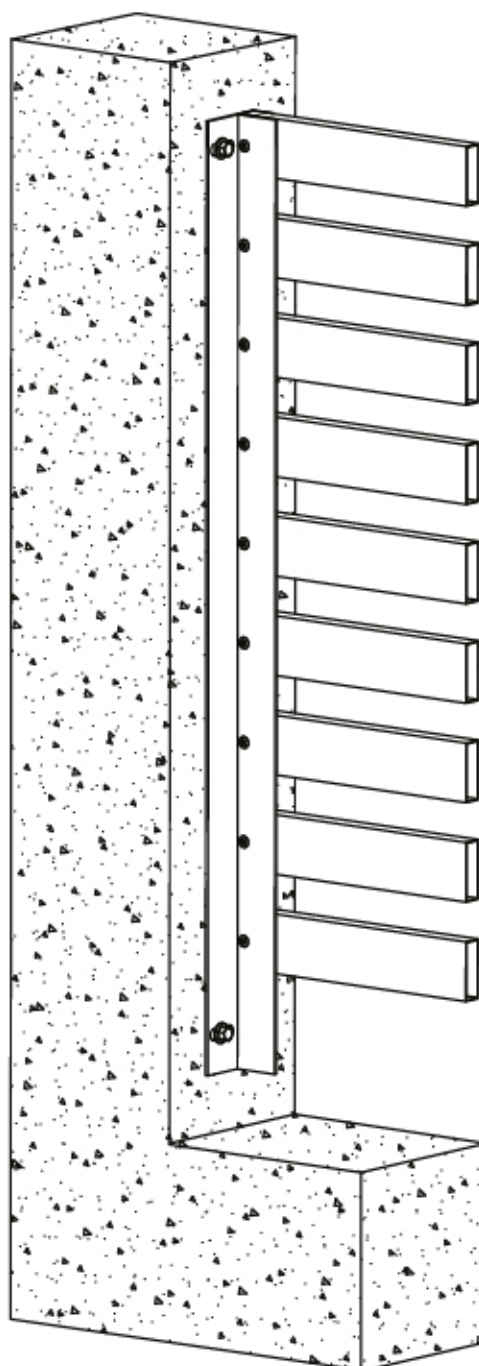
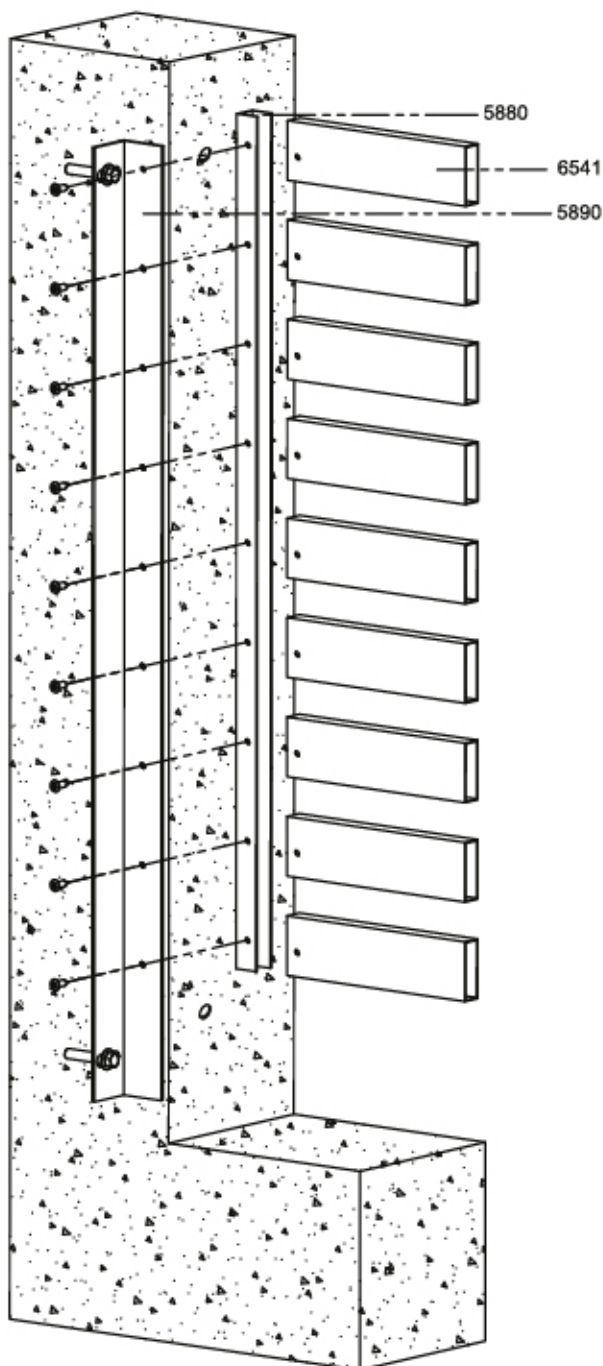
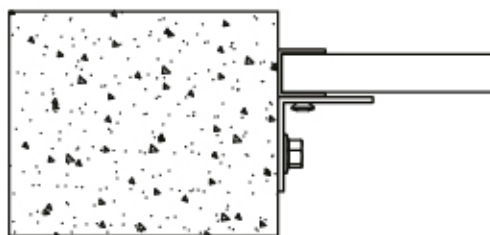
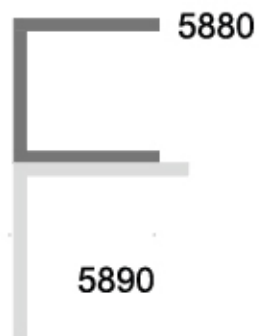
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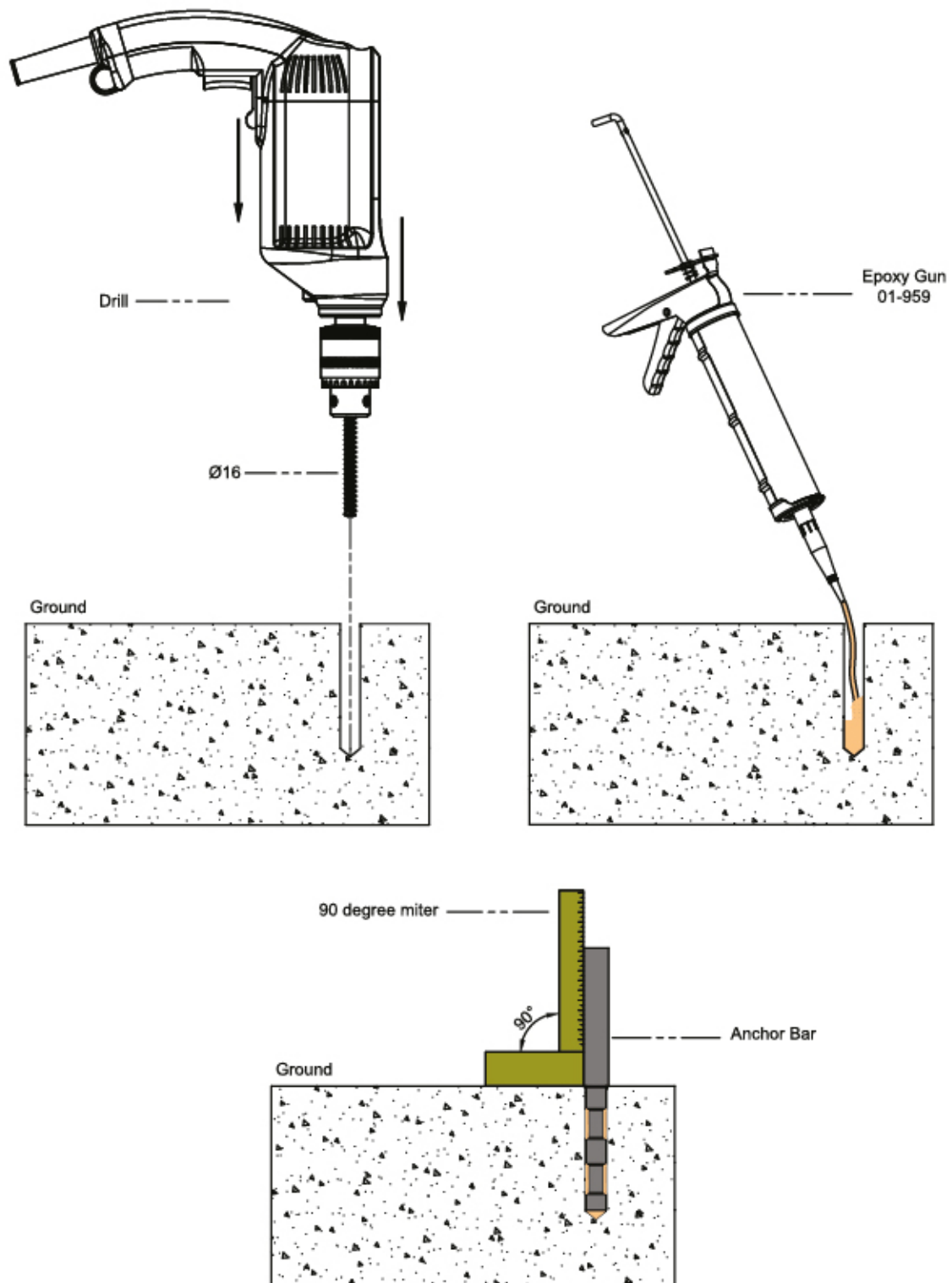
