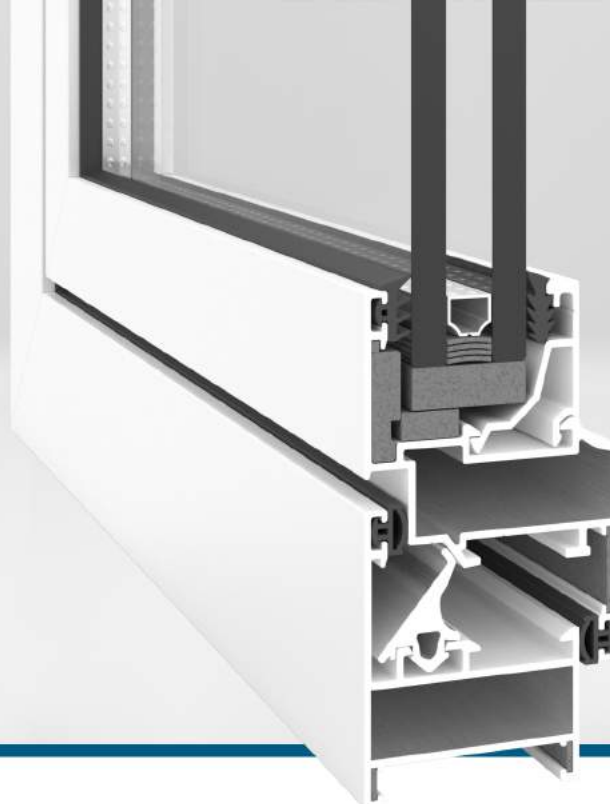




A ALTEST[®]
ALUMINIUM PROFILES SYSTEMS

PONY





ALTEST[®]
Ltd.

ATTENTION!

For faultless operation, please read carefully this catalogue!

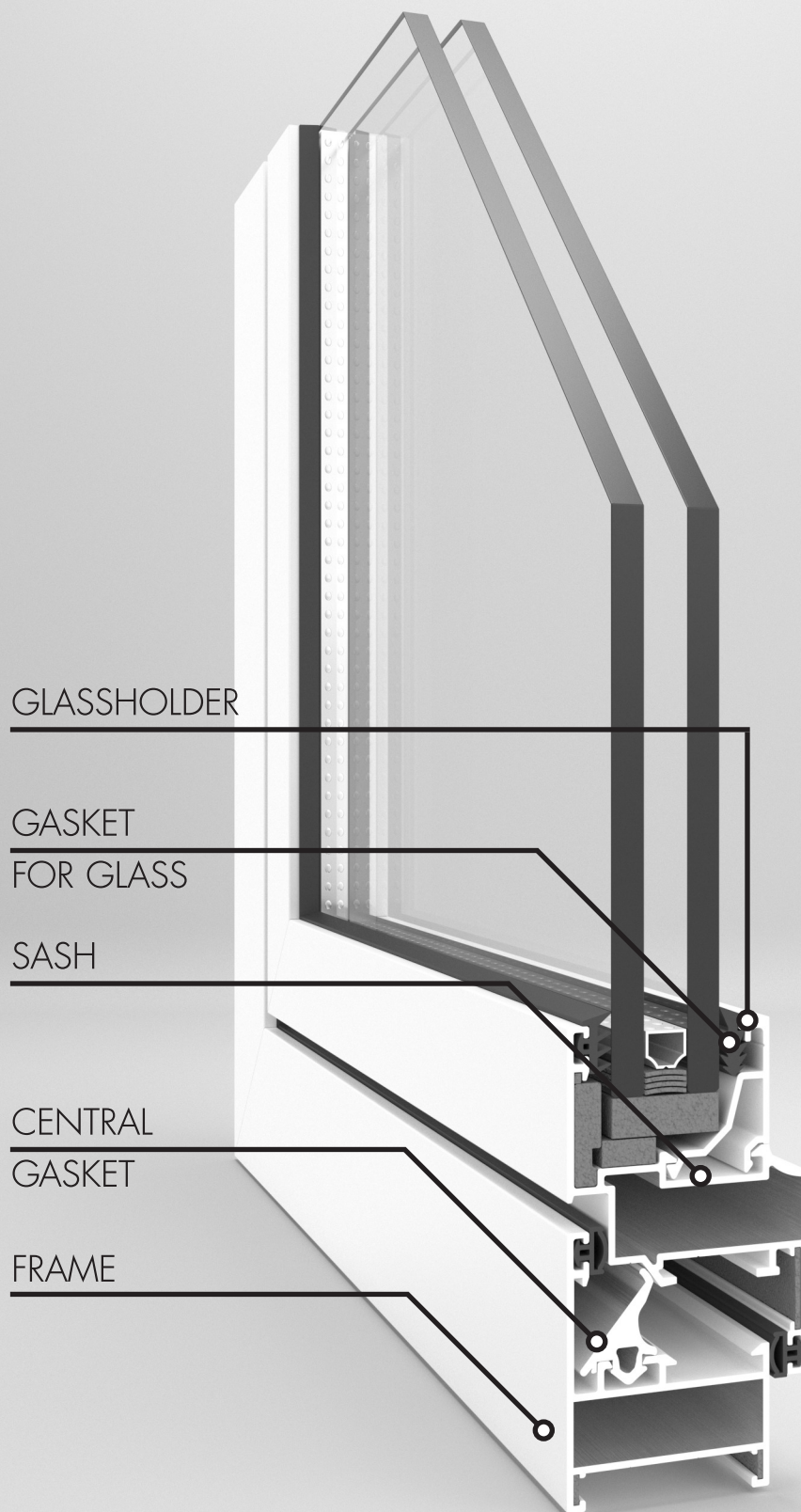
It was elaborated by ALTEST Company. Its copying, reproduction, and reprinting without our consent is not welcomed!

The profiles presented in the catalogue are patented and ALTEST Company has the exclusive rights. ALTEST Company reserves that right to modify the profiles and the presented sections at its own discretion. The system is equipped with full set of calculations made in accordance with the existing manufacturing requirements, presented in this catalogue.

In conclusion - use original ALTEST profiles in compliance with the peculiarities and the technical characteristics presented in this catalogue.

CONTENTS:

- 1. PROFILES OVERVIEW**
- 2. ACCESSORIES**
- 3. PROFILES**
- 4. SECTIONS**
- 5. CUTTING ANALYSIS**
- 6. 3D DETAILS**



INTRODUCTION

The "PONY" system of company ALTEST is 37,5mm aluminium series designed according to European standards and comfortable to requirements and dimensions of the hardware- hinges,locks and etc.

The „PONY" system is suitable for different version of opening and fixed systems. The range of profiles,modern accessories and EPDM gaskets guarantee perfect draining and faultless performance in different situations. The series is suitable also for tilt and turn mechanism.Versions of fixed,vertical and horizontal opening windows as well as fixed and opening sections doors are possible.

The „PONY" system is based on work with three seal gaskets-central, outer and inner(the central gasket is specially designed for the series). The dimensions of the hardware channel are designed according to the European Standard and in this way it provides trouble-free use of hardware and joints.The wide range of basic profiles and glass holders,allows the usage of single(4-10 mm) pane and 20 or 24 mm glazing.

Variable design elaboratons are possible, due to wide the variety of frames,sashes and other auxiliary profiles.

ALTEST company offers wide range of surface treatments : sublimation, powder coating ,anodizing and lamination.

„PONY" series are extruded from the following alloys: EN AW-6060 (Al Mg Si) and EN AW 6063 (Al Mg0,7 Si).

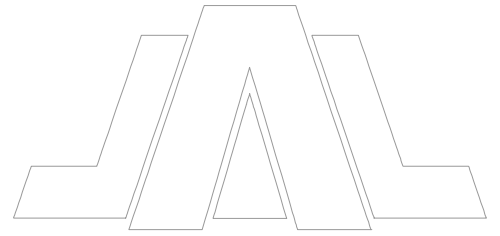
The properties of alloy EN AW-6063 are:

*Ultimate tensile strength- $R_m = 210 \text{ N/mm}^2$

*Yield strength- $R_{p0,2} = 160 \text{ N/mm}^2$

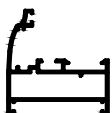
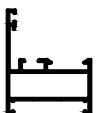
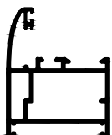
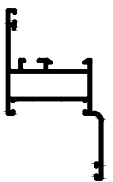
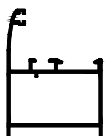
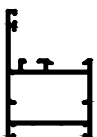
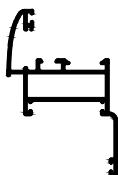
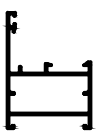
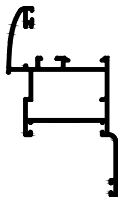
*Modulus of elasticity- $E_{al} = 70\,000 \text{ N/mm}^2 = 7 \cdot 10^9 \text{ kg/m}^2$

*Coefficient of thermal expansion: $\alpha = 0.023 \text{ mm/m} \cdot \text{K}$ (up to 1.2 mm/m for difference up to 50°)



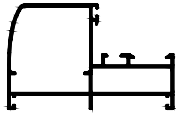
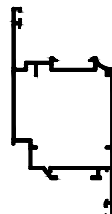
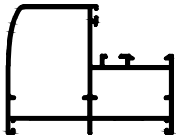
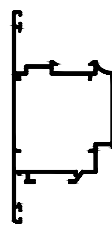
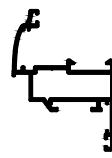
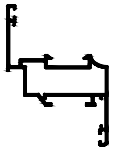
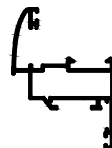
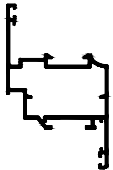
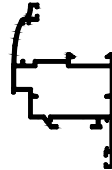
PROFILES OVERVIEW

PROFILES OVERVIEW

Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	375 0004 frame new *	322		375 0020 frame	668
	375 0005 frame	580		375 0035 frame	819
	375 0006 frame	702		375 0036 frame	687
	375 0010 frame	665		375 0040 frame	758
	375 0011 frame	560		375 0045 frame	841

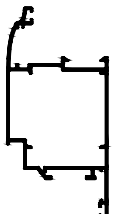
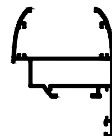
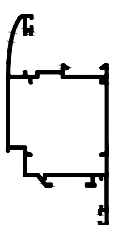
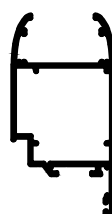
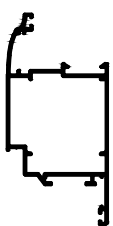
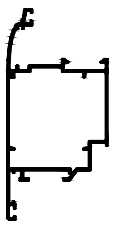
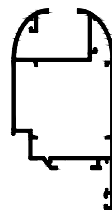
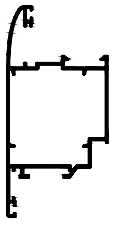
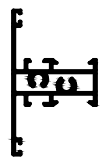
WARNING: ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.

PROFILES OVERVIEW

Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	375 0050 frame	957		375 0115 sash	965
	375 0055 frame	1072		375 0120 sash	954
	375 0405 frame	434		375 0125 sash	705
	375 0105 sash	694		375 0126 sash	716
	375 0110 sash	797		375 0130 sash	815

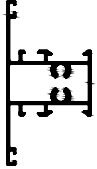
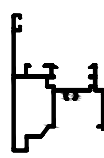
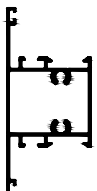
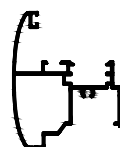
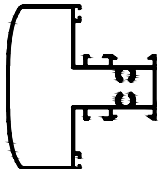
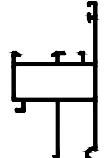
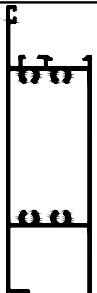
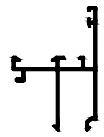
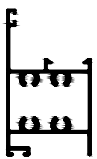
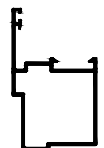
WARNING: ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.

PROFILES OVERVIEW

Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	375 0135 sash	940		375 0145 sash	722
	375 0136 sash	987		375 0155 sash	995
	375 0138 sash	897		375 0160 sash	800
	375 0140 sash	970		375 0170 sash	1064
	375 0141 sash	977		375 0205 mullion	840

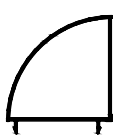
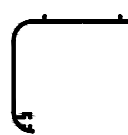
WARNING: ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.

PROFILES OVERVIEW

Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	375 0210 mullion	882		375 0305 overhung	738
	375 0215 mullion	954		375 0310 overhung	794
	375 0235 mullion	1192		375 0315 outer opening profile	758
	375 0225 door board	1482		375 0320 outer opening profile	542
	375 0226 door board	970		375 0325 addition for door	638

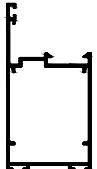
WARNING: ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.

PROFILES OVERVIEW

Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	375 0330 column for 90° angle	520		375 0345-1 addition for pipe	315
	375 0330-1 column for 90° angle	615		375 0350 decoration profile	225
	375 0335 column for 135° angle	400		375 0350-1 edge	385
	375 0340 pipe	428		375 0355 decoration profile	123
	375 0345 addition for pipe	279		375 0360 addition for door	255

WARNING: ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.

PROFILES OVERVIEW

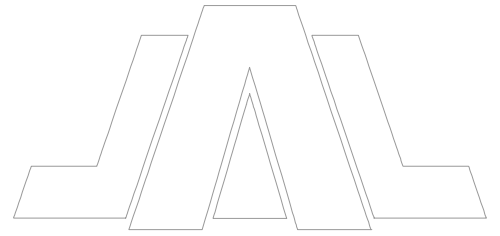
Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	375 0361 addition for door	488		375 0520 glass bead for 4 mm glass	268
	375 0365 door sill	379		375 0530 glass bead for 8 mm glass	260
	375 0410 two-sides sash	783		375 0550 glass bead for 24 mm glass	203
	375 0415 two-sides addition	395		1017 glass bead for 20 mm glass	222
	375 0510 glass bead for 0 mm glass	290		1200 glass bead for 4 mm glass	270

WARNING: ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.

PROFILES OVERVIEW

Profile shape	Profile code / description	Weight (gr/m)	Profile shape	Profile code / description	Weight (gr/m)
	9312 glass bead for 10 mm glass	235			
	9316 espagnolette	152			
	9317 profile larmier	106			
	1852 aluminium panel	326			
	9358 aluminium panel	804			

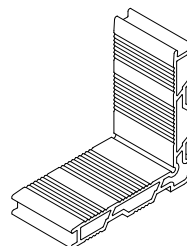
WARNING:ALL OF THE PROFILE WEIGHTS ARE THEORETICAL.



ACCESSORIES

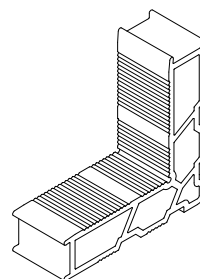
APE 1030/1031

Press corner



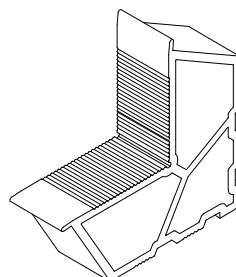
APE 2070

Press corner



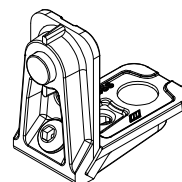
APE 4180

Press corner



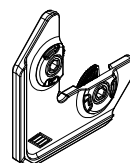
APE 3

Mechanical corner



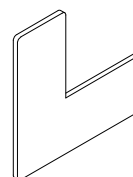
APE 10

Mechanical corner



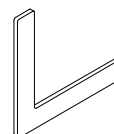
APE 7

Alignment corner



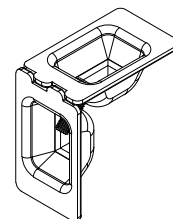
APE 6

Alignment corner



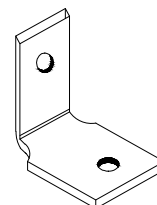
BA2870

big GABI joint

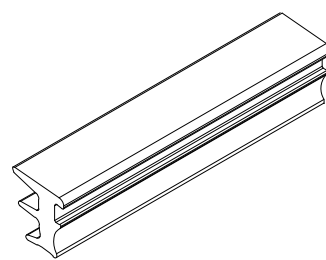


BA1001

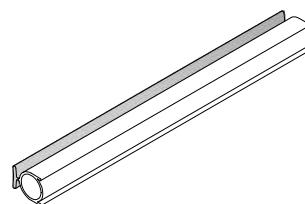
P100.1 joint



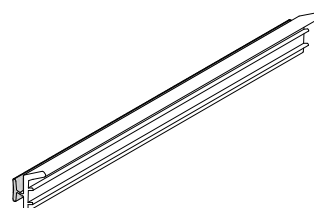
U00;0;1;1.5;2;2.5;3;4;5; EPDM gasket for glazing



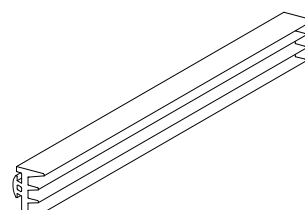
U60 gasket for the opening parts



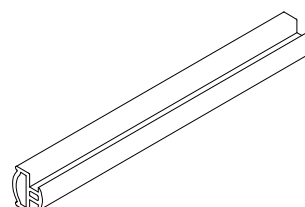
U68 gasket for the fix parts



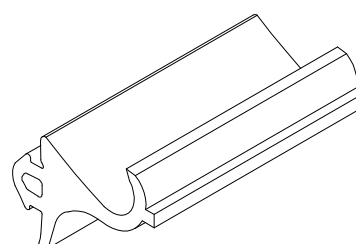
US68 EPDM gasket for the fix parts

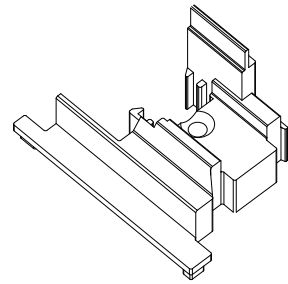


US60 EPDM gasket for the opening parts



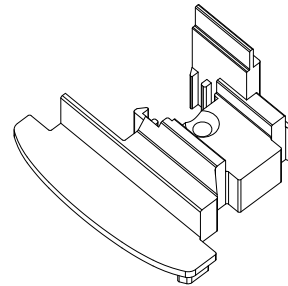
UG6168 EPDM central gasket





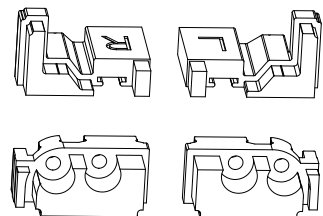
APE211

Cover cap for overhung 375 0305



APE200

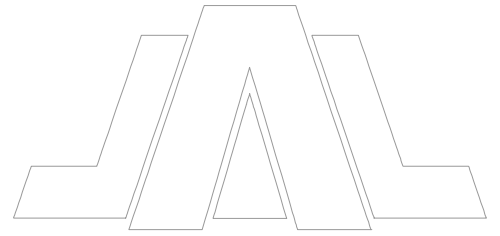
Cover cap for overhung 375 0310



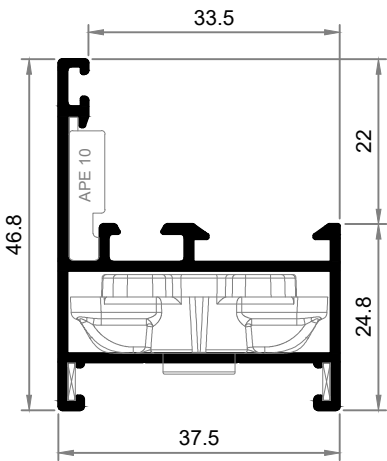
APE22

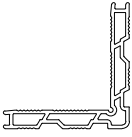
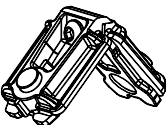
End caps for addition for door
3750360 & door sill 3750365