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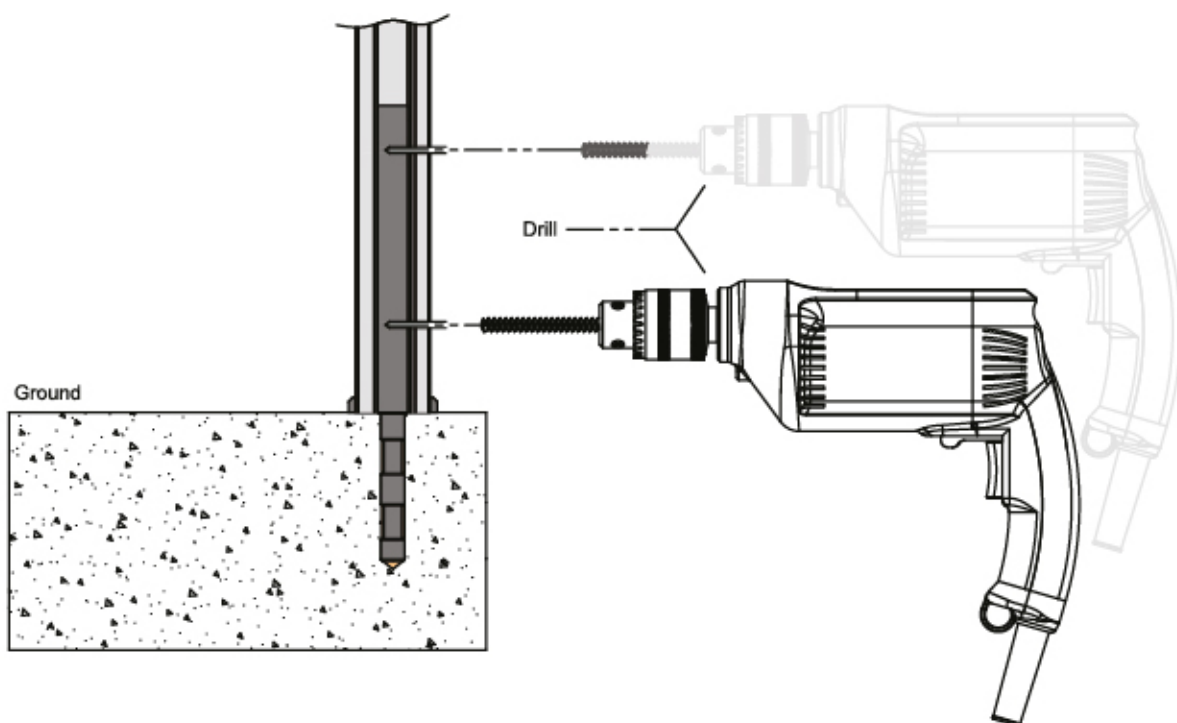
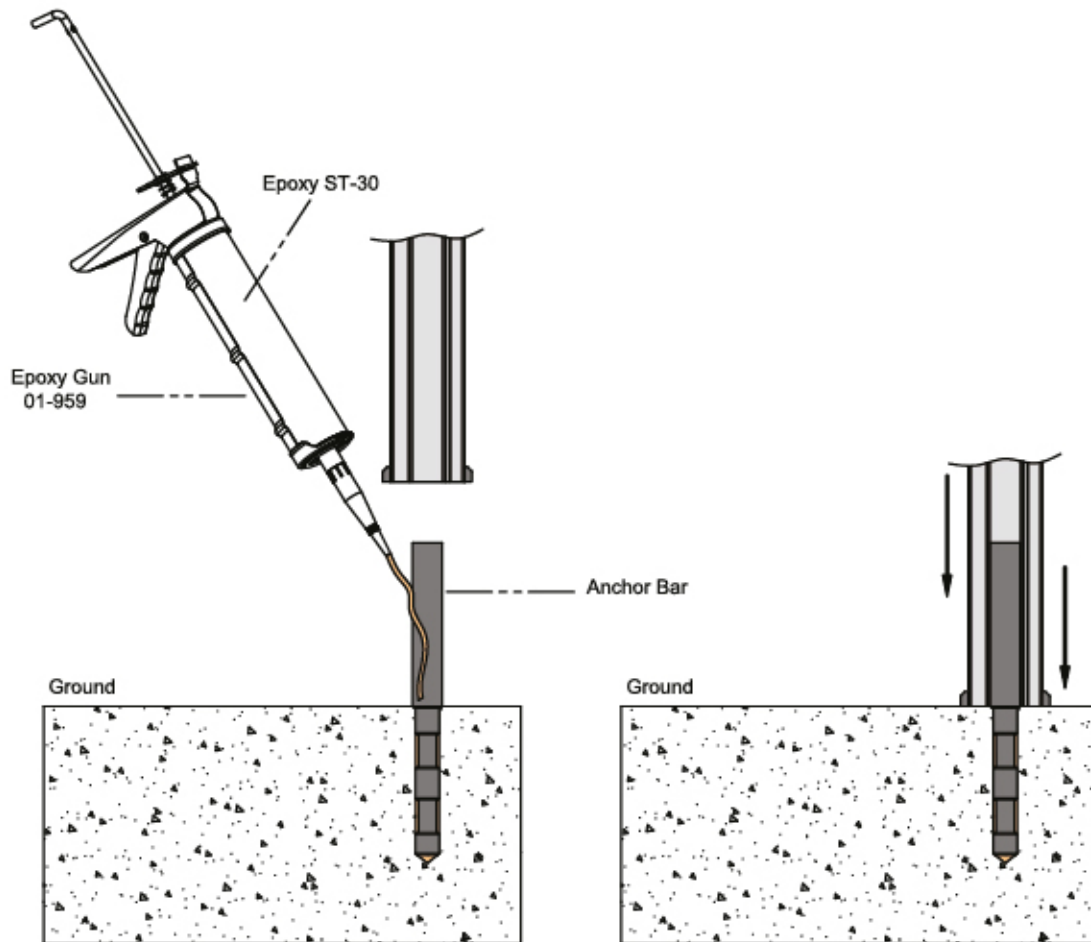
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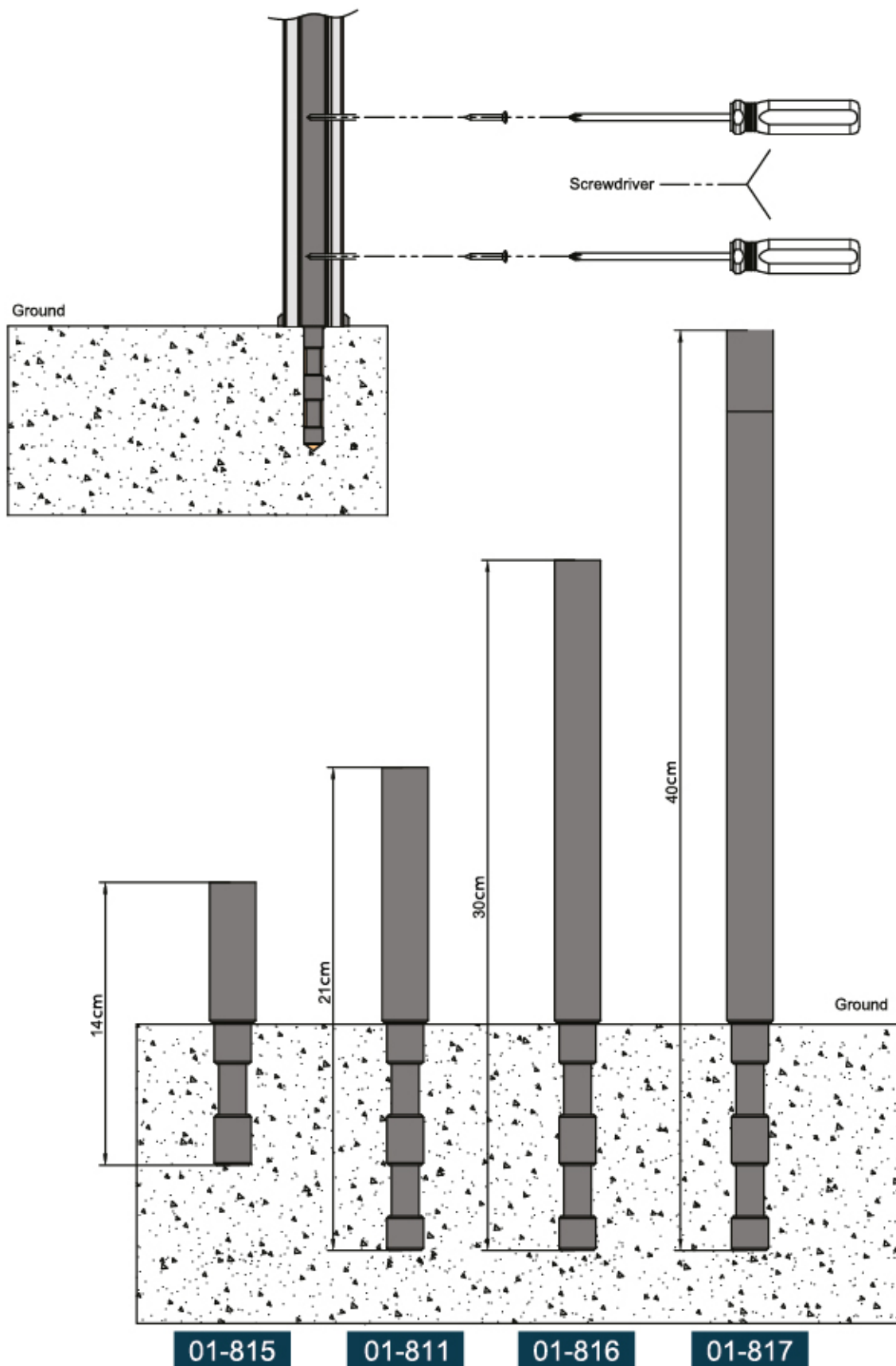
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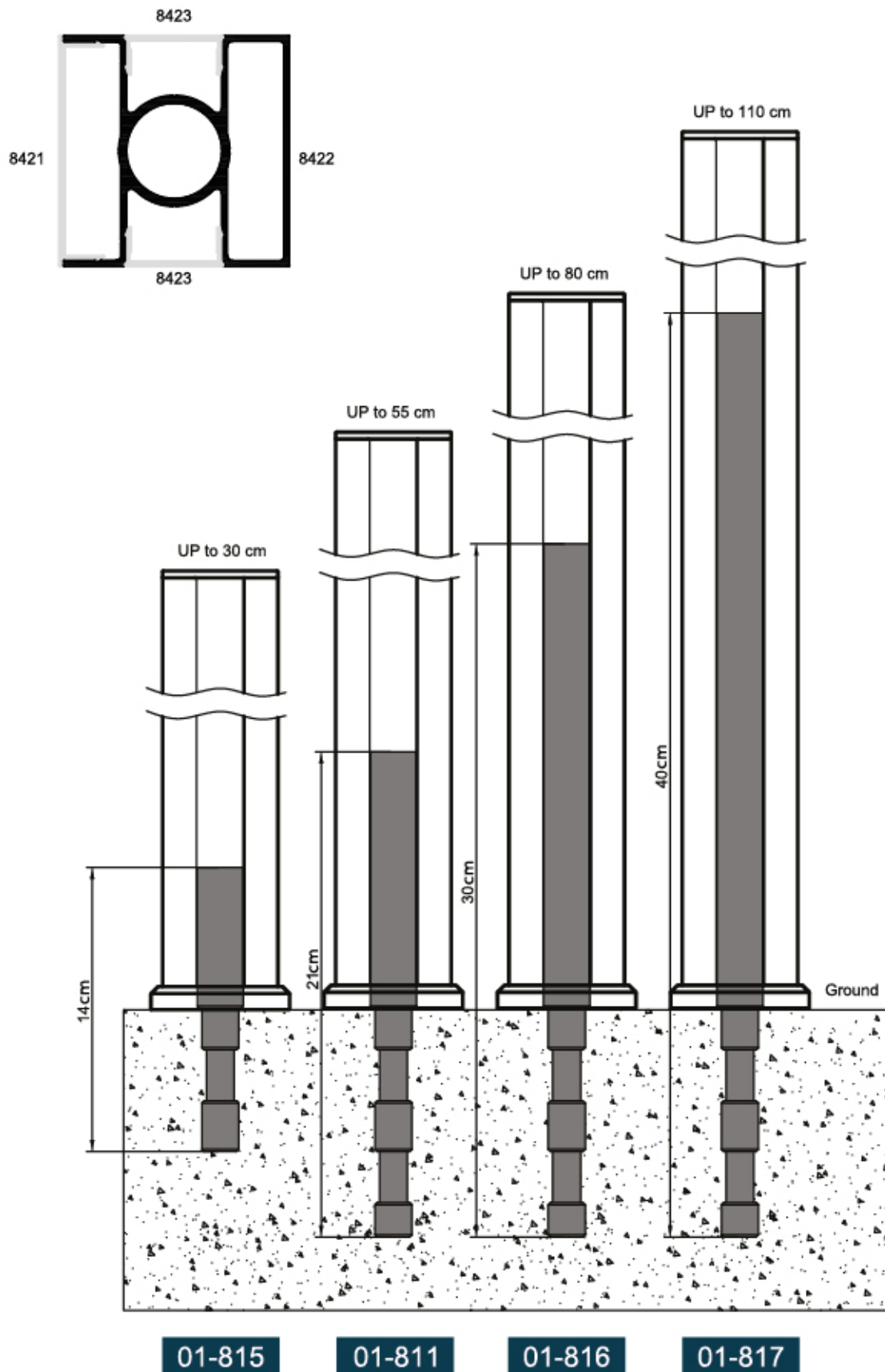
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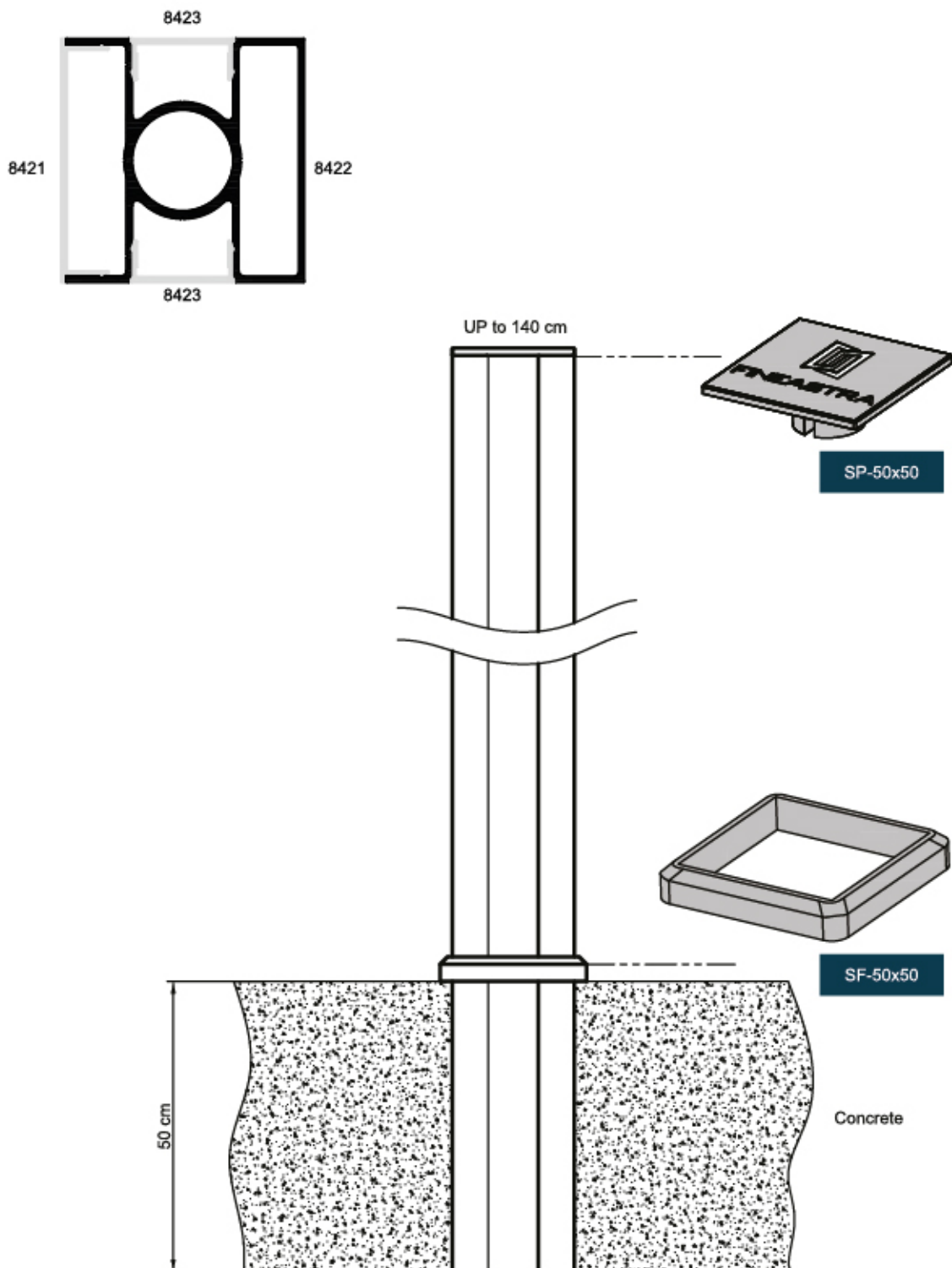
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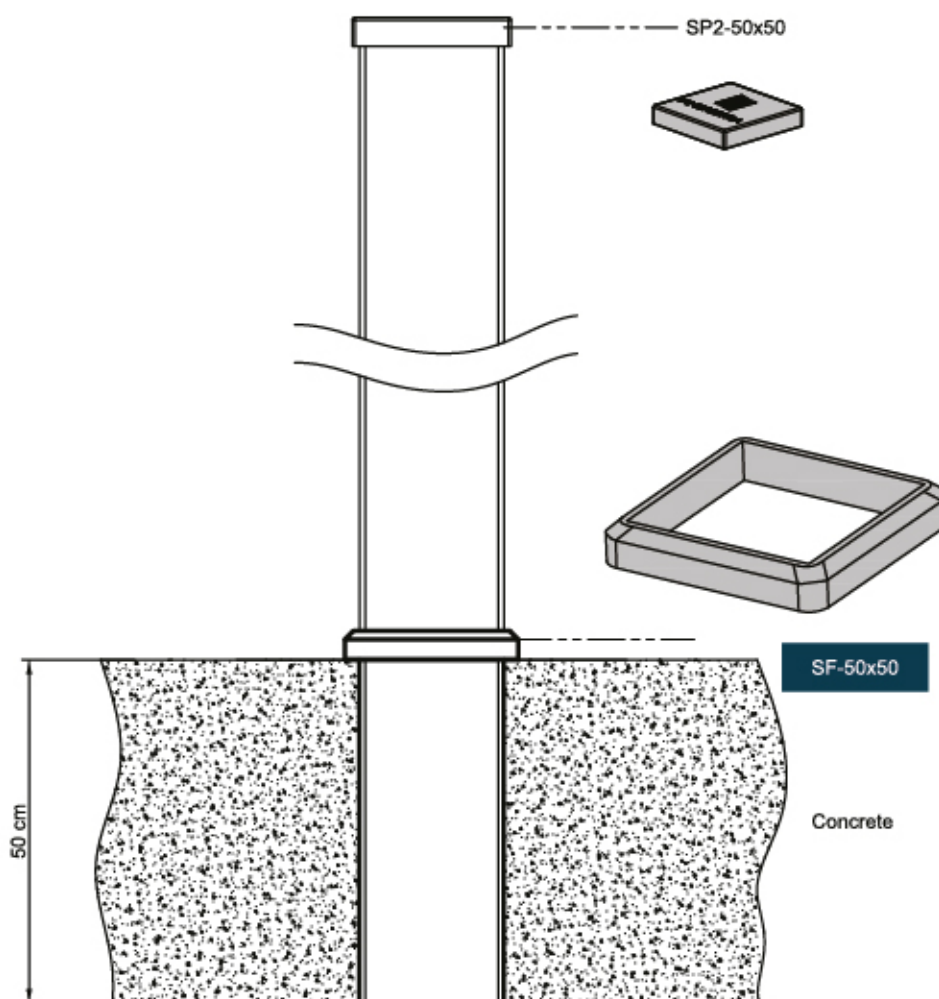