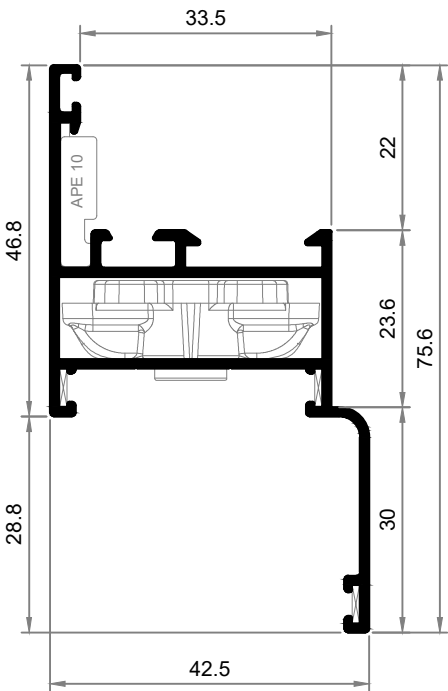
NEW*

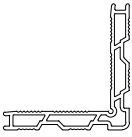
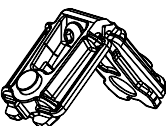


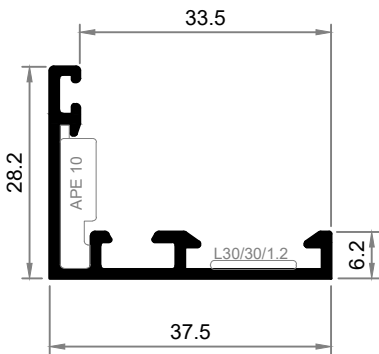
PROFILES

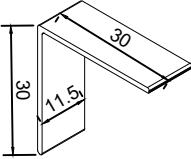


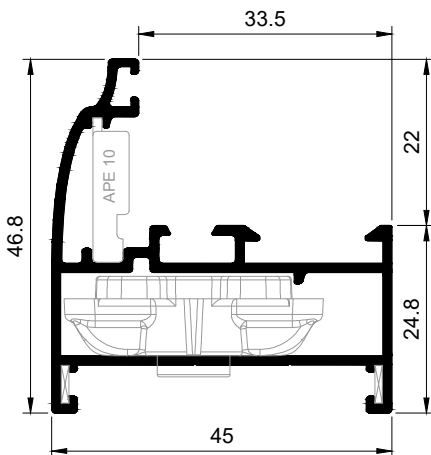
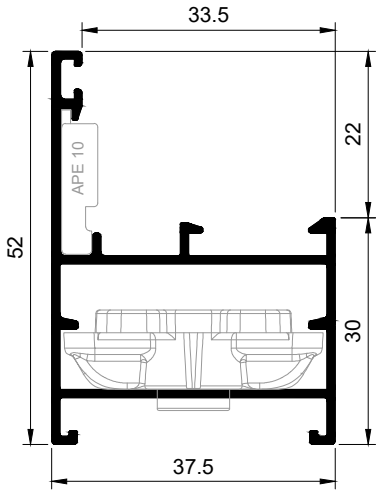
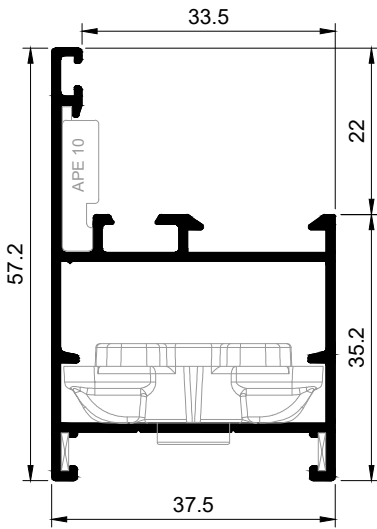
375 0005 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		580	2.85/4.18	0.99/1.88
JOINTS	   			
	APE 1030 APE 6 APE 10 APE 3			
GASKETS	 			
	   			
	U 00.0;1;1.5; 2;2.5;3;4;5 U 60 U 68 US 68 US 60 UG 6168			

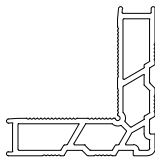
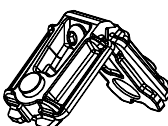


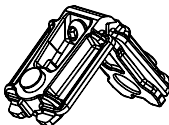
375 0006 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		702	7.23/6.74	1.76/2.98
JOINTS	   			
	APE 1030 APE 6 APE 10 APE 3			
GASKETS	 			
	   			
	U 00.0;1;1.5; 2;2.5;3;4;5 U 60 U 68 US 68 US 60 UG 6168			

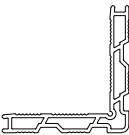
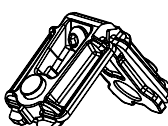


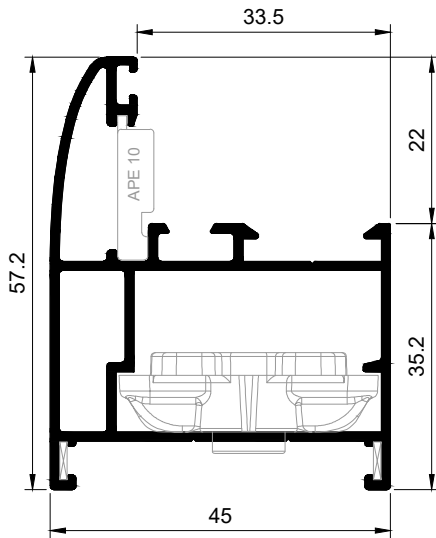
375 0004 Frame new*		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		322	0,89/1,86	0,43/0,74
JOINTS	 			GASKETS
	APE 10 L 30/30/1.2 0205			
GASKETS	 			
	U3 US 68			

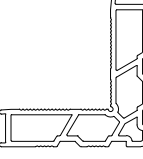
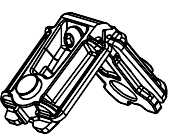


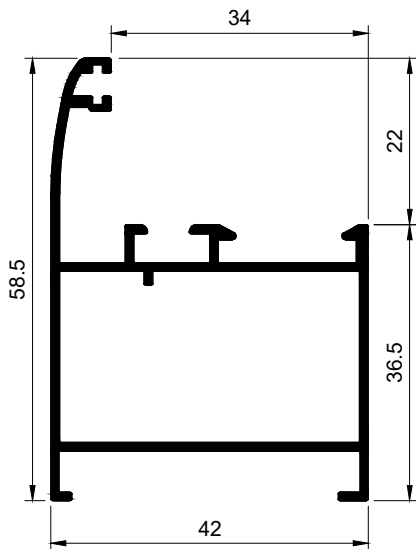
375 0010 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		665	5.50/5.20	1.63/2.39
JOINTS	   			
	APE 2070 APE 6 APE 10 APE 3			
GASKETS	 			
	   			

375 0011 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		560	3.77/4.42	1.20/2.03
JOINTS	 			
	APE 10 APE 3			
GASKETS	    			
	U 00.0;1;1.5;2;2.5;3;4;5 U 60 U 68 US 68 US 60			

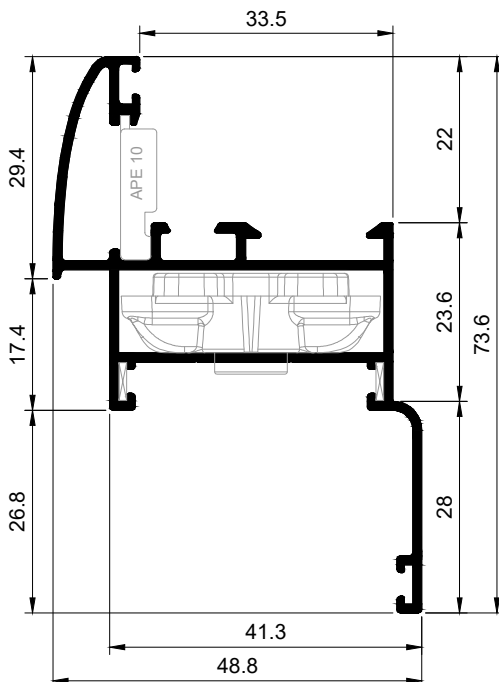
375 0020 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		668	3.31/6.23	1.15/2.41
JOINTS	   			
	APE 1031 APE 6 APE 10 APE 3			
GASKETS	 			
	   			
	U 68 US 68 US 60 UG 6168			

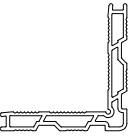
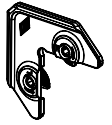
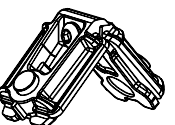


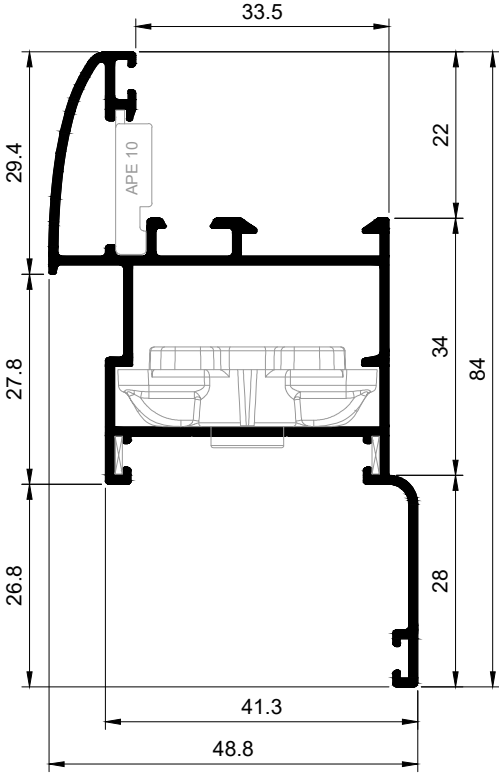
375 0035 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		816	7.00/7.81	2.10/2.96
JOINTS	   			
GASKETS	     			

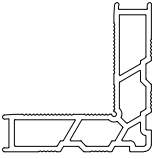


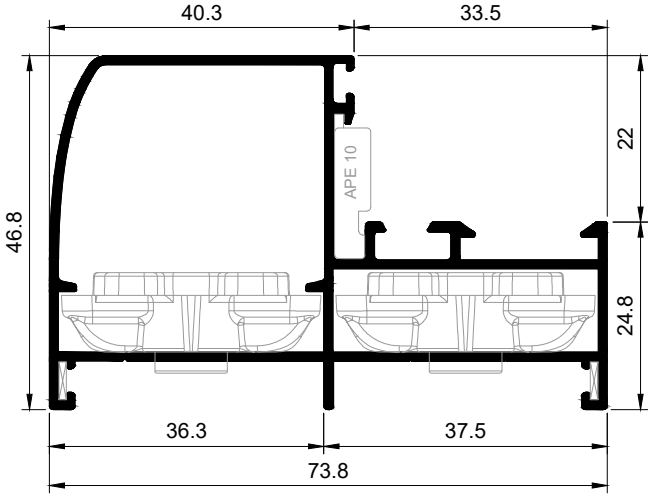
375 0036 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		687	6.22/6.41	1.86/2.69
JOINTS				
GASKETS	     			

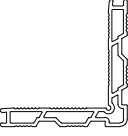


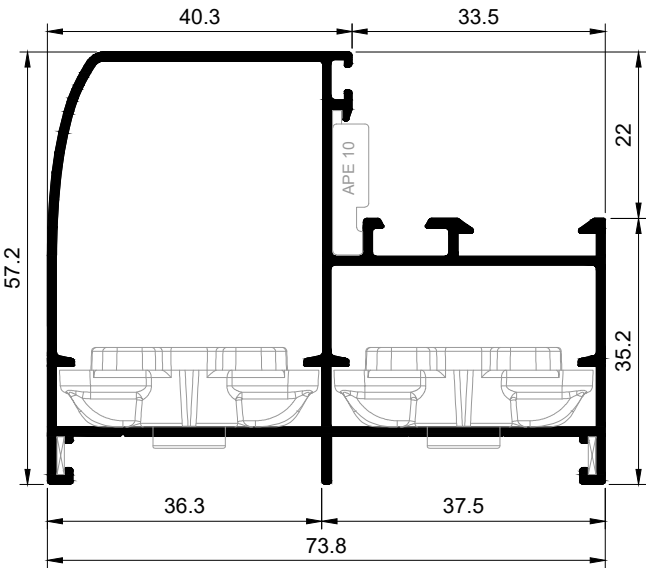
375 0040 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		758	7.80/8.13	1.91/3.32
JOINTS	   			
GASKETS	     			

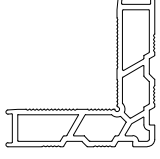
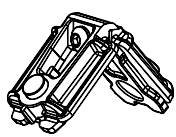


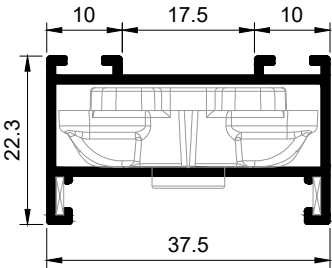
375 0045 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		841	12.39/9.00	2.66/3.63
JOINTS				
				
GASKETS				
				
GASKETS				
				
GASKETS				
				

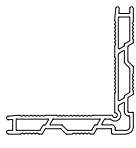
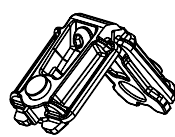


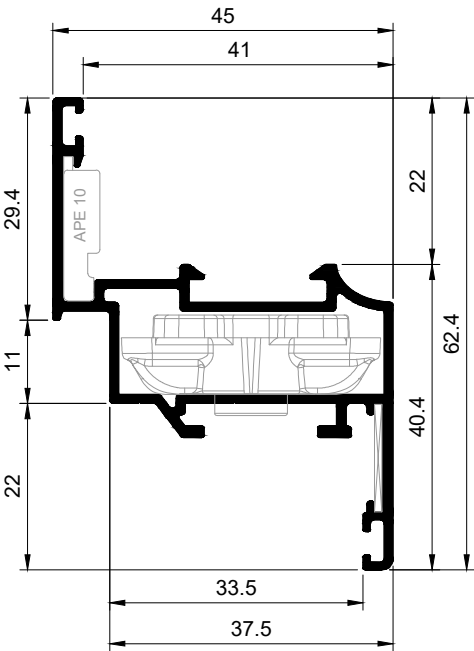
375 0050 Frame		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		957	7.22/19.77	2.70/5.19
JOINTS				
				
GASKETS				
				
GASKETS				
				
GASKETS				
				

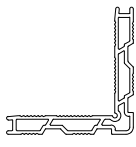
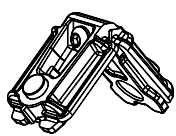


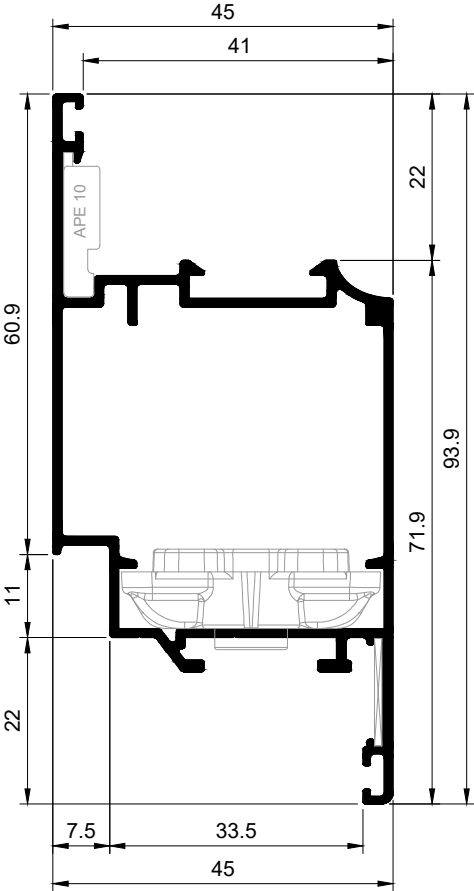
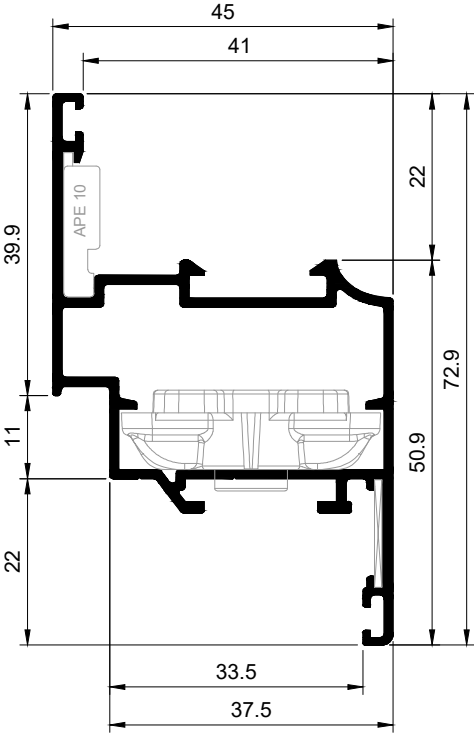
375 0055 Frame	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	1072	12.50/23.44	3.92/6.22
JOINTS	 APE 2070  APE 6  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60  UG 6168		

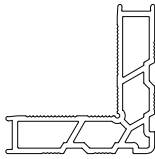
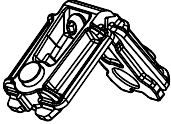


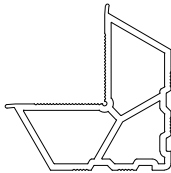
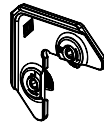
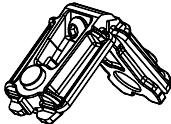
375 0405 Frame	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	434	0.76/3.06	0.61/1.63
JOINTS	 APE 1030  APE 6  APE 3		
BRUSHES	 TZ 12		

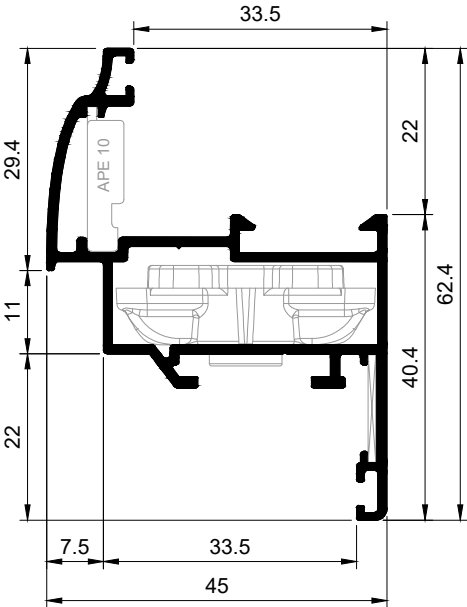
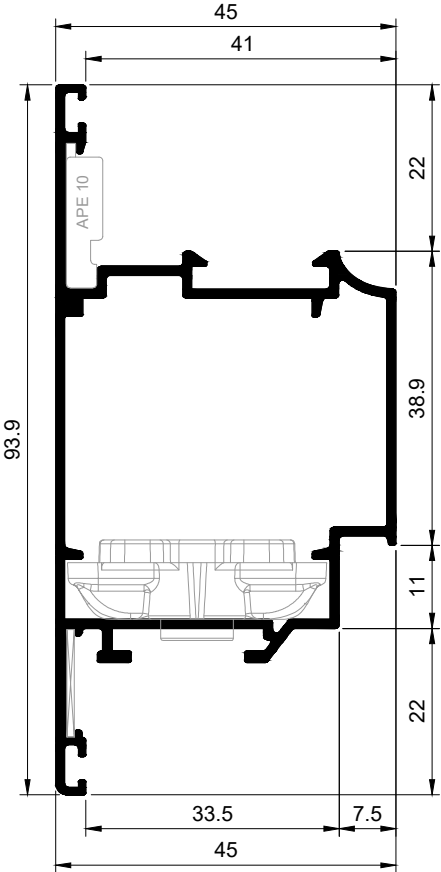


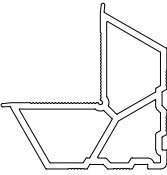
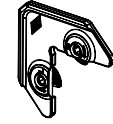
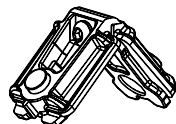
375 0105 Sash	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	694	4.75/6.90	1.48/2.95
JOINTS	 APE 1030  APE 7  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

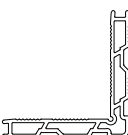
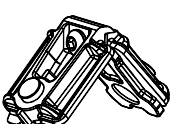