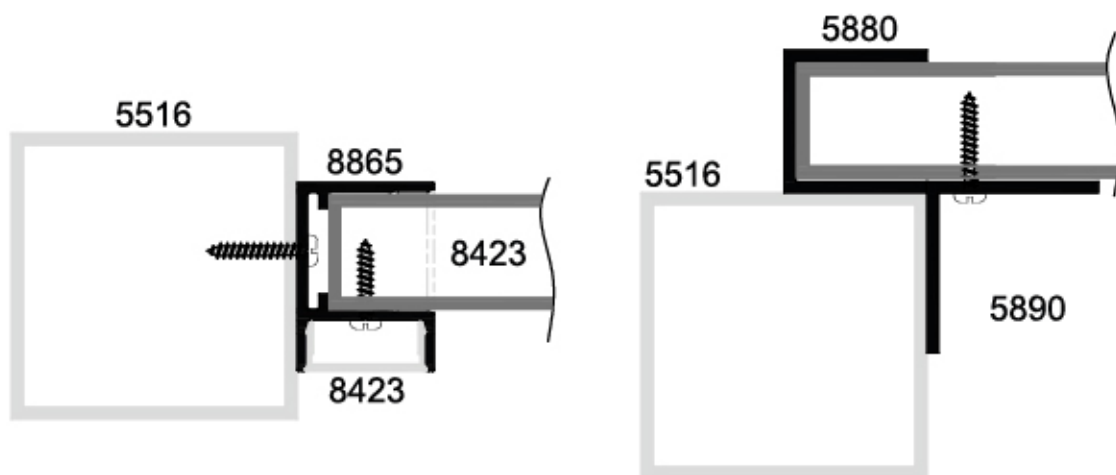
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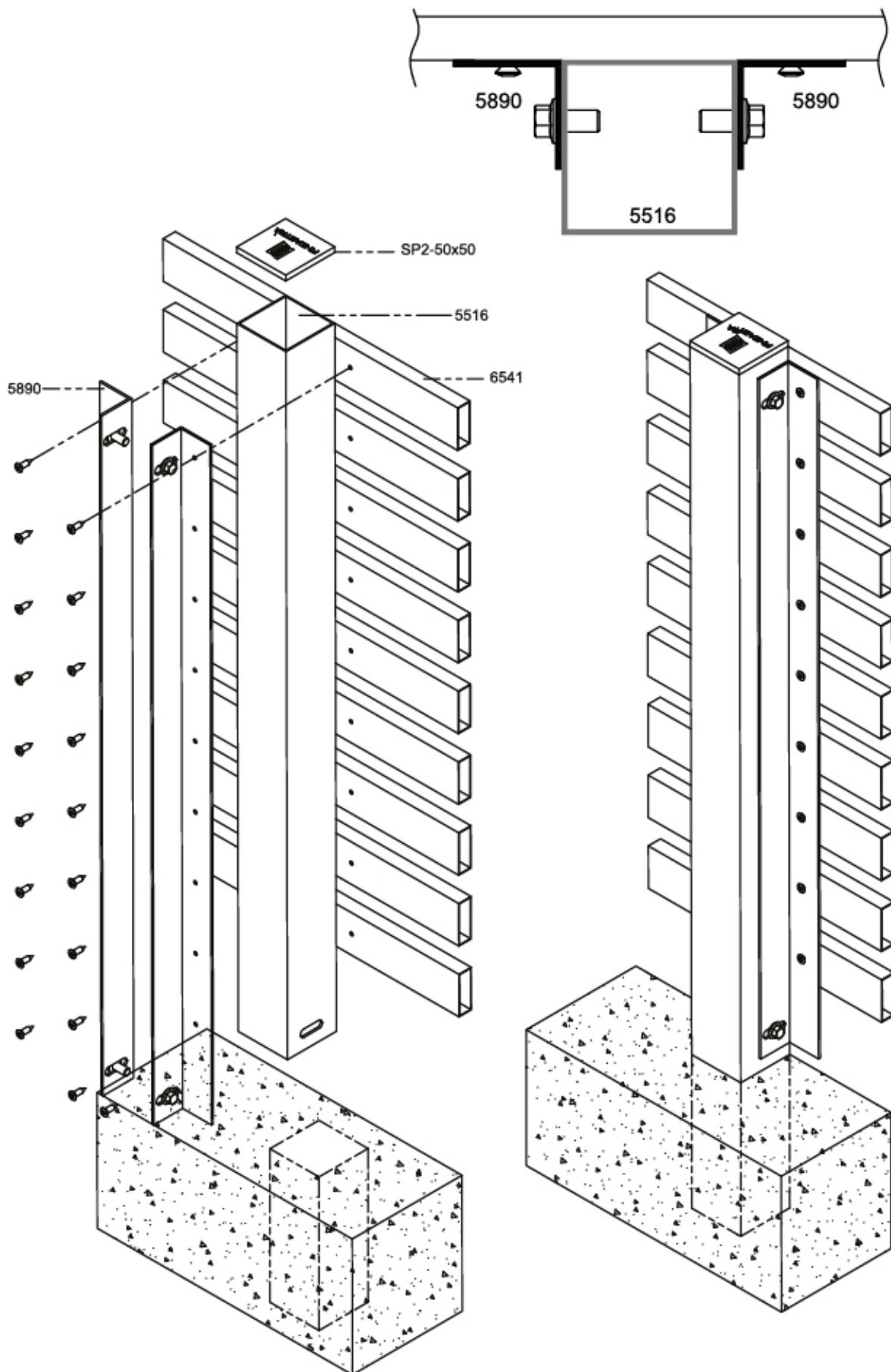
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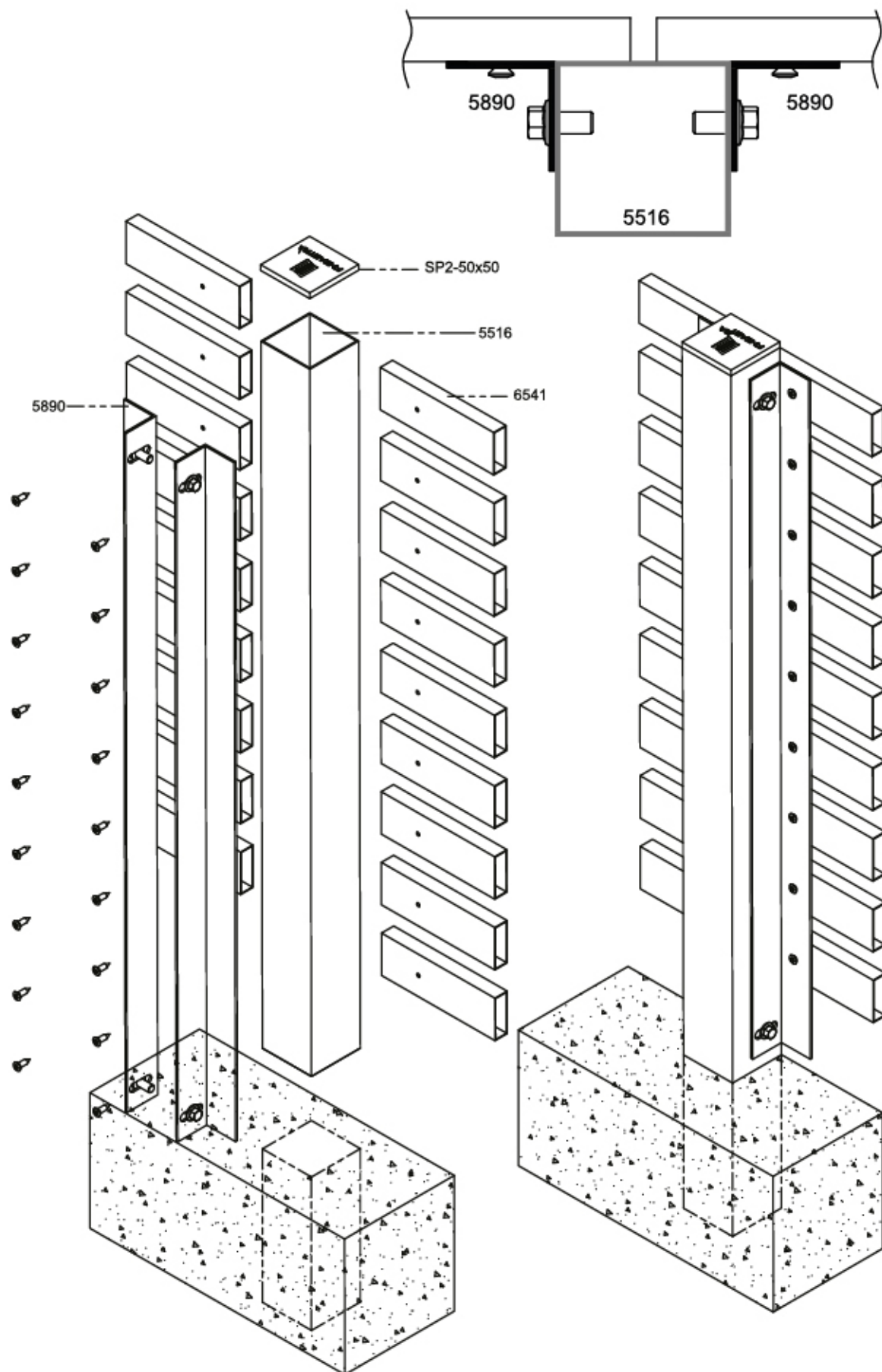
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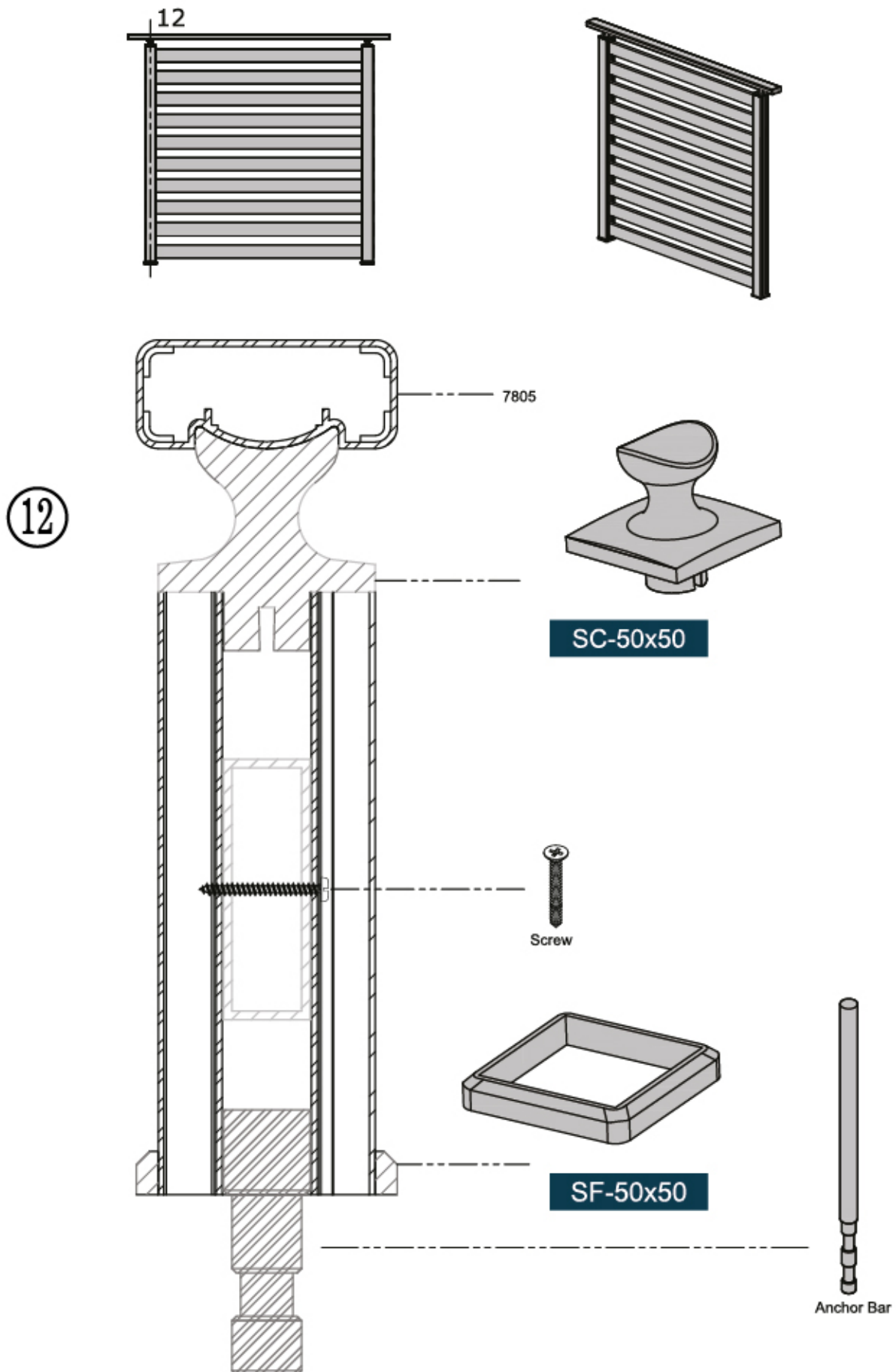
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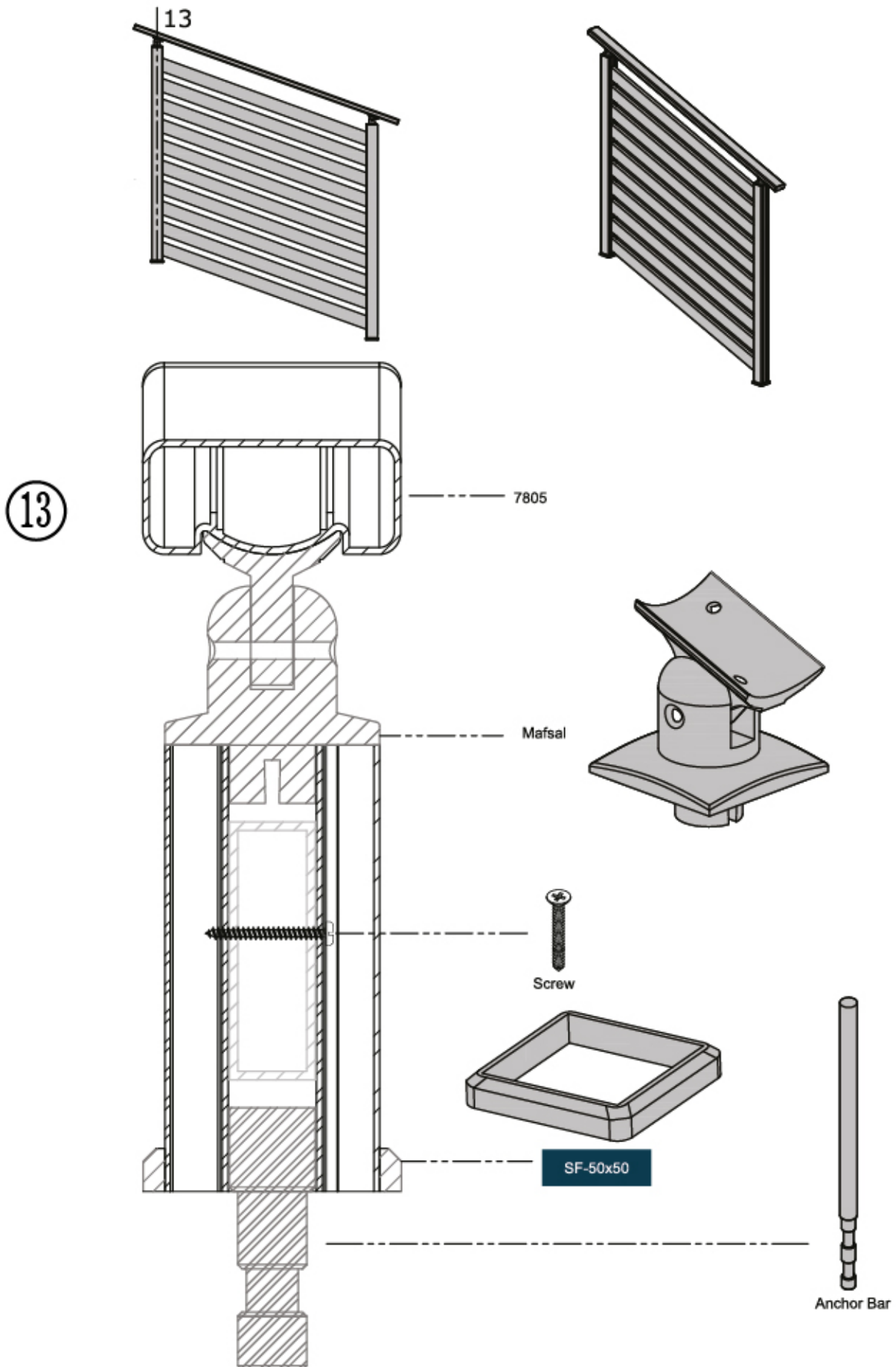
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ADDITIONAL PROFILES