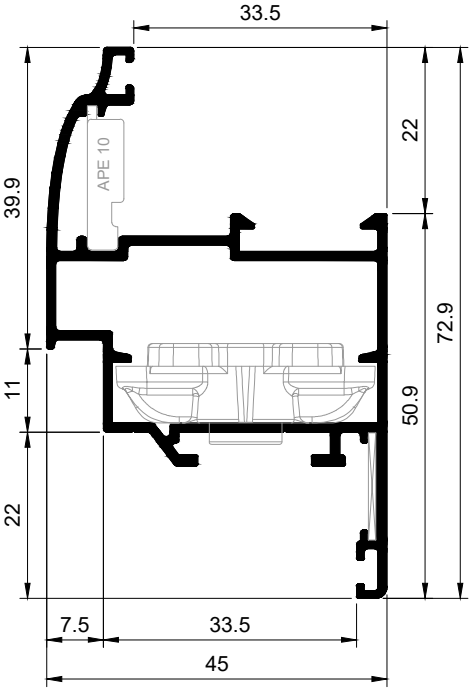
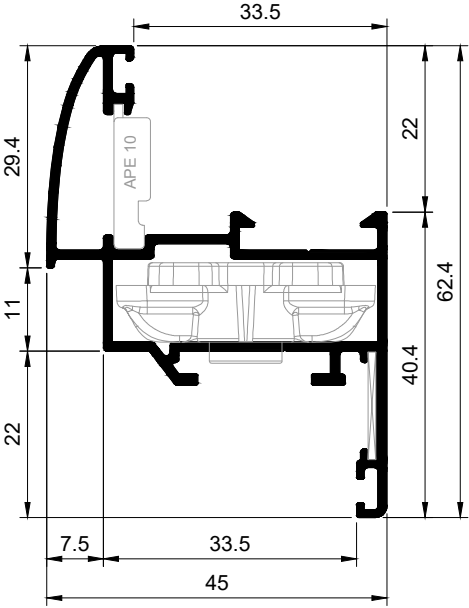
375 0110 Sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	797	8.44/8.53	2.26/3.71
JOINTS	 APE 2070  APE 7  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

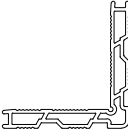
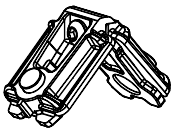
375 0115 Sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	965	21.13/11.26	4.47/4.90
JOINTS	 APE 4180  APE 7  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

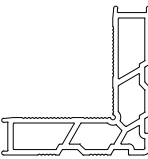
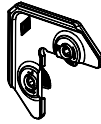
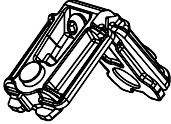


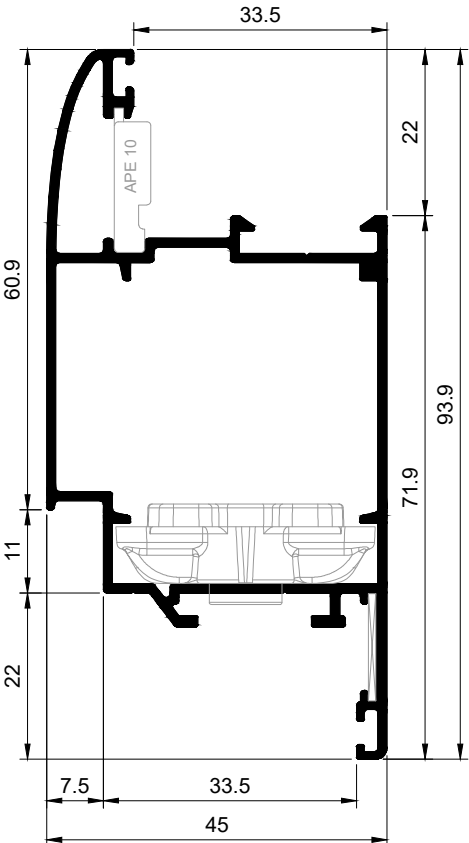
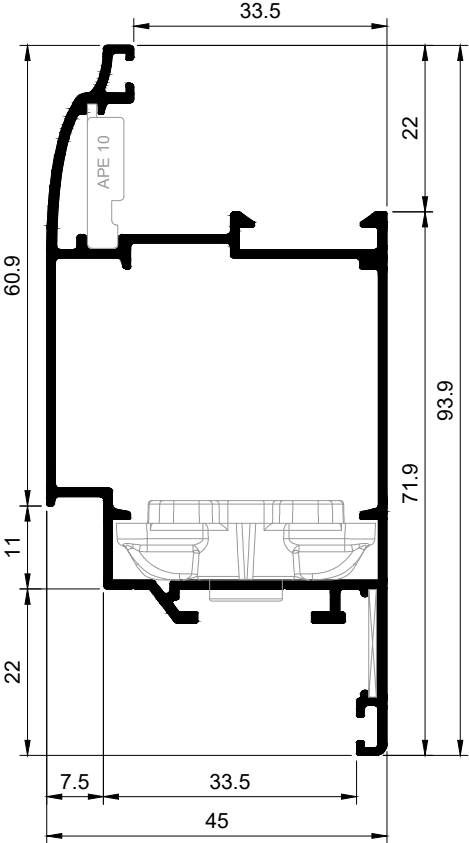
375 0120 Sash		Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
		954	20.95/10.07	4.41/3.58
JOINTS	 APE 4180  APE 7  APE 10  APE 3			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			

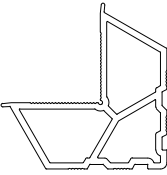
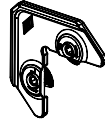
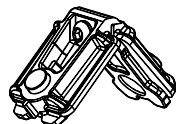
375 0125 Sash		Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
		705	5.13/6.65	1.62/2.76
JOINTS	 APE 1030  APE 7  APE 10  APE 3			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			

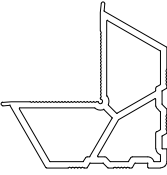
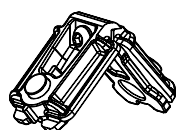


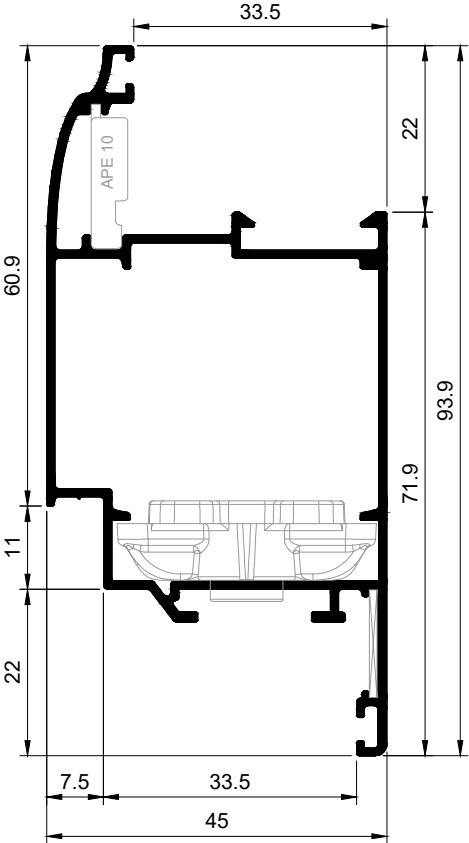
375 0126 Sash		Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
		716	5.63/6.72	1.80/2.81
JOINTS	 APE 1030  APE 7  APE 10  APE 3			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			

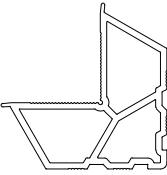
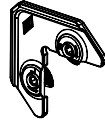
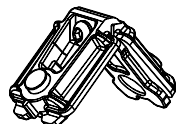
375 0130 Sash		Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
		815	8.98/8.36	2.44/3.57
JOINTS	 APE 2070  APE 7  APE 10  APE 3			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			

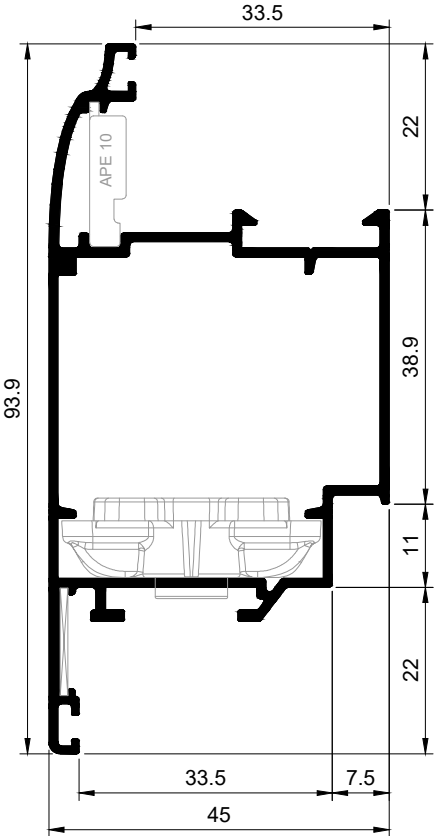


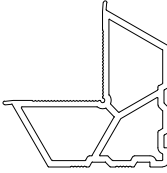
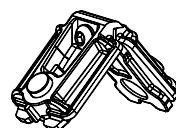
375 0135 Sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	940	21.55/10.65	4.59/4.57
JOINTS	 APE 4180  APE 7  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

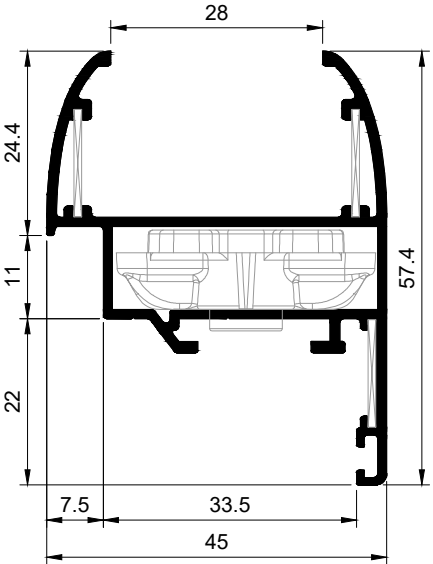
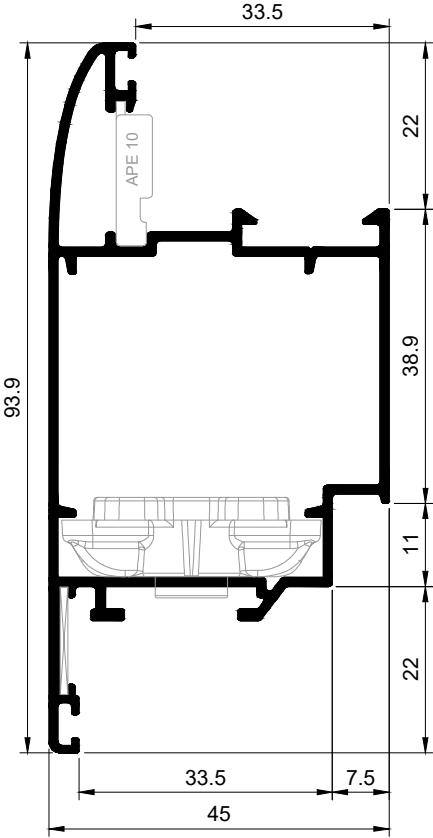
375 0136 Sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	987	23.08/11.11	4.86/4.77
JOINTS	 APE 4180  APE 7  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

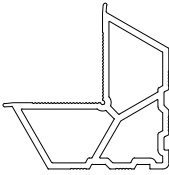
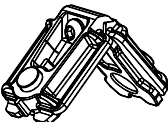


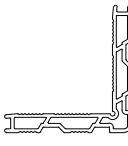
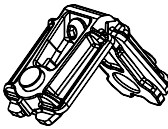
375 0138 Sash		Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
		897	20.80/10.20	4.41/4.38
JOINTS	 APE 4180			
	 APE 7			
GASKETS	 APE 10			
	 APE 3			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5			
	 U 60			
GASKETS	 U 68			
	 US 68			
GASKETS	 US 60			

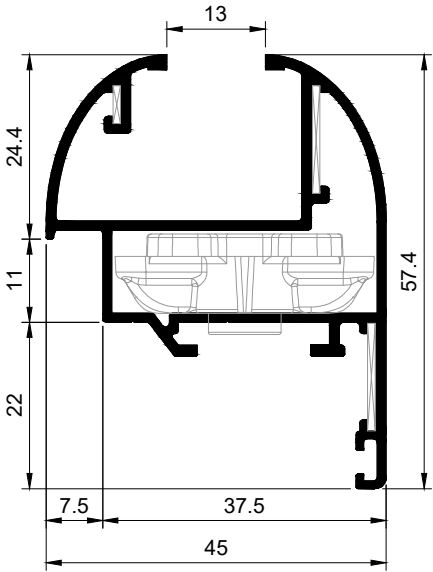
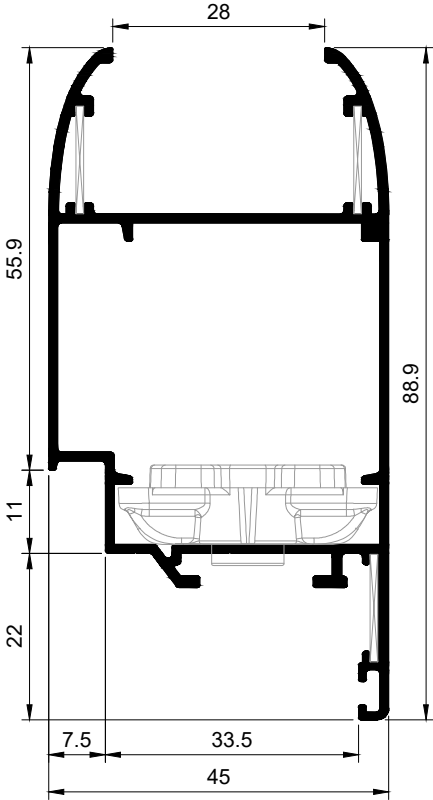


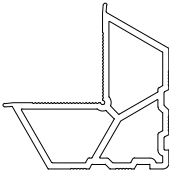
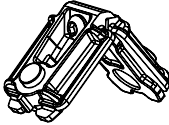
375 0140 Sash		Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
		970	21.93/10.07	4.67/3.64
JOINTS	 APE 4180			
	 APE 7			
GASKETS	 APE 10			
	 APE 3			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5			
	 U 60			
GASKETS	 U 68			
	 US 68			
GASKETS	 US 60			

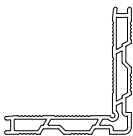
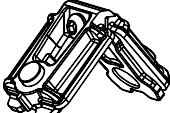


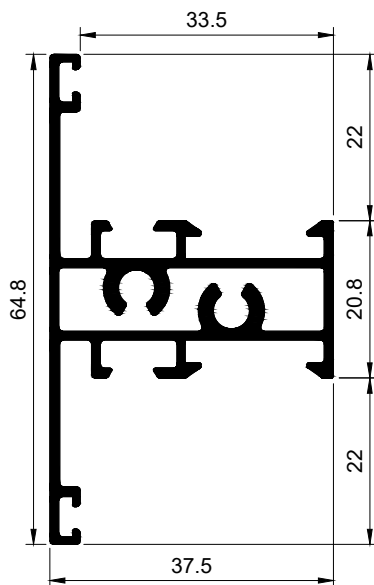
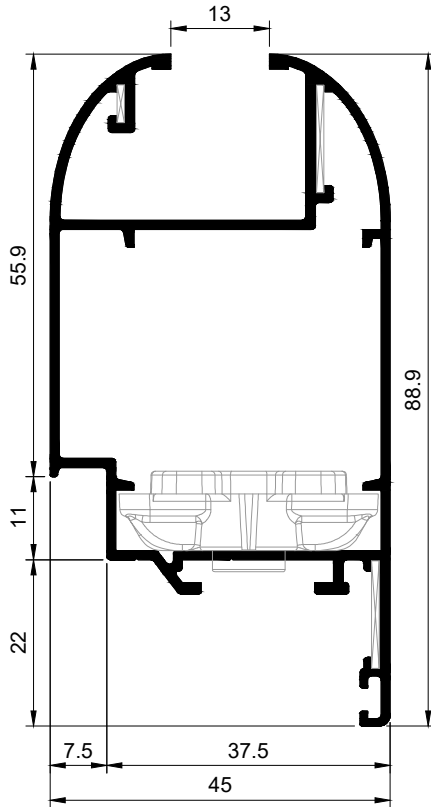
375 0141 Sash	Weight (gr/m)	I_x/ I_y (cm ⁴)	W_x/ W_y (cm ³)
	977	22.99/10.05	4.85/3.63
JOINTS	 APE 4180  APE 7  APE 10  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

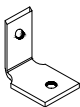
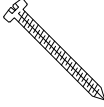
375 0145 Sash	Weight (gr/m)	I_x/ I_y (cm ⁴)	W_x/ W_y (cm ³)
	722	4.95/7.04	1.60/2.62
JOINTS	 APE 1030  APE 7  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

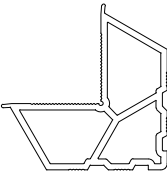
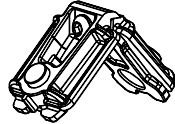


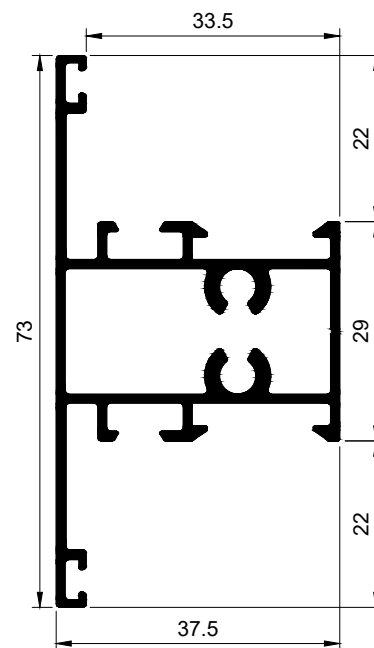
375 0155 Sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	995	22.15/11.57	4.67/4.54
JOINTS	 APE 4180  APE 7  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

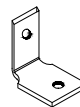
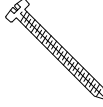
375 0160 Sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	800	6.31/6.68	1.89/2.54
JOINTS	 APE 1030  APE 6  APE 7  APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

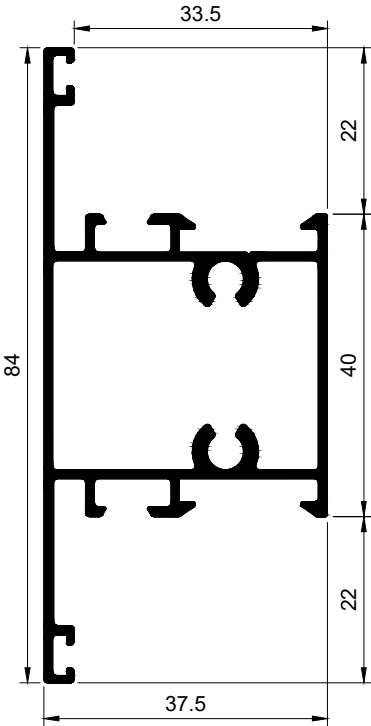


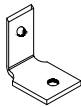
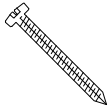
375 0205 Mullion		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		840	4.88/4.81	1.51/2.05
JOINTS	  BA 1001 VM 12212			
GASKETS	   US 68 US 60			

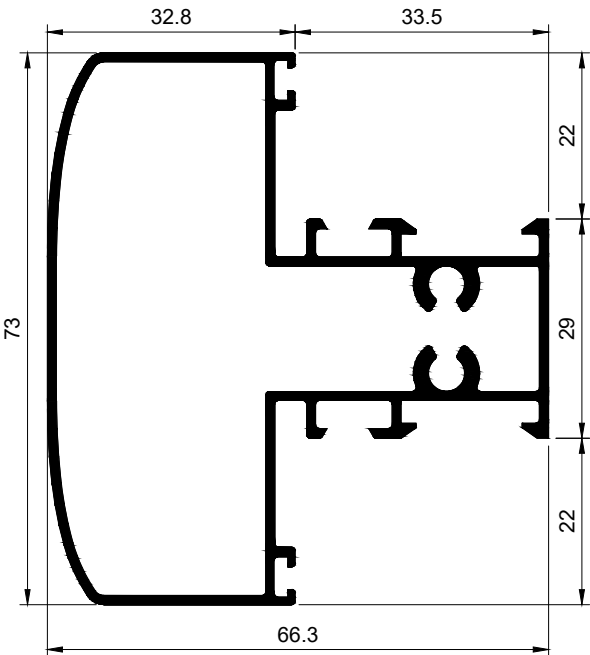
375 0170 Sash		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		1064	26.17/11.12	5.20/4.41
JOINTS	    APE 4180 APE 6 APE 7 APE 3			
GASKETS	     U 00.0;1;1.5; 2;2.5;3;4;5 U 60 U 68 US 68 US 60			

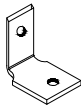
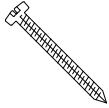


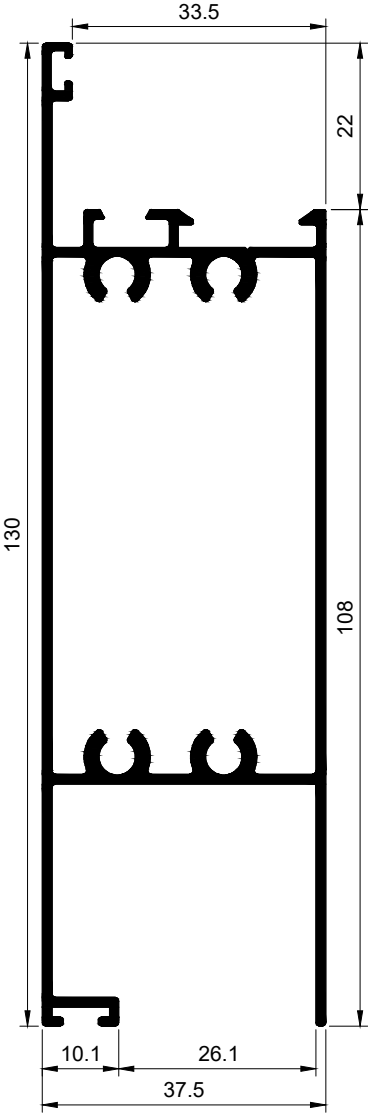
375 0210 Mullion		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		882	7.72/5.67	2.12/2.54
JOINTS	  BA 1001 VM 12212			
GASKETS	   US 68 US 60			

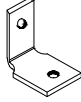
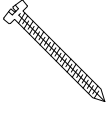


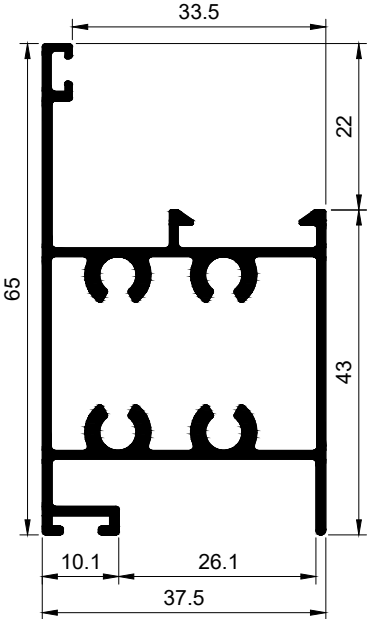
375 0215 Mullion	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	954	13.23/6.57	3.15/2.97
JOINTS	 BA 1001  VM 12212		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

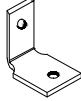
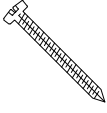


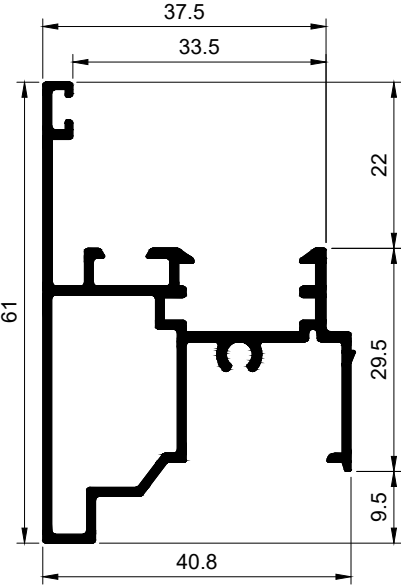
375 0235 Mullion	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	1192	18.23/19.69	4.99/5.93
JOINTS	 BA 1001  VM 12212		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60		

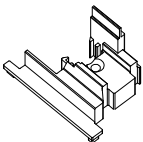


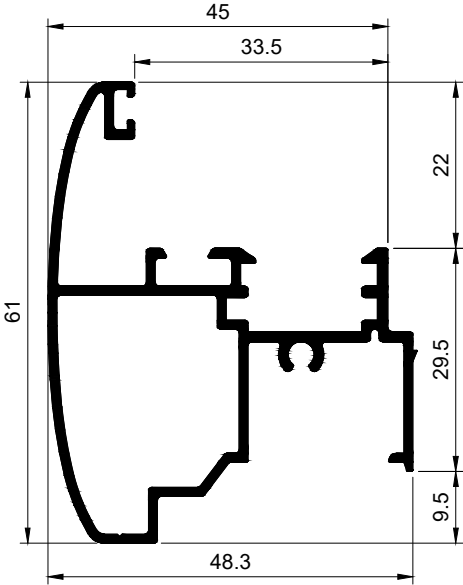
375 0225 Door board		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		1482	73.69/12.14	11.10/5.84
JOINTS	  BA 1001VM 12212			
GASKETS	   U 00.0;1;1.5; 2;2.5;3;4;5U 68US 68			
BRUSHES	 TZ 12;TZ18;			

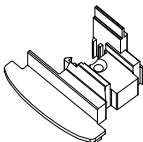


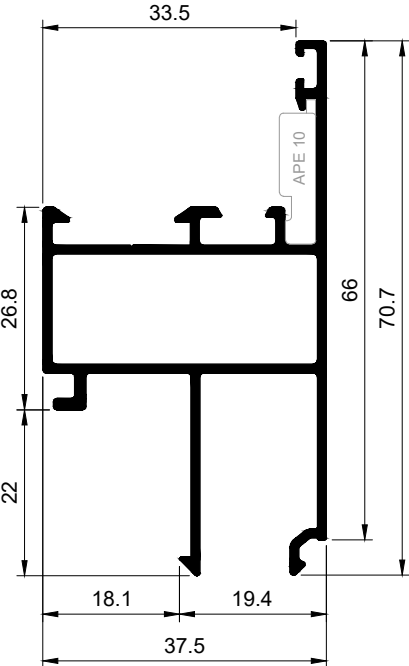
375 0226 Door board		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		970	9.14/6.20	2.34/2.87
JOINTS	  BA 1001VM 12212			
GASKETS	   U 00.0;1;1.5; 2;2.5;3;4;5U 68US 68			
BRUSHES	 TZ 12;TZ18;			



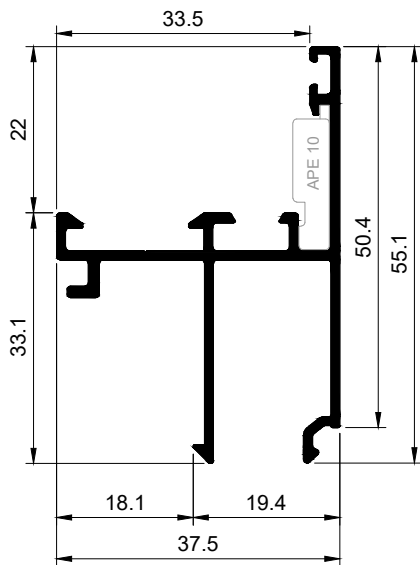
375 0305 Overhung		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		738	5.49/5.41	1.62/2.11
COVER CAP	 APE 211			
GASKETS	 U 60  US 60  UG 6168			



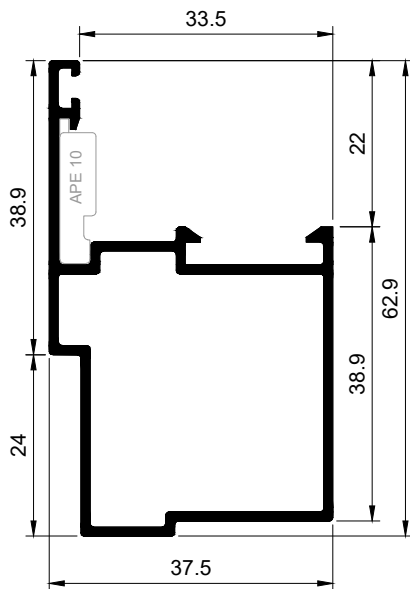
375 0310 Overhung		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		794	6.59/7.38	2.00/2.61
COVER CAP	 APE 200			
GASKETS	 U 60  US 60  UG 6168			



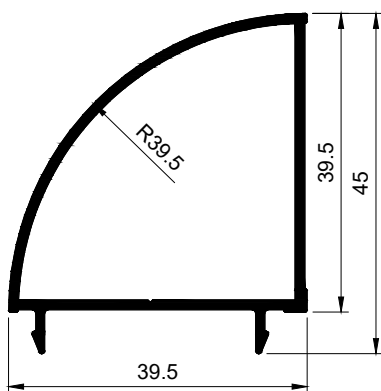
375 0315 Outer opening prof.		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		758	7.90/4.80	2.16/2.07
JOINTS	 APE 10			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			



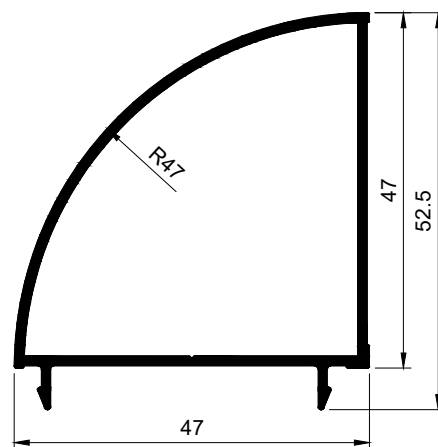
375 0320 Outer opening prof.		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		542	3.40/2.91	1.18/1.17
JOINTS	 APE 10			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			



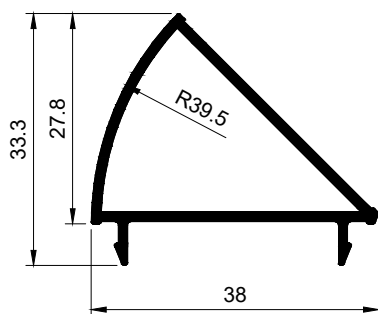
375 0325 Addition for door		Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
		638	7.50/4.82	2.09/2.26
JOINTS	 APE 10			
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 60  U 68  US 68  US 60			



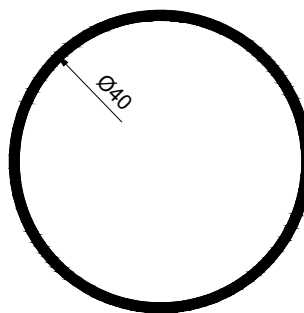
375 0330 Column for 90° angle	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	520	3.98/3.82	1.64/1.69



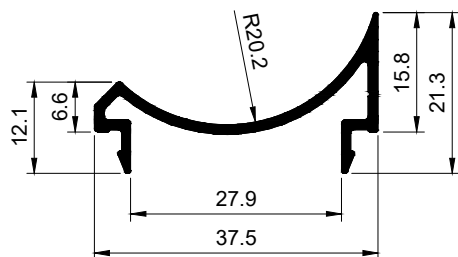
375 0330-1 Column for 90° angle	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	615	6.66/6.50	2.33/2.42



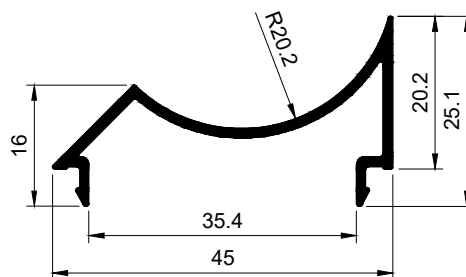
375 0335 Column for 135° angle	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	400	1.21/2.02	0.62/0.96



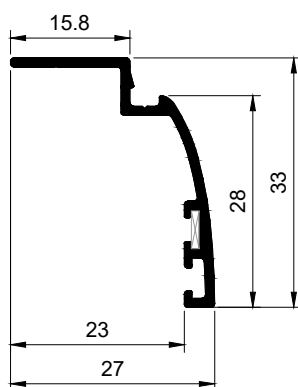
375 0340 Pipe	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	428	2.96/2.96	1.48/1.48



375 0345 Addition for pipe	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	279	0.18/1.91	0.14/0.88

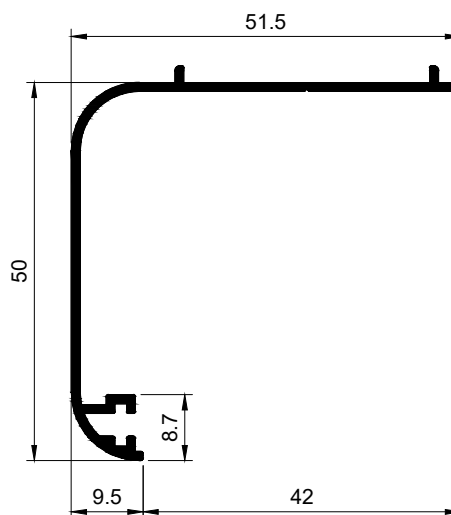


375 0345-1 Addition for pipe	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	315	0.31/2.95	0.22/1.09



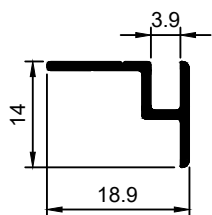
375 0350 Decoration profile	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	225	0.99/0.44	0.51/0.23

JOINTS	 APE 6	GASKETS	 U 60
--------	--	---------	--

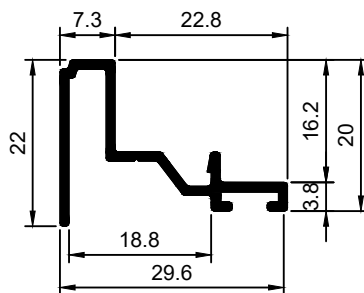


375 0350-1 Edge	Weight (gr/m)	I _x / I _y (cm ⁴)	W _x / W _y (cm ³)
	385	4.97/3.56	1.53/0.94

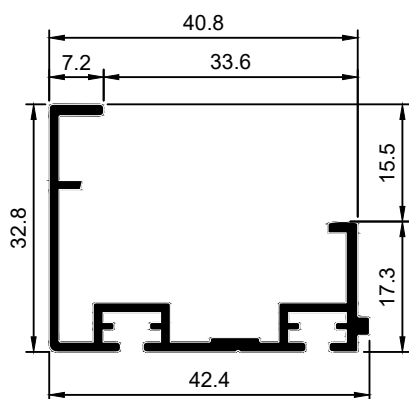
JOINTS	 APE 6	GASKETS	 U 60
--------	--	---------	--



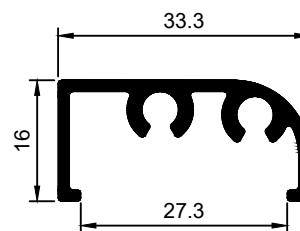
375 0355	Weight
Decoration	(gr/m)
profile	123



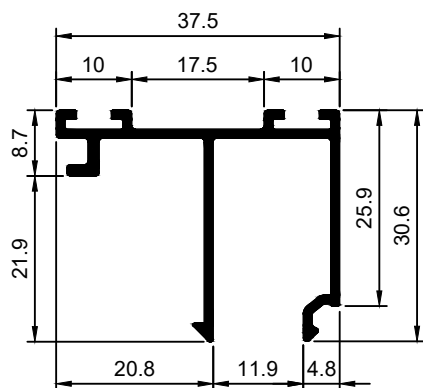
375 0360	Weight	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
Addition for door	(gr/m)		
	255	0.35/0.90	0.29/0.48
BRUSHES	 TZ 12;TZ18;		
END CAPS	 APE 22 NEW*		



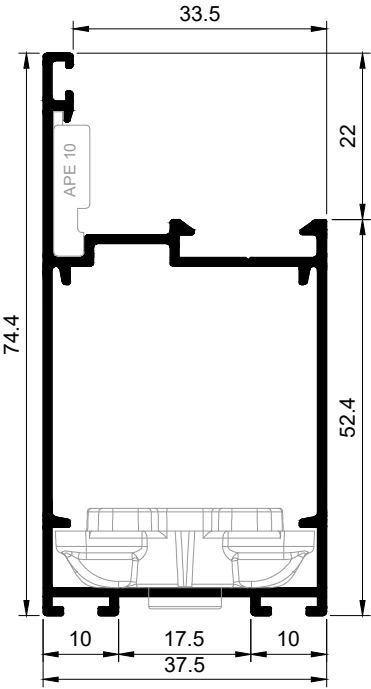
375 0361	Weight	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
Addition for door	(gr/m)		
	488	1.63/4.31	0.68/1.79
BRUSHES	 TZ 5.5		
CAPS	 SET APE 361		

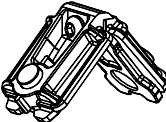


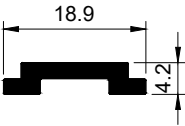
375 0365 Door sill	Weight (gr/m)	
	379	
END CAPS		 APE 22 NEW*



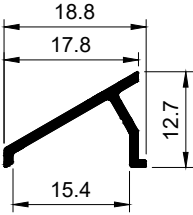
375 0415	Weight	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
Two-sides addition	(gr/m)		
	395	1.25/2.10	0.61/0.95



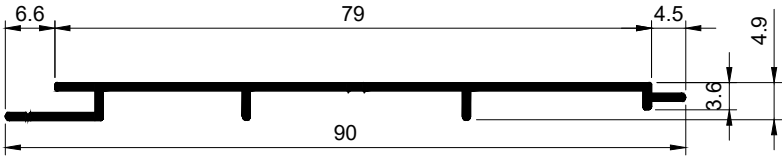
375 0410 Two-sides sash	Weight (gr/m)	I_x / I_y (cm ⁴)	W_x / W_y (cm ³)
	783	14.21/6.69	3.30/3.17
JOINTS	  APE 10 APE 3		
GASKETS	 U 00.0;1;1.5; 2;2.5;3;4;5  U 68  US 68		
BRUSHES	 TZ 12;TZ18;		



9316 Espagnolette	Weight (gr/m)
	152



9317 Profile larmier	Weight (gr/m)
	106

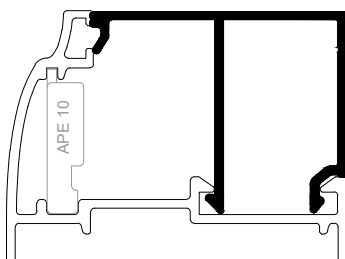


1852 Aluminium panel	Weight (gr/m)
	326

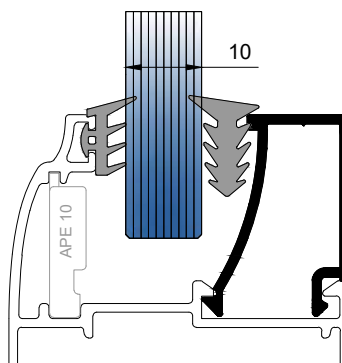


9358 Aluminium panel	Weight (gr/m)
	804

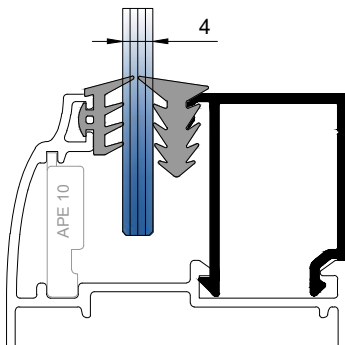
GLASS HOLDERS



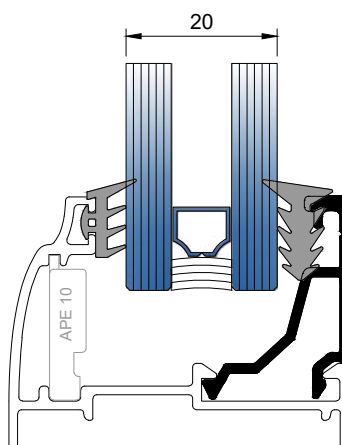
375 0510
/0mm glass bead/
weight: 290gr/m



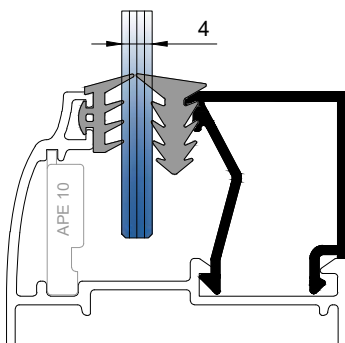
9312
/10mm glass bead/
weight: 235gr/m



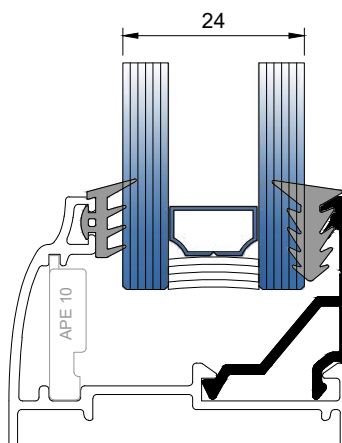
375 0520
/4mm glass bead/
weight: 268gr/m



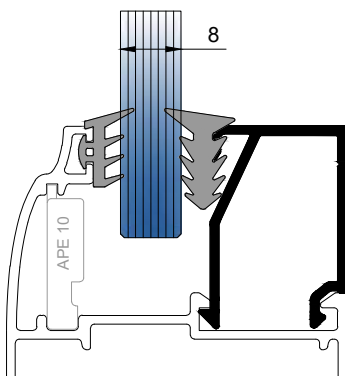
1017
/20mm glass bead/
weight: 222gr/m



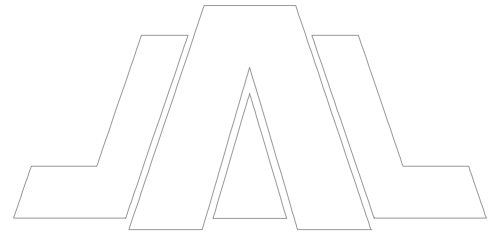
1200
/4mm glass bead/
weight: 270gr/m



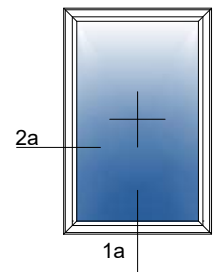
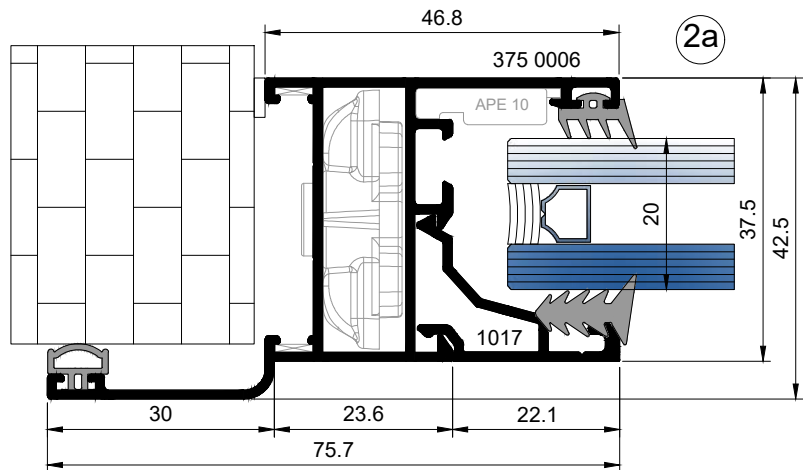
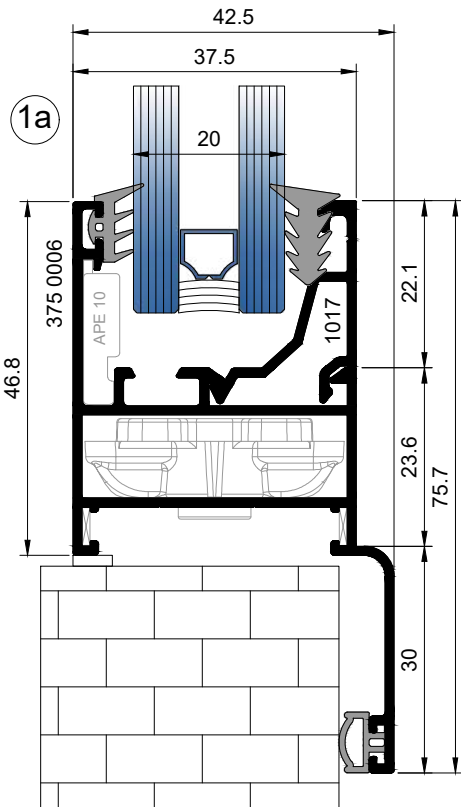
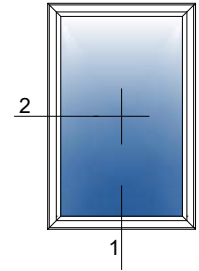
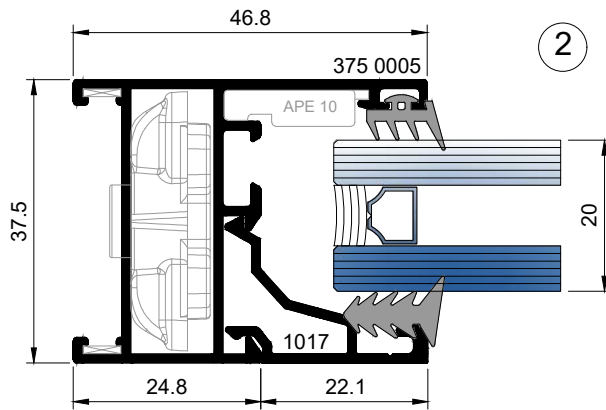
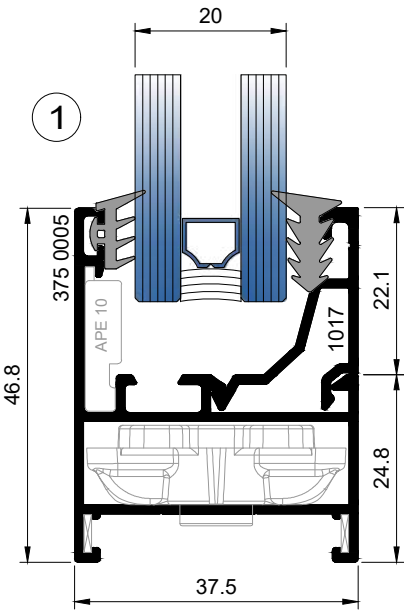
375 0550
/24mm glass bead/
weight: 203gr/m

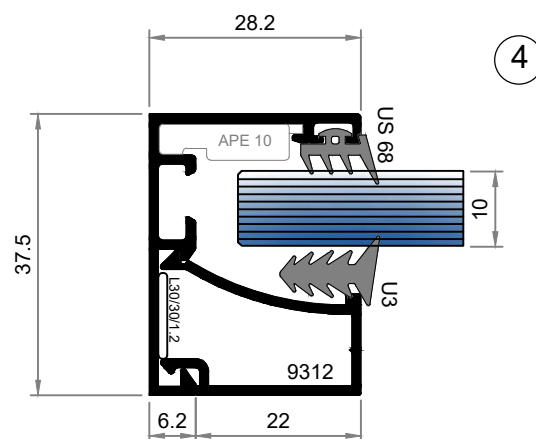
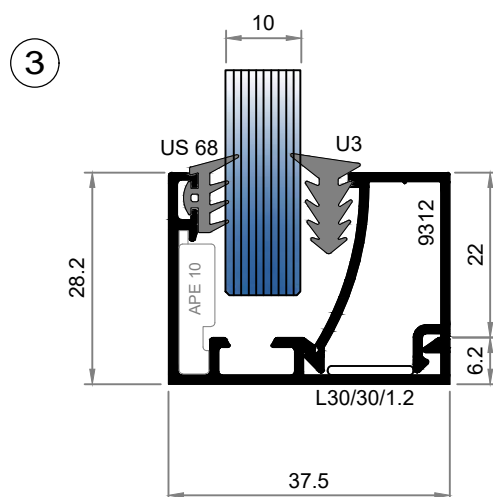
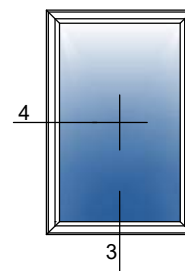


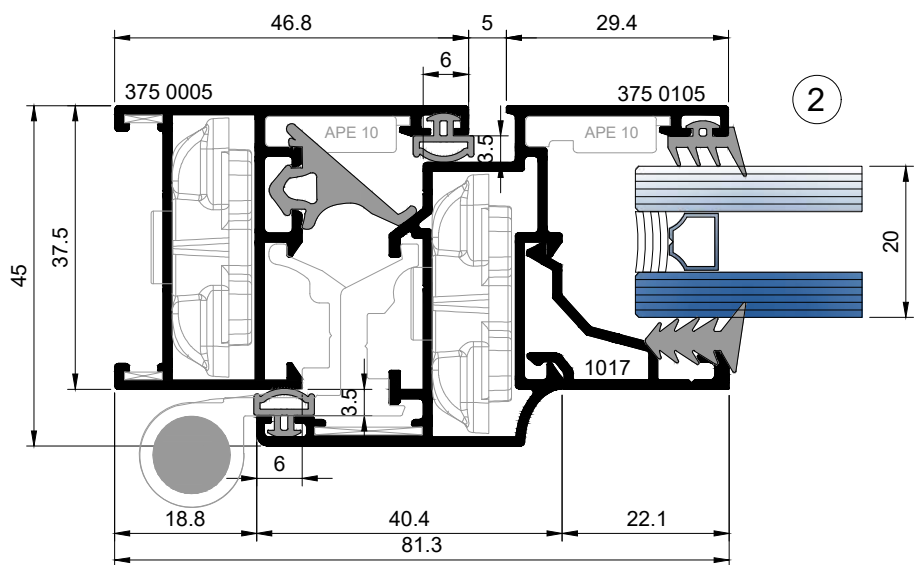
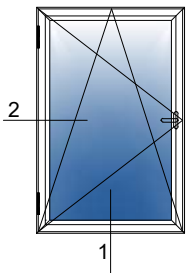
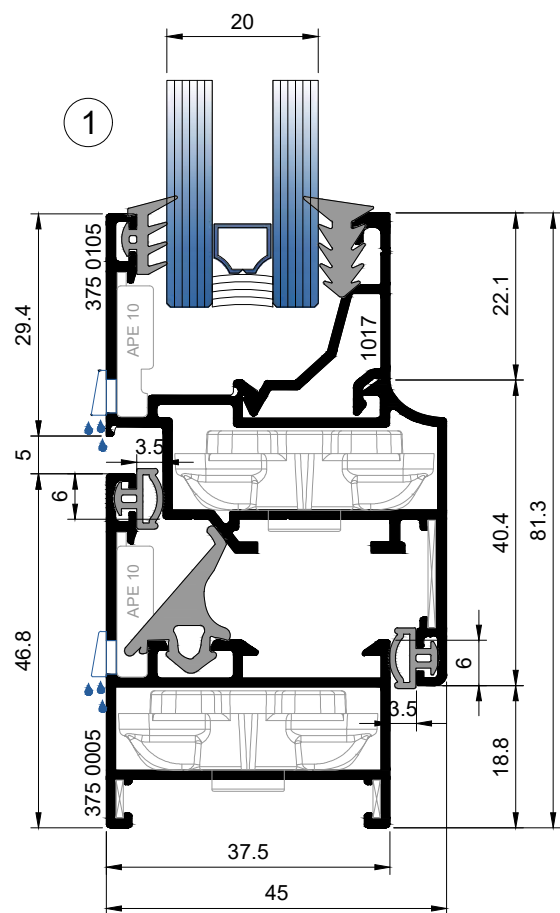
375 0530
/8mm glass bead/
weight: 260gr/m

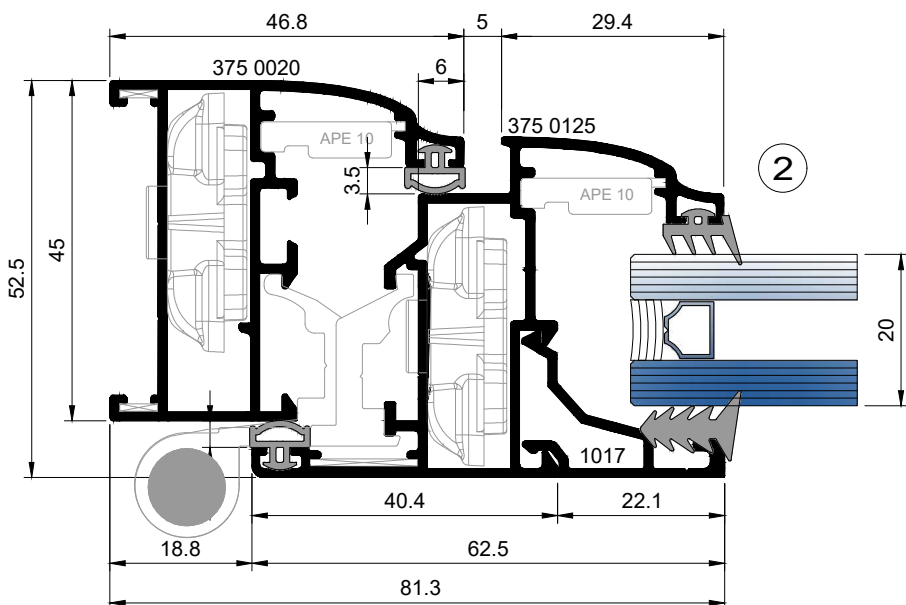
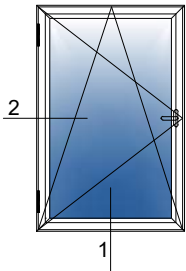
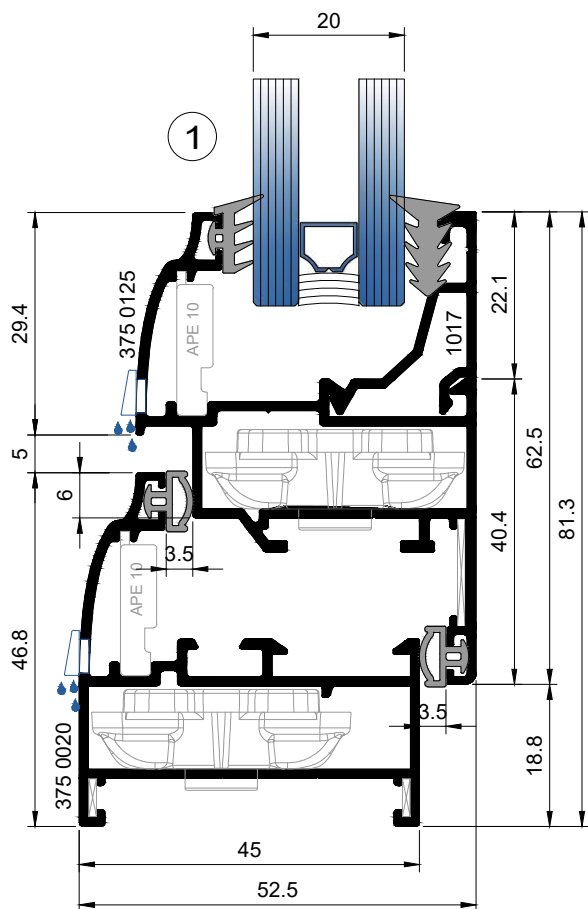


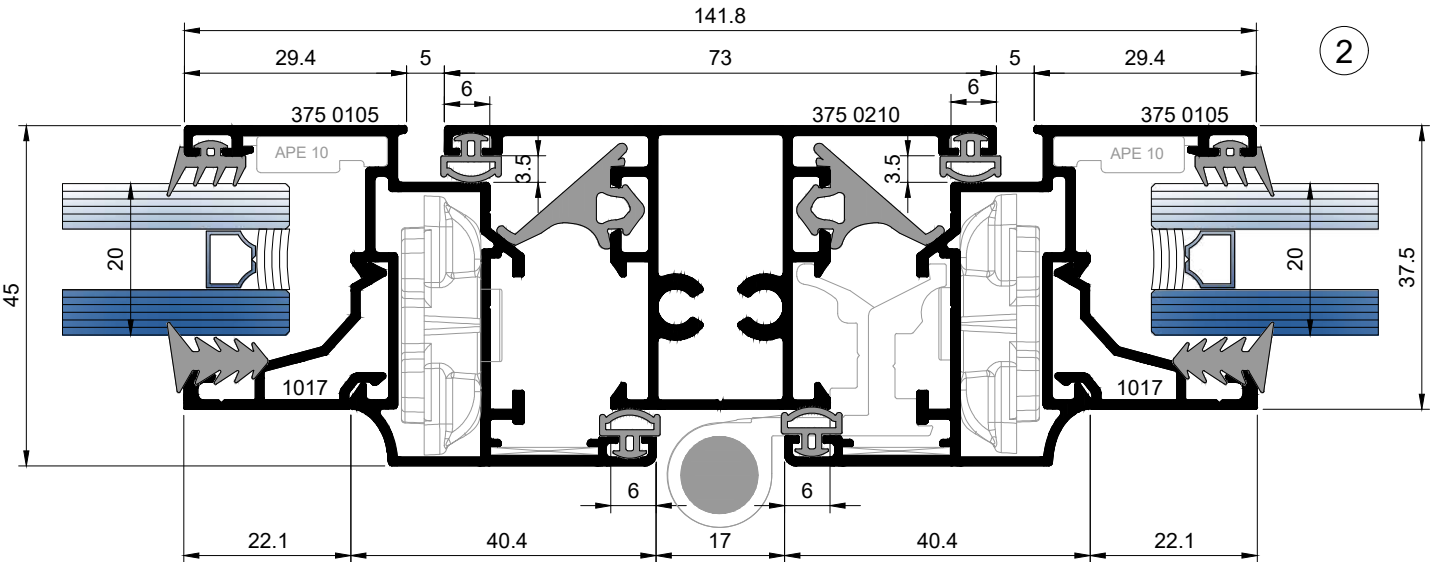
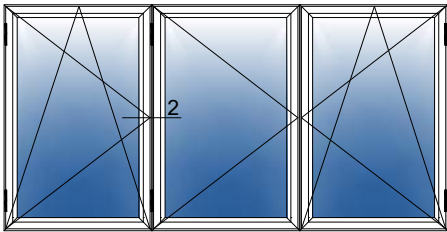
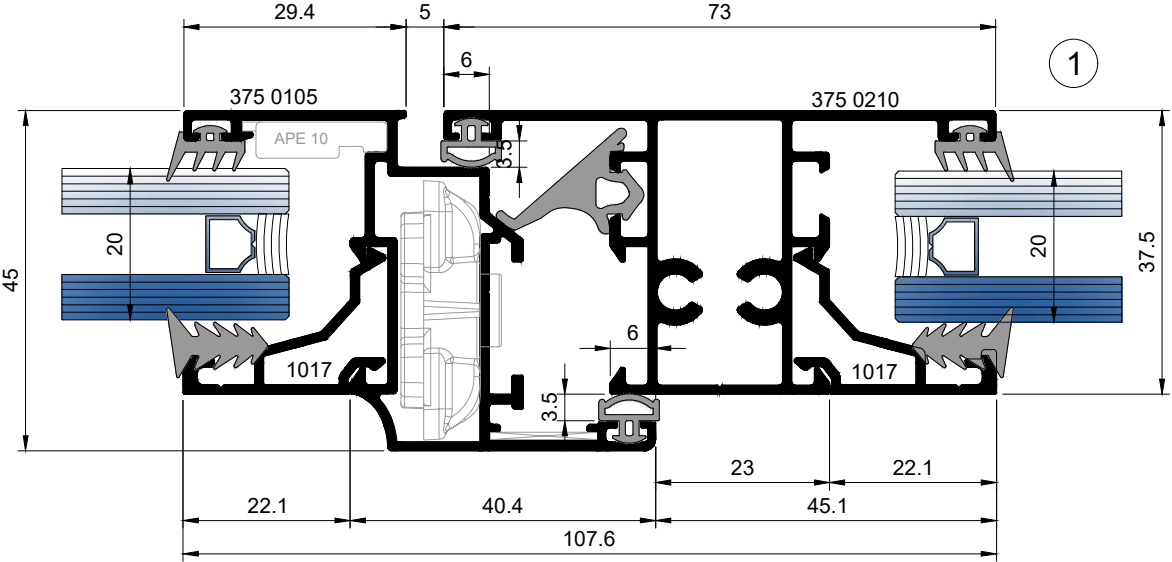
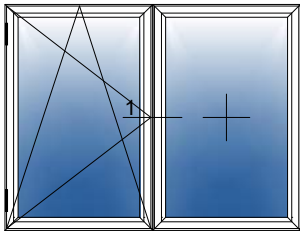
SECTIONS

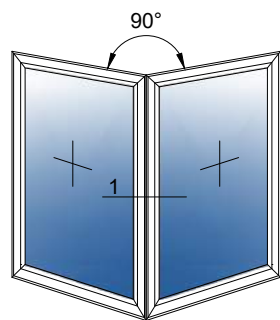
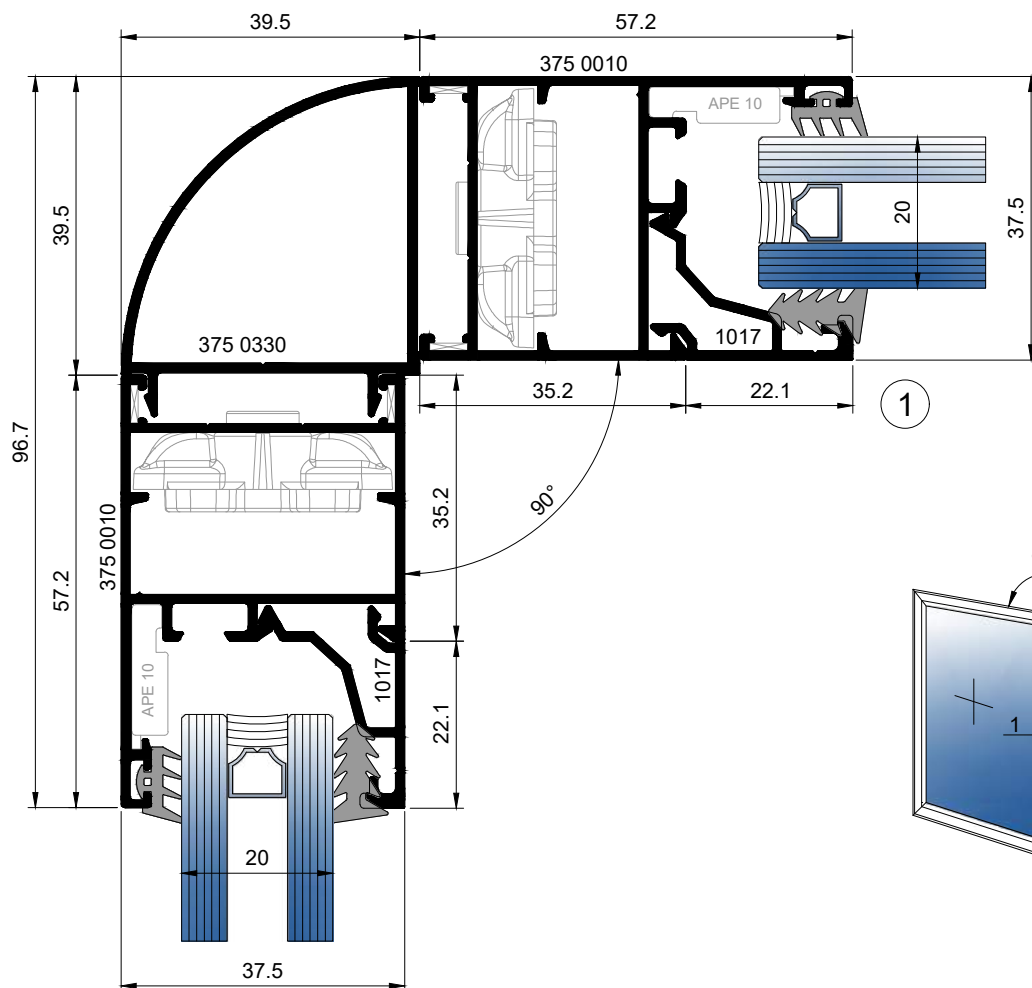
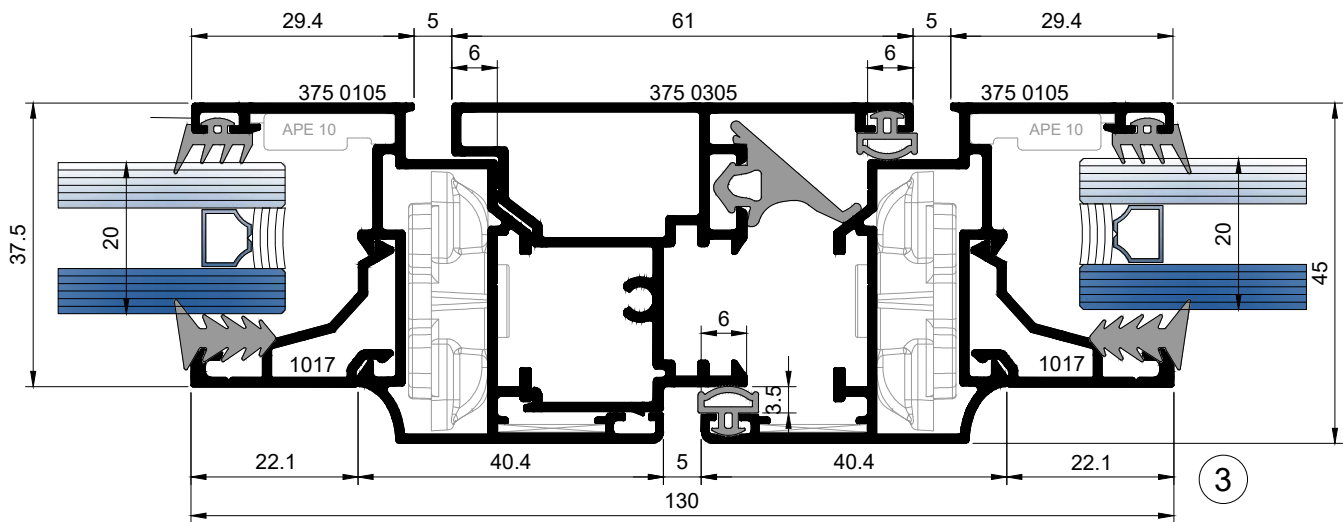
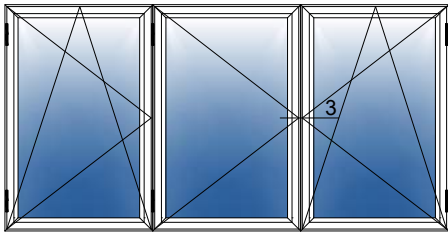


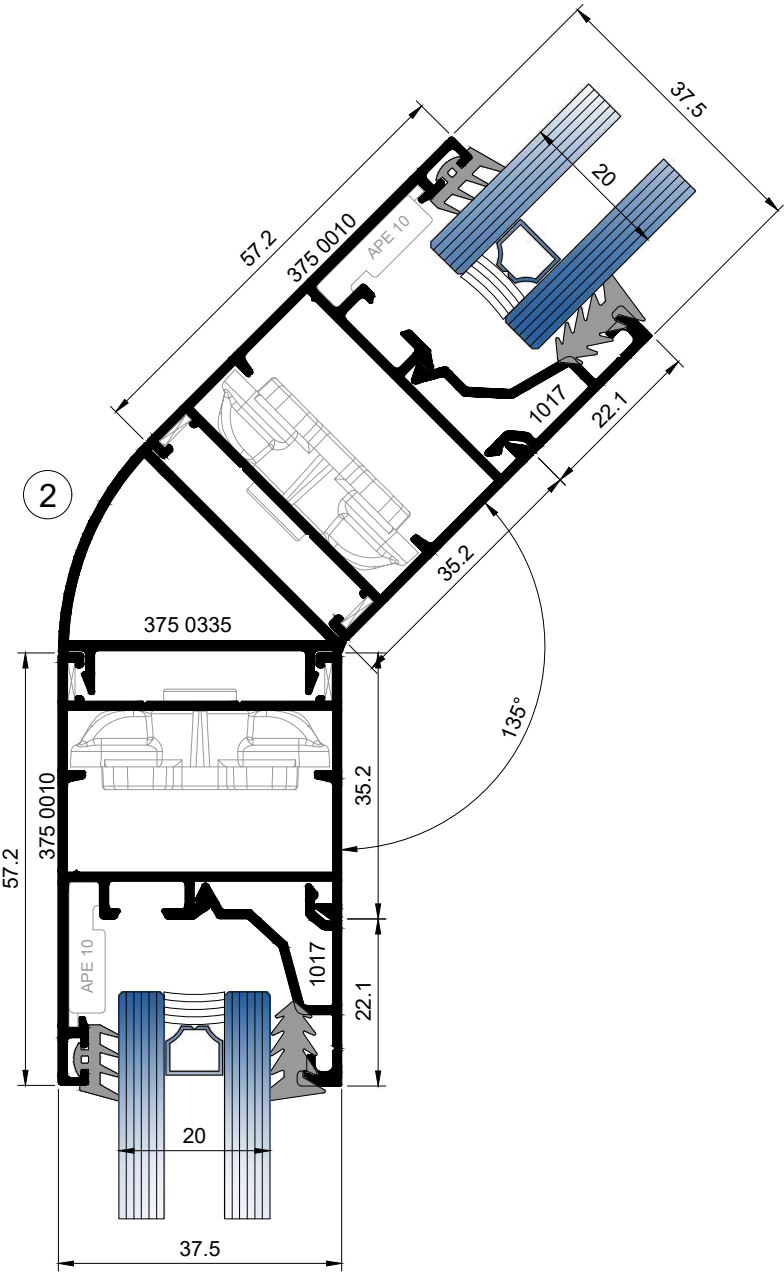
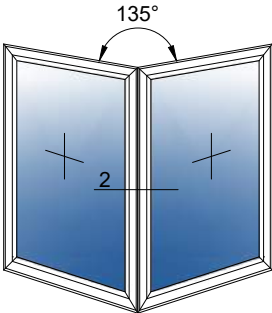


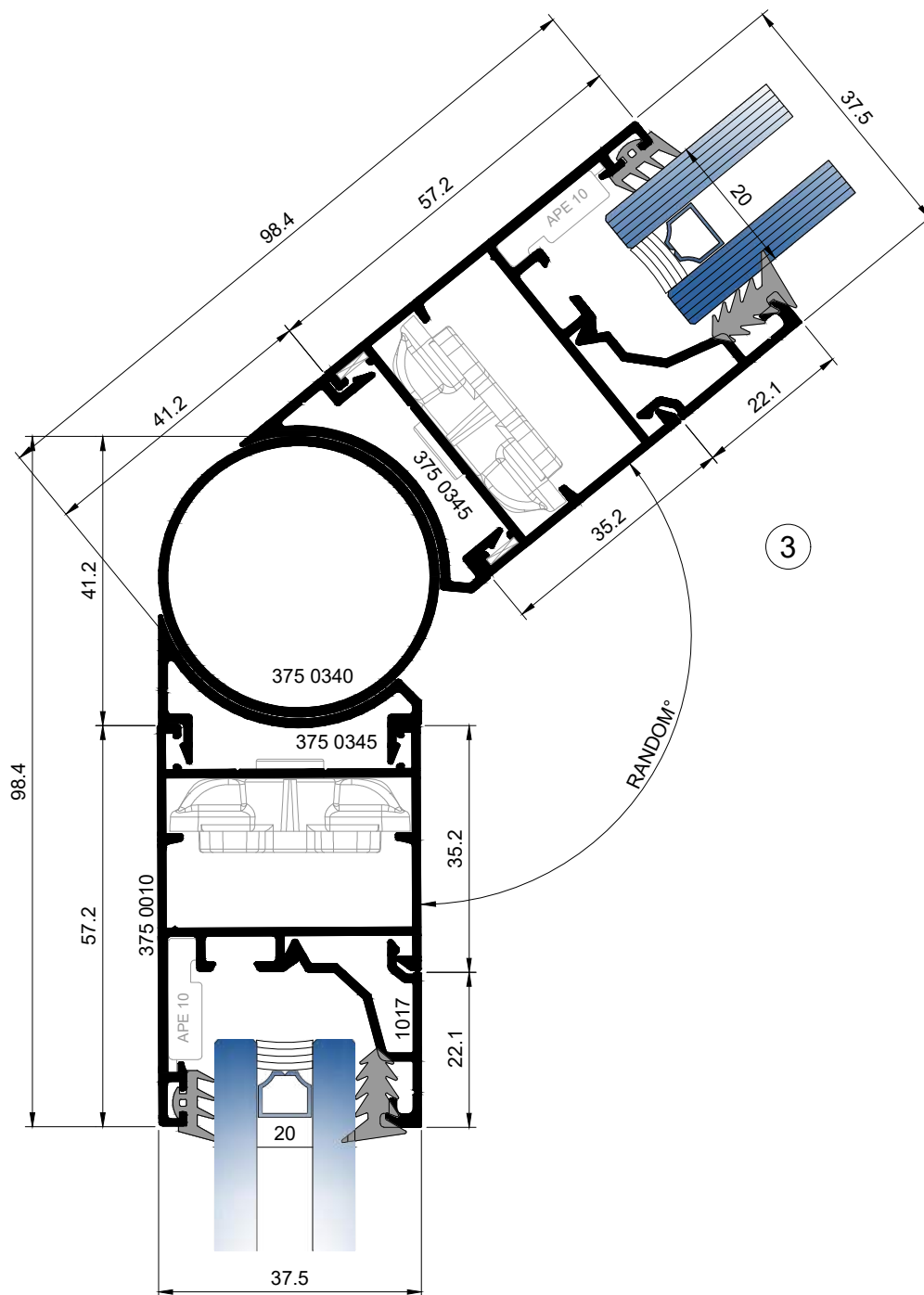


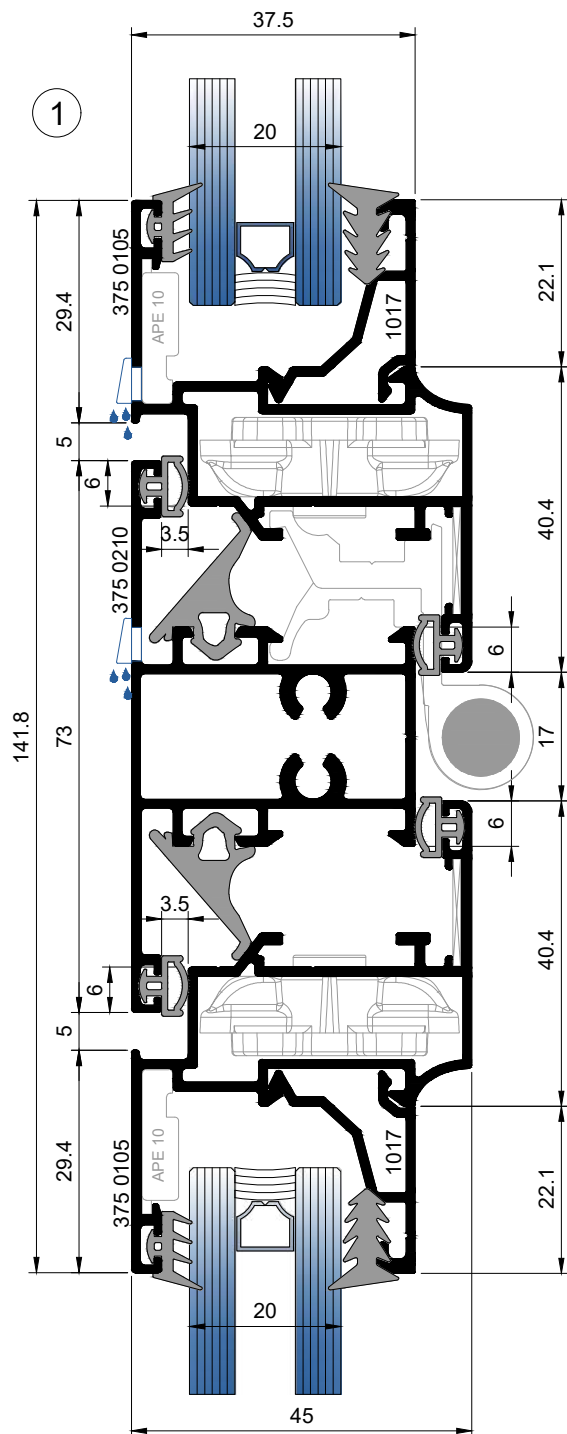


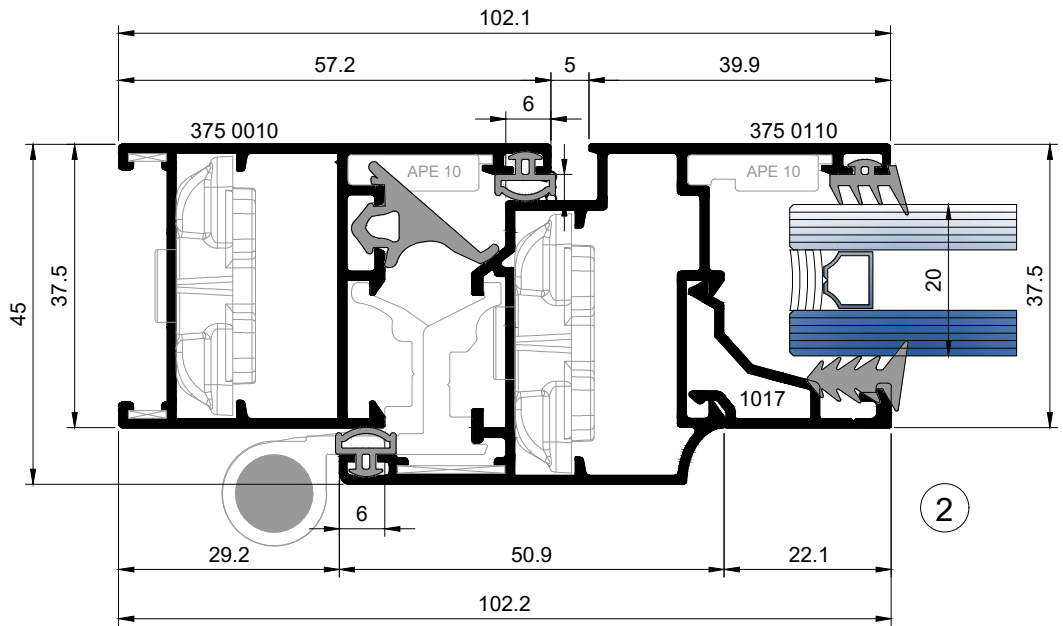
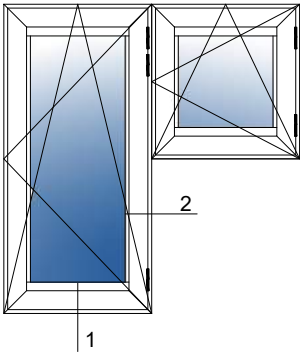
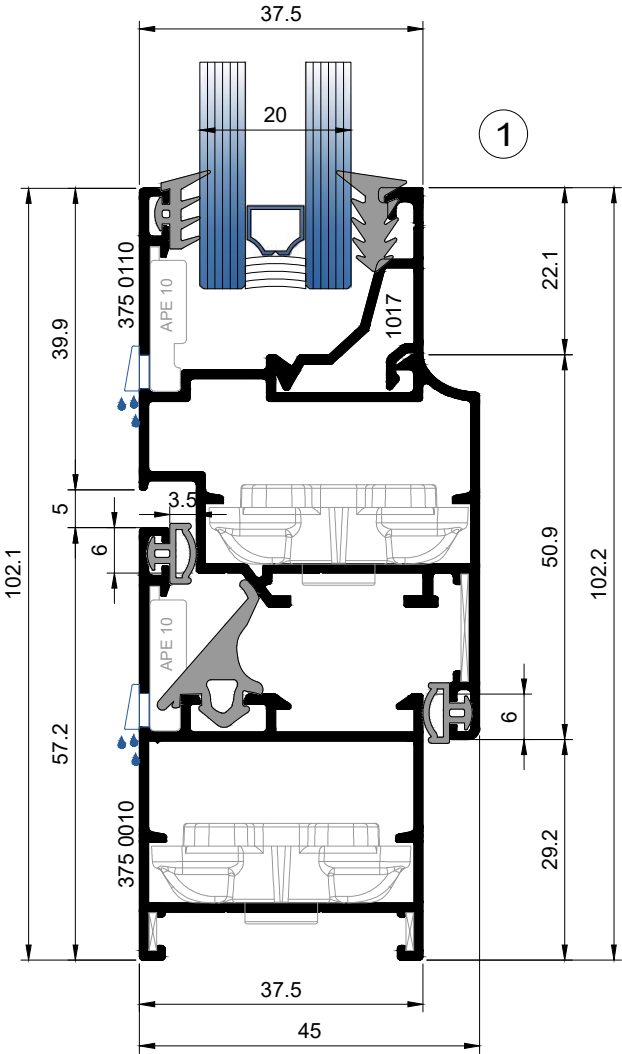


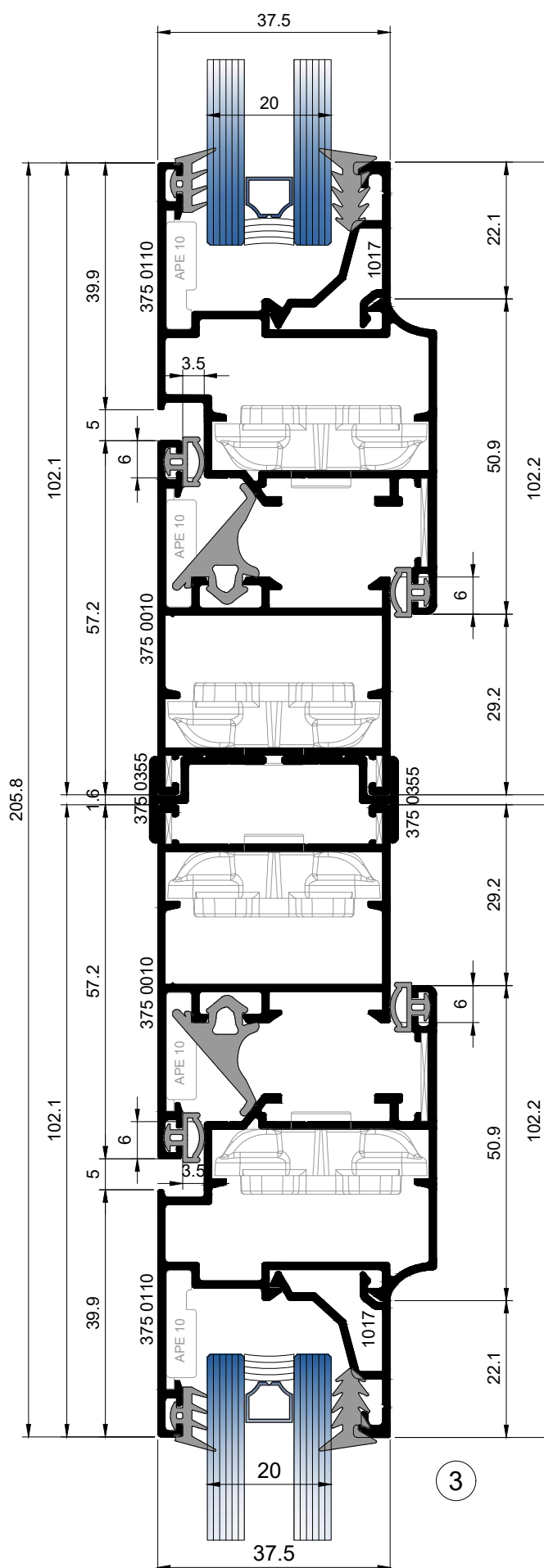


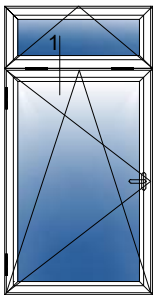
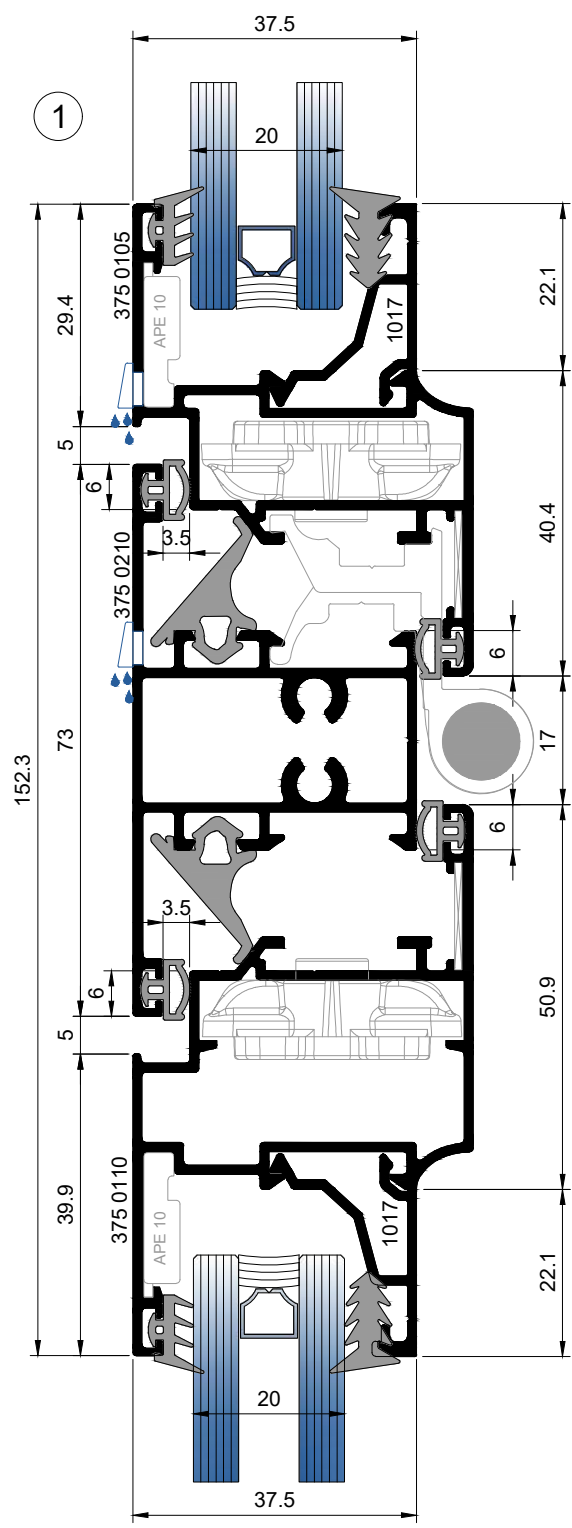


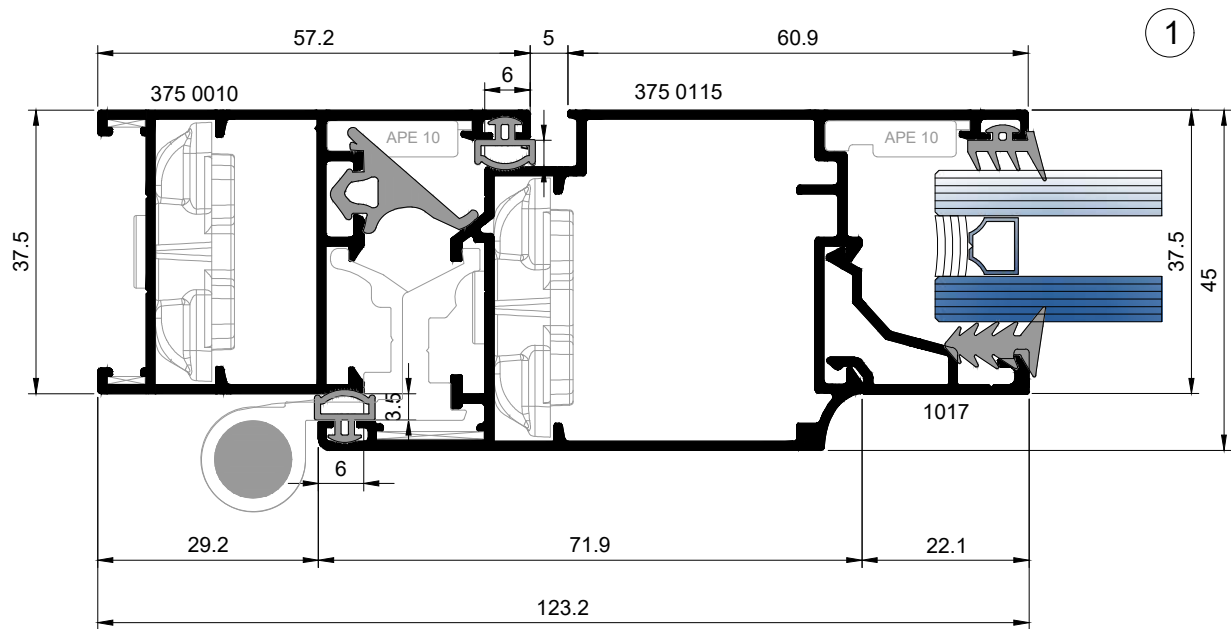
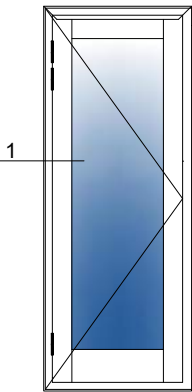




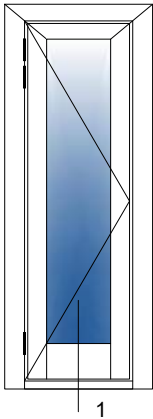
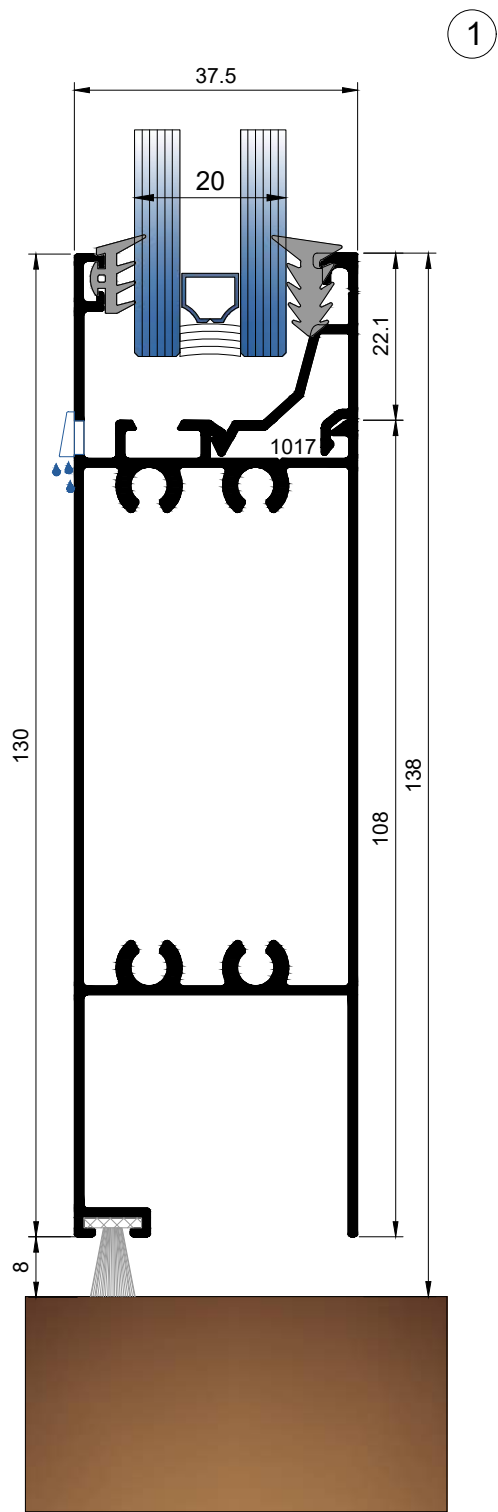


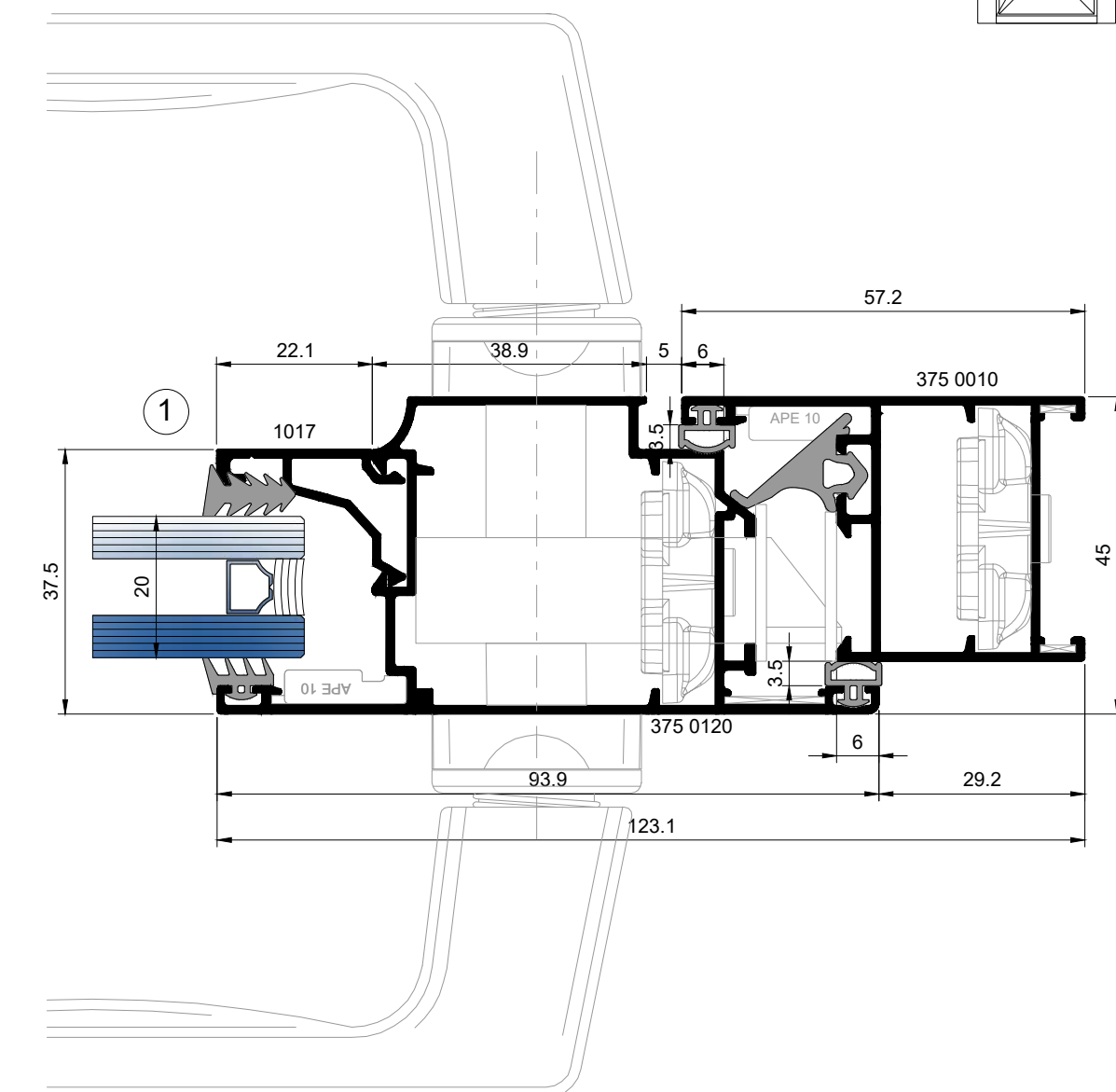


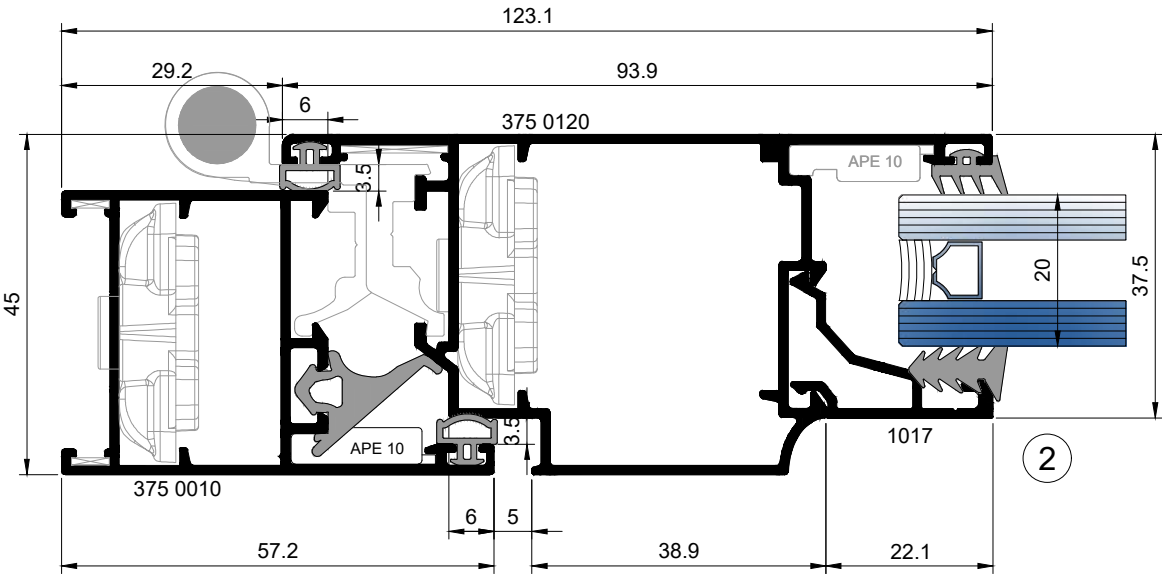
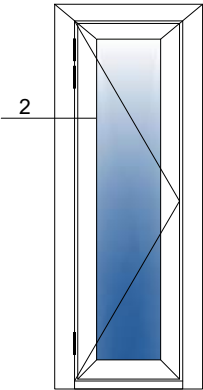


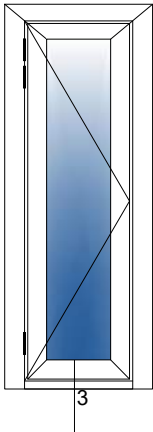
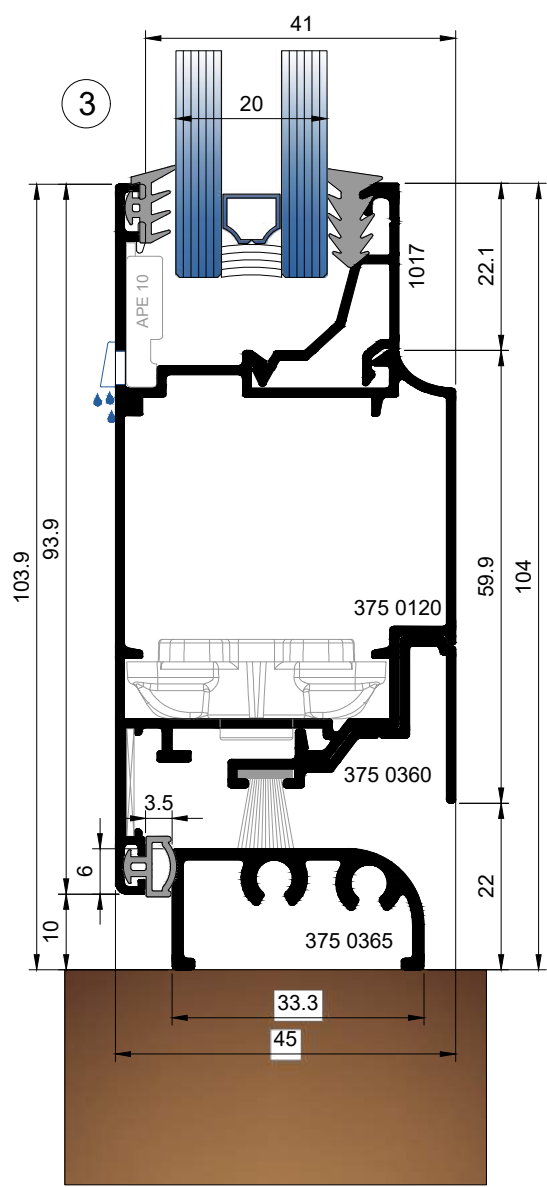


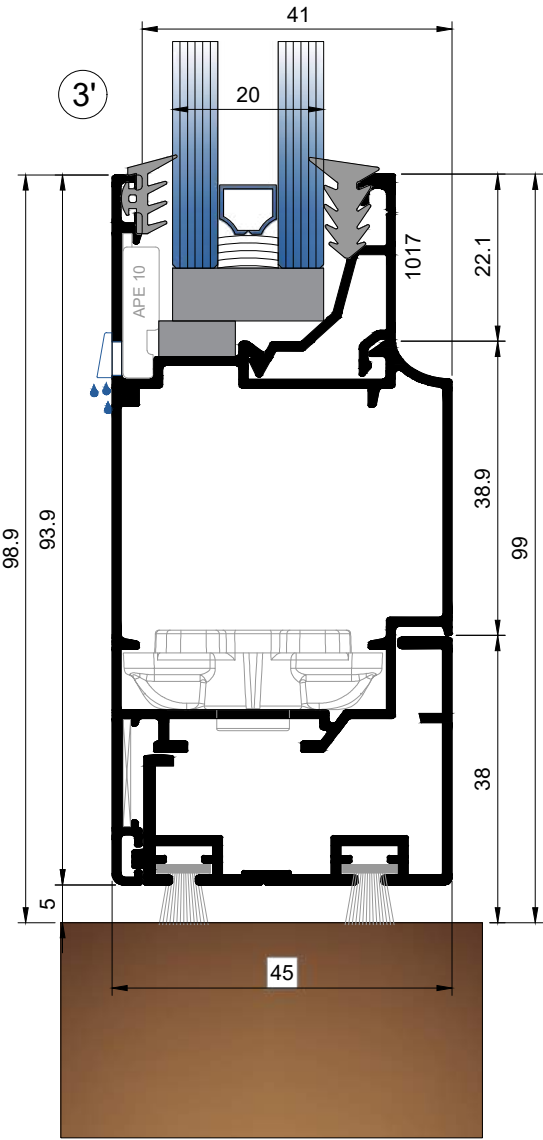
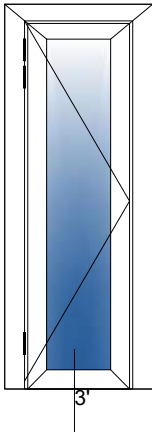


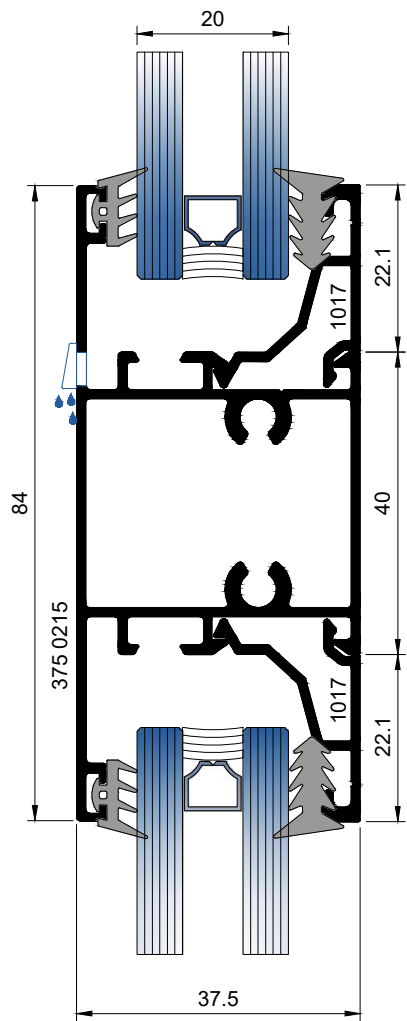
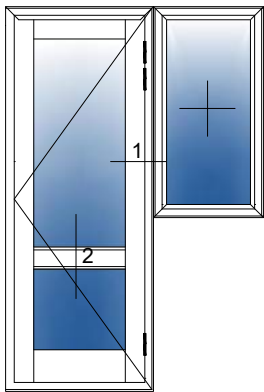
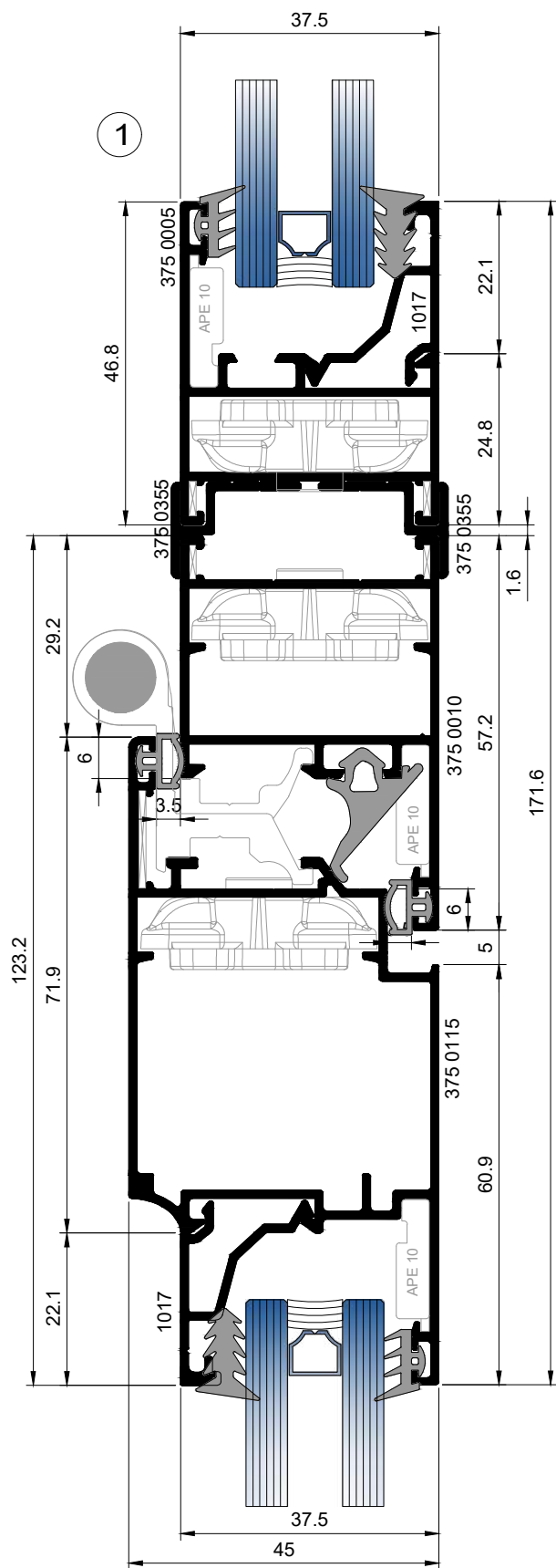


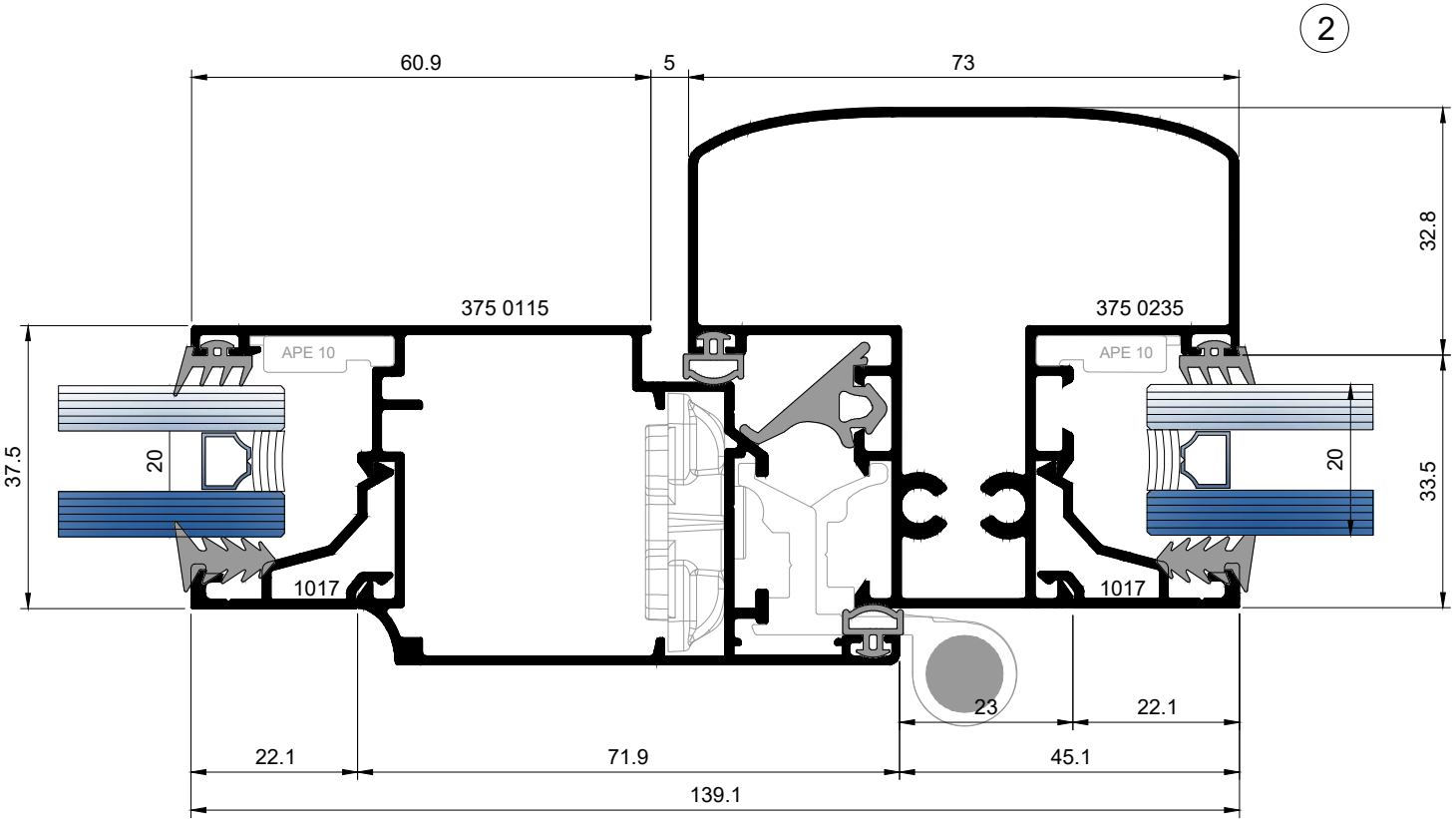
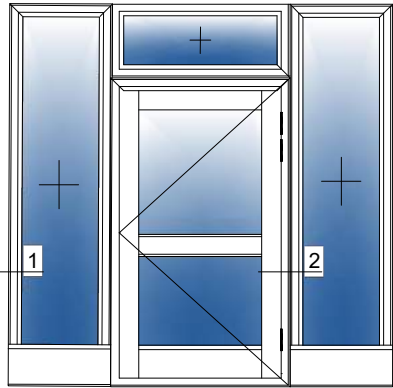
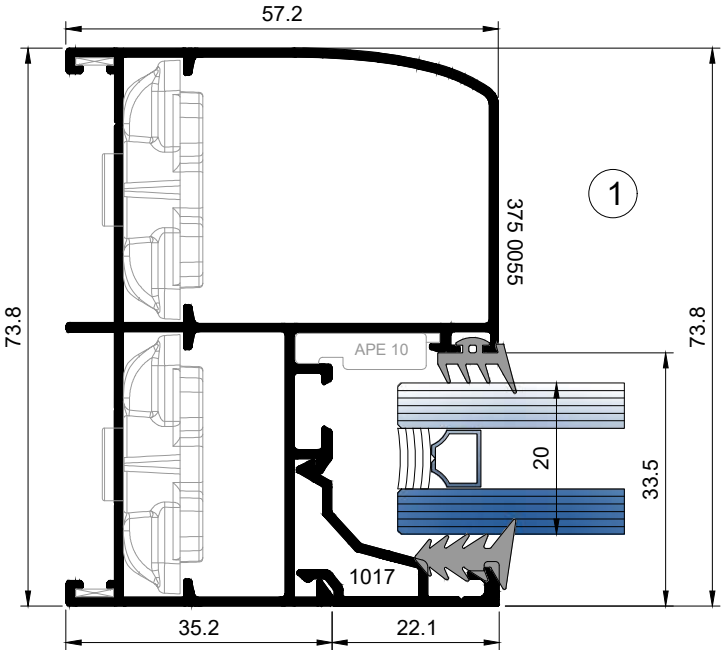


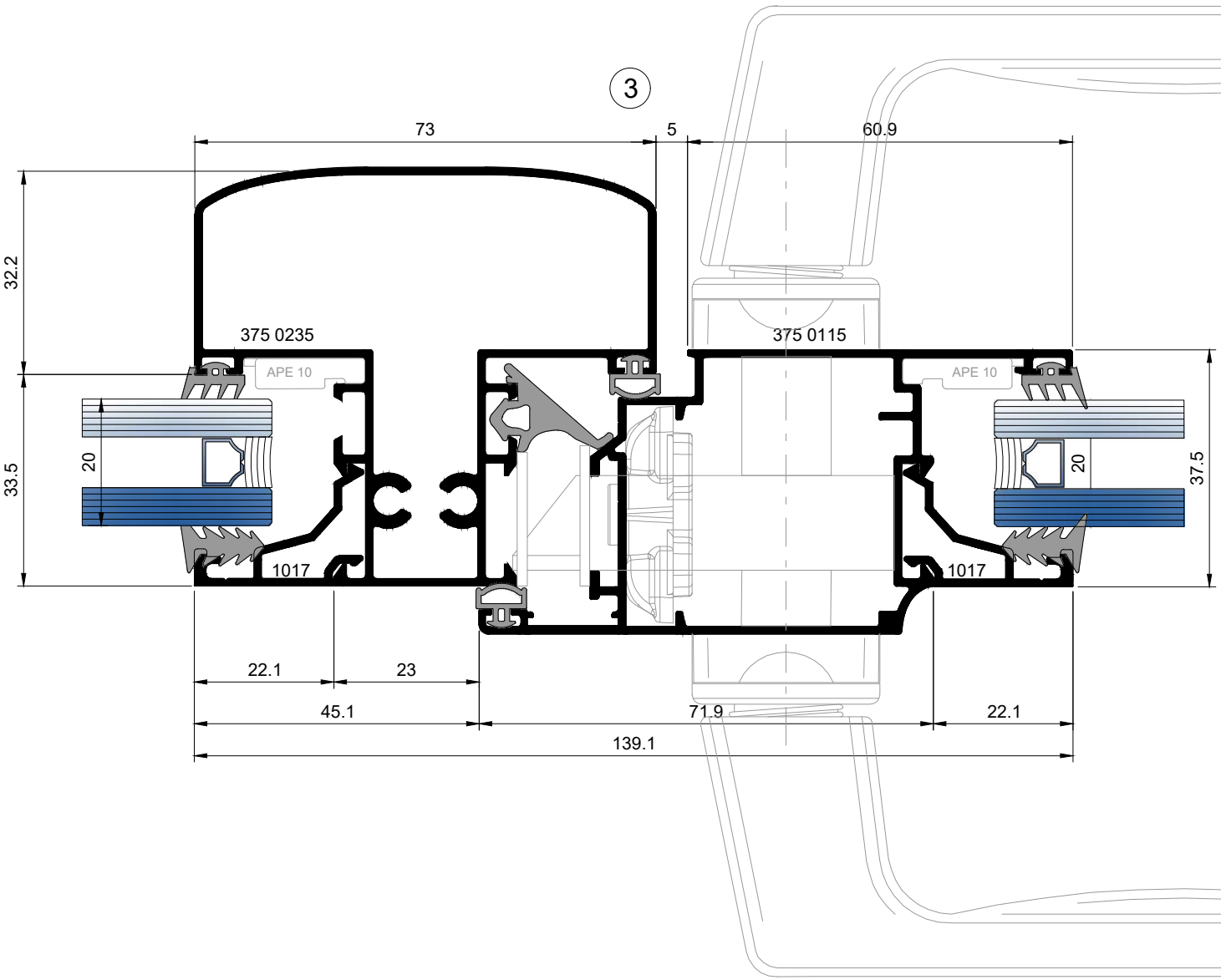
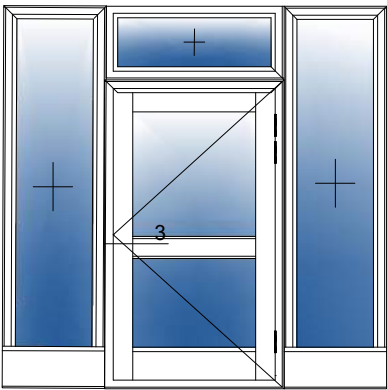


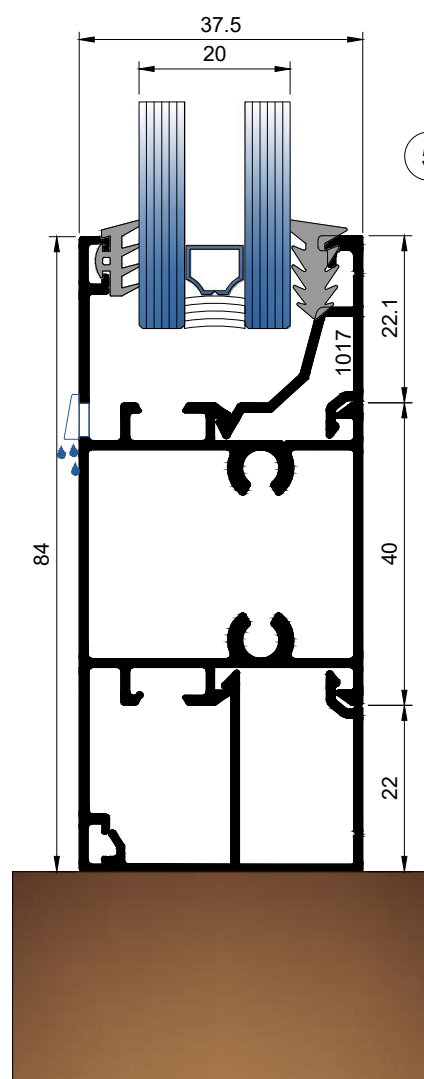


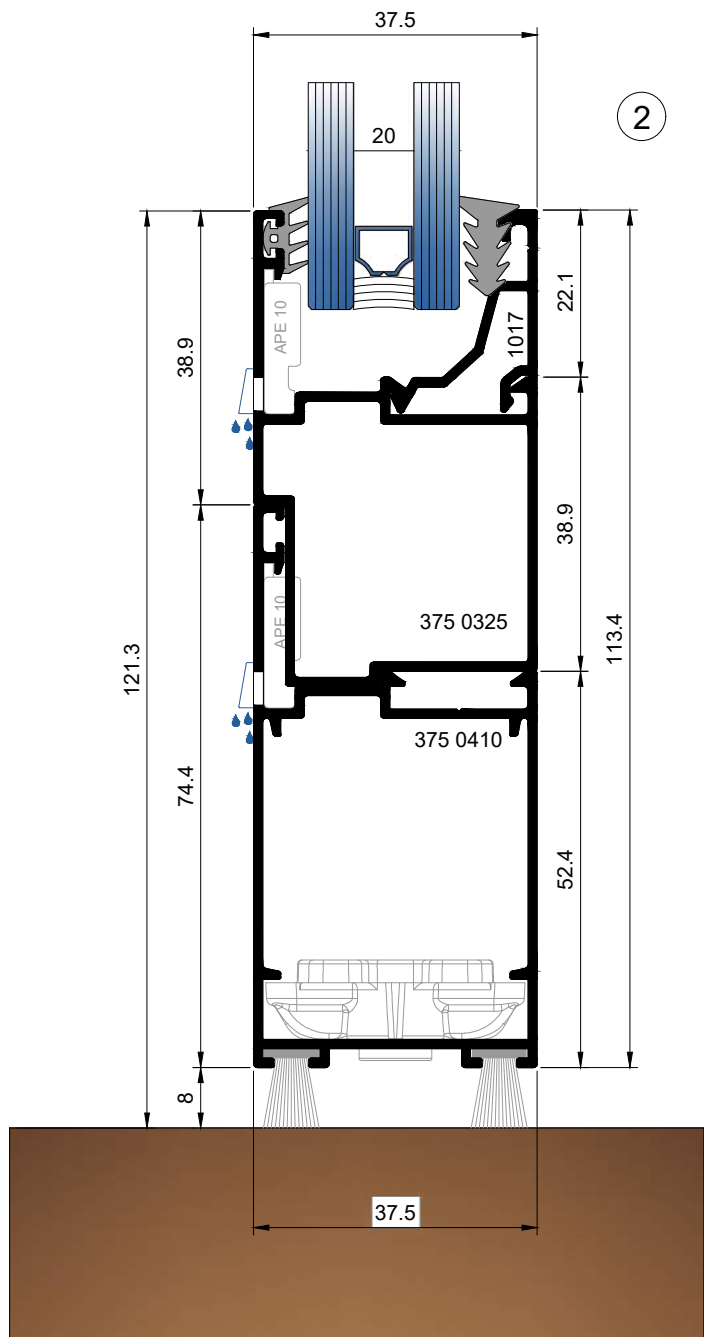