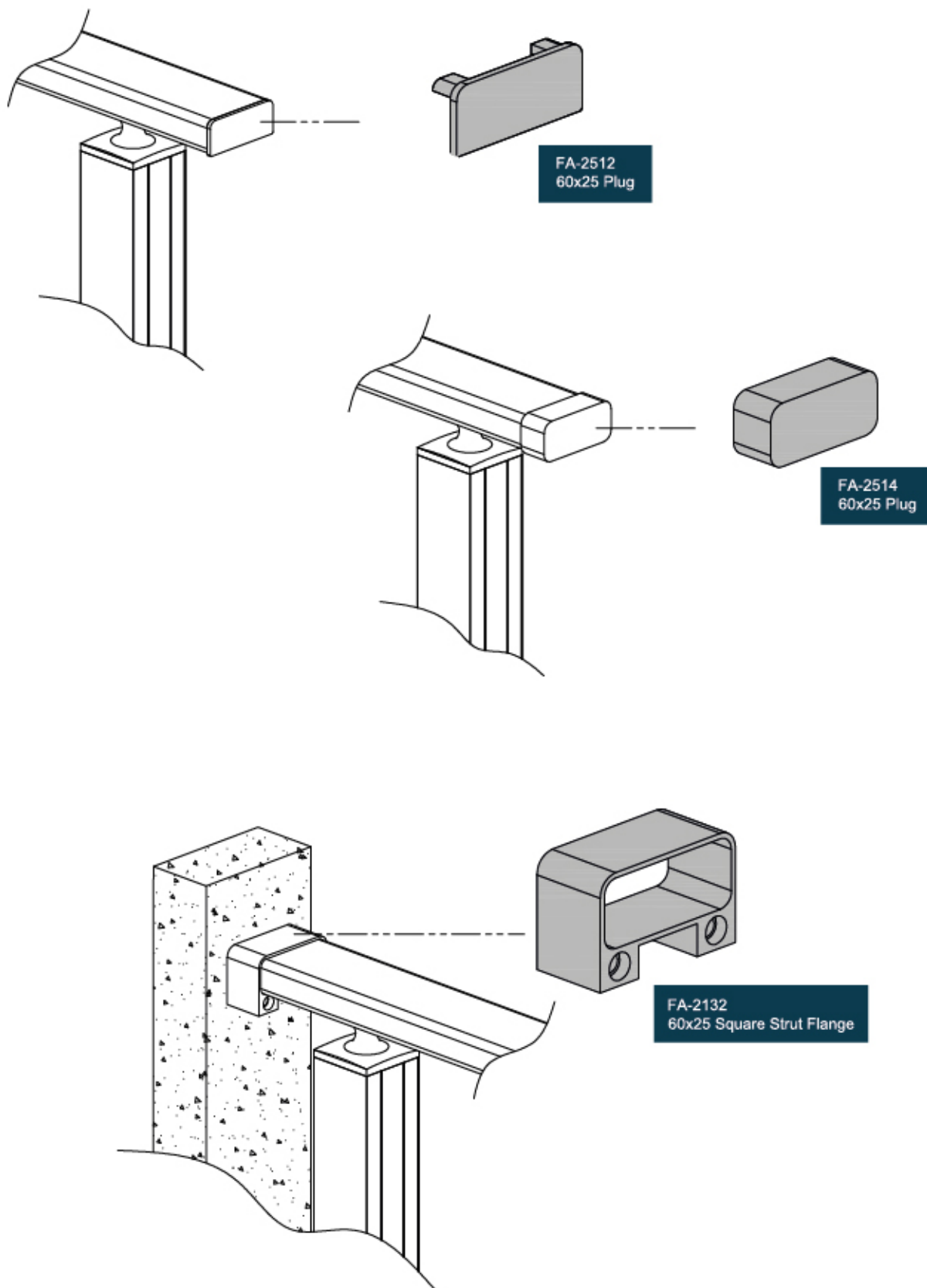
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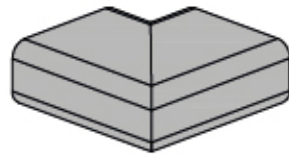
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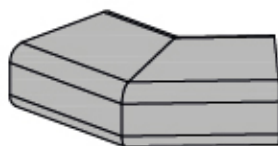
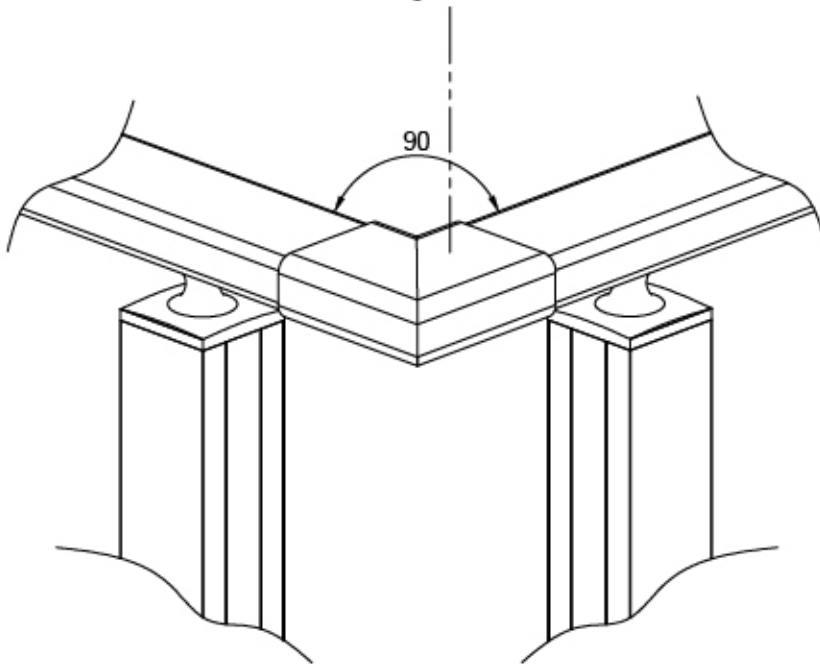
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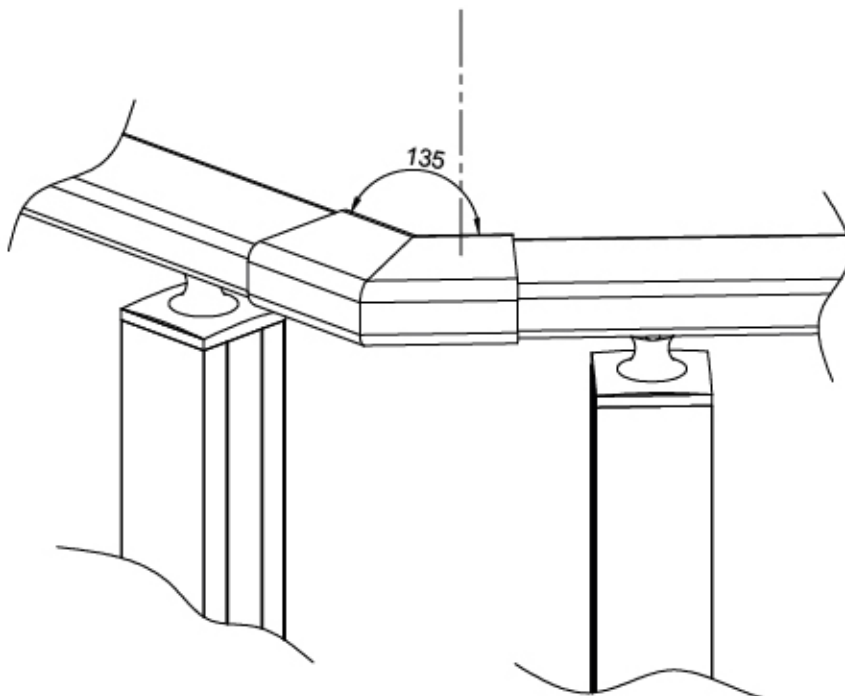
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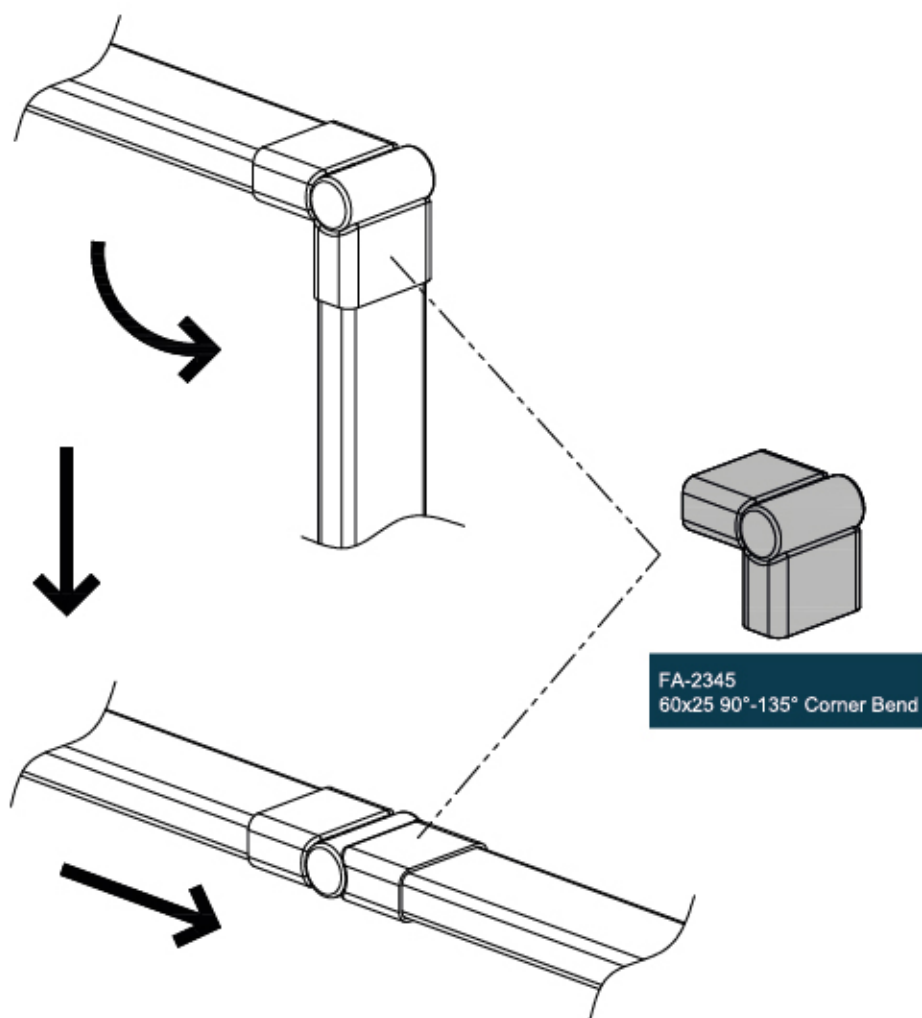
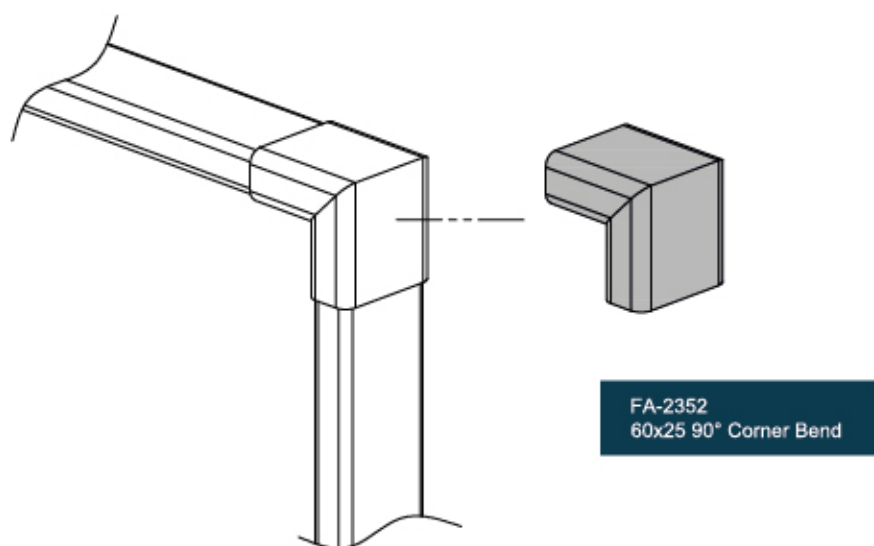
FA-2310
60x25 90° Bend



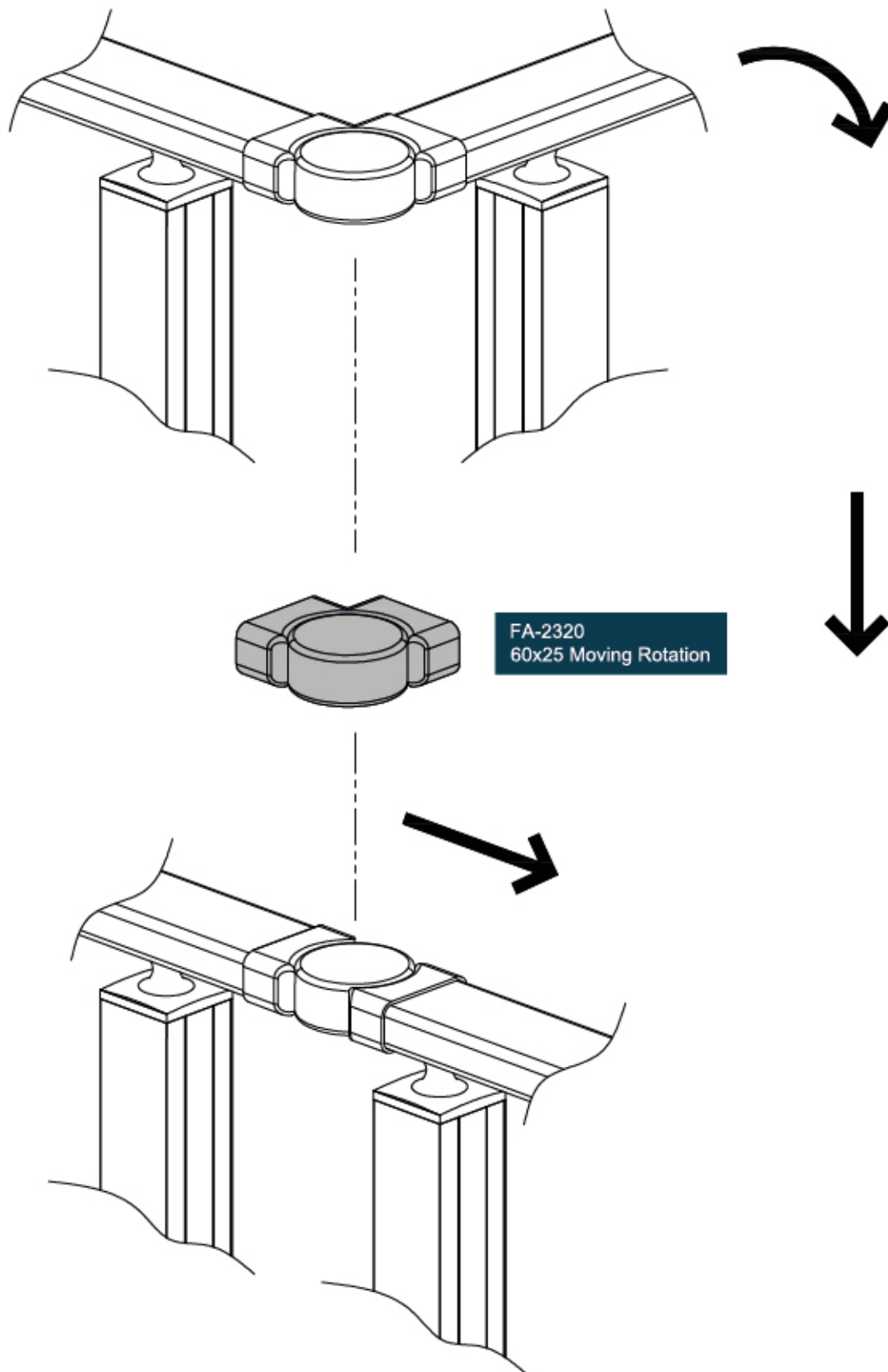
FA-2312
60x25 135° Bend



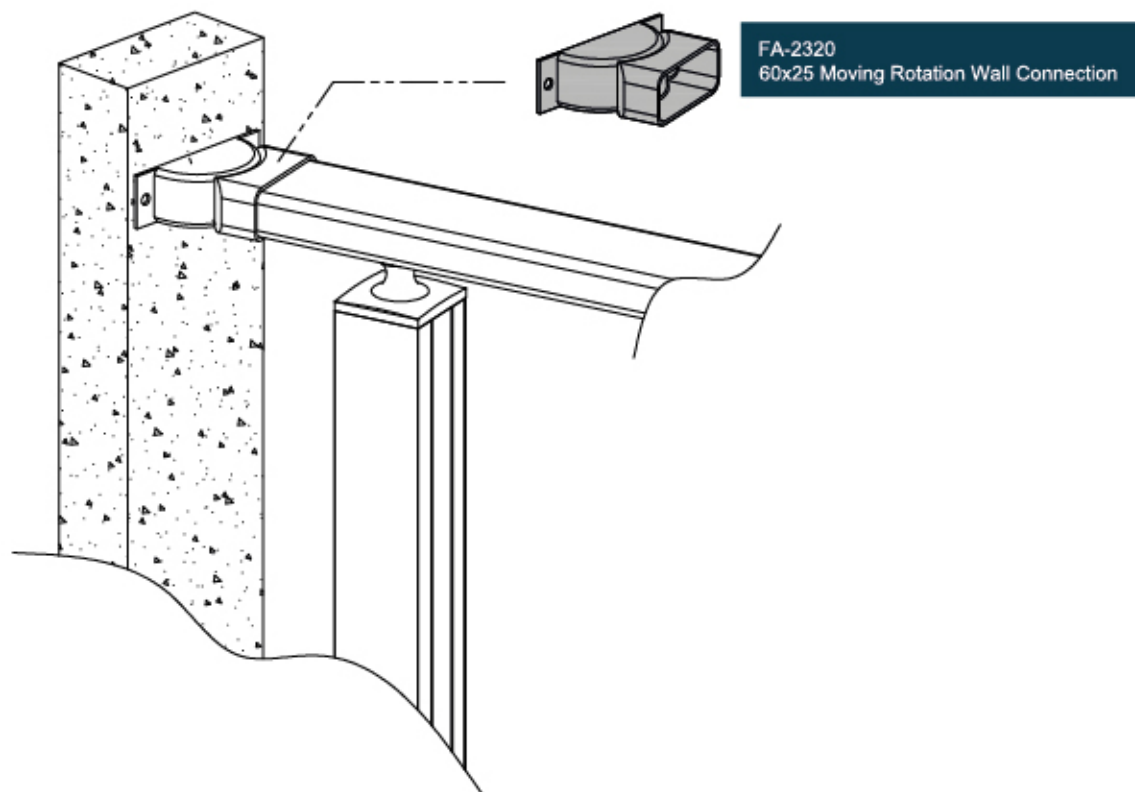
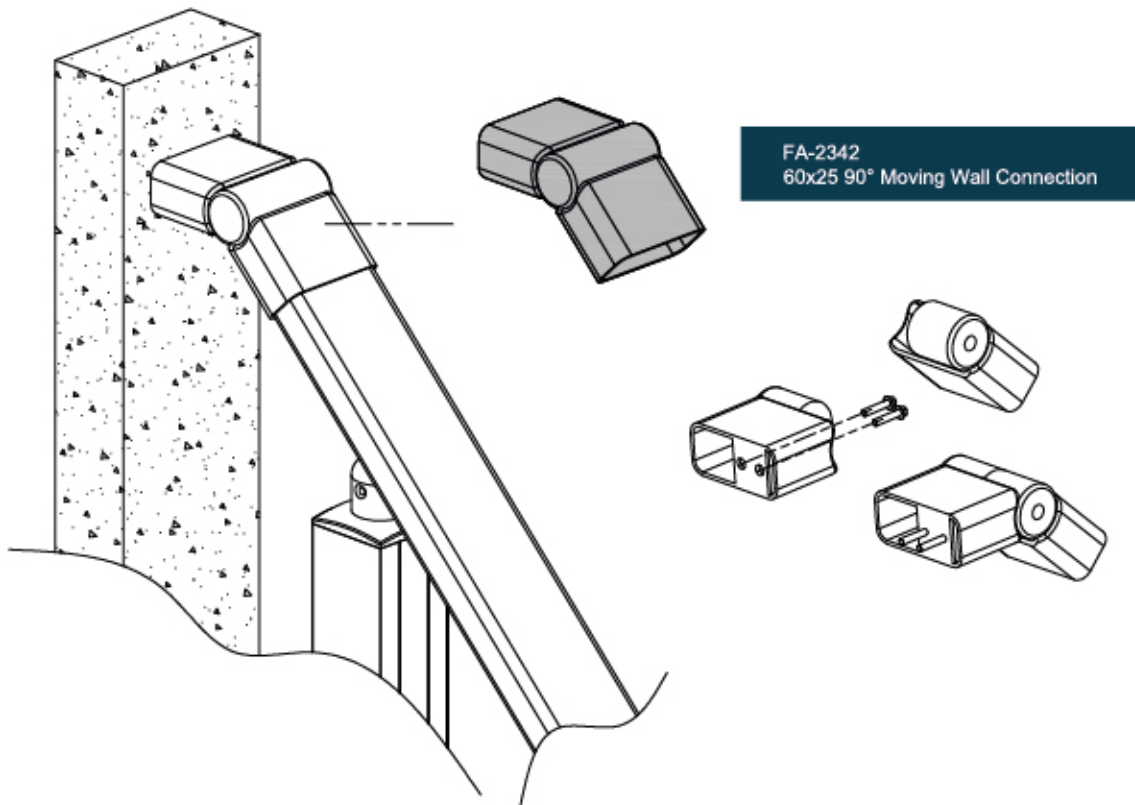
SECTIONS



SECTIONS

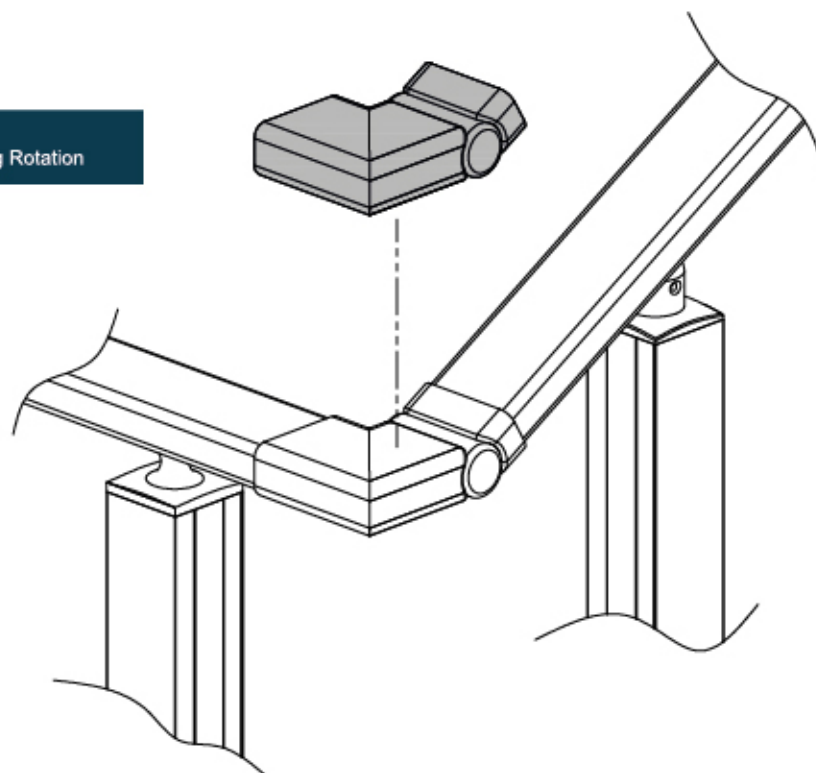


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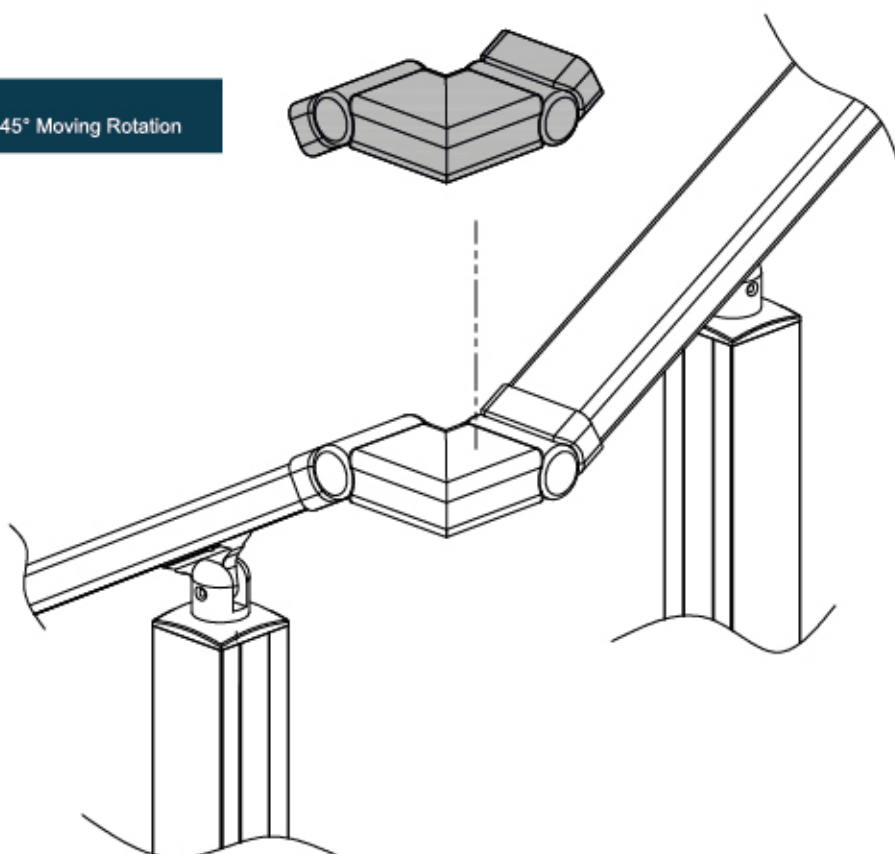


SECTIONS

FA-2334
60x25 45°-90° Moving Rotation



FA-2335
60x25 45°-90°-45° Moving Rotation
















ACCESSORIES

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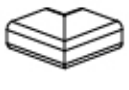



FENCE50
GARDEN AND FENCE SYSTEM






ACCESSORIES

	Accessor Drawings	Accessor Description
SP-50x50		50 x 50 Strut Plug
SF-50x50		50 x 50 Strut Flange
SP2-50x50		50 x 50 Strut Sheet Plug
SF2-50x50		50 x 50 Strut Sheet Flange
CAP-8865		33 x 24 Strut Plug

	Accessor Drawings	Accessor Description
01-815		40mm Anchor Bar - Height 14
01-811		40mm Anchor Bar - Height 21
01-816		40mm Anchor Bar - Height 30
01-817		40mm Anchor Bar - Height 40
ST-30		Anchor Adhesive
01-959		Anchor Adhesive Gun

ACCESSORIES

	Accessor Drawings	Accessor Description
SC-50x50		50 x 50 Strut Connection
ASC-50x50		50 x 50 Angle Strut Connection
FA-2512		60x25 Plug
FA-2514		60x25 Plug
FA-2132		60x25 Square Strut Flange
FA-2310		60x25 90° Bend
FA-2312		60x25 135° Bend
FA-2352		60x25 90° Corner Bend
FA-2345		60x25 90°-135° Corner Bend

	Accessor Drawings	Accessor Description
FA-2320		60x25 Moving Rotation
FA-2342		60x25 90° Moving Wall Connection
FA-2320		60x25 Moving Rotation Wall Connection
FA-2334		60x25 45°-90° Moving Rotation
FA-2335		60x25 45°-90°-45° Moving Rotation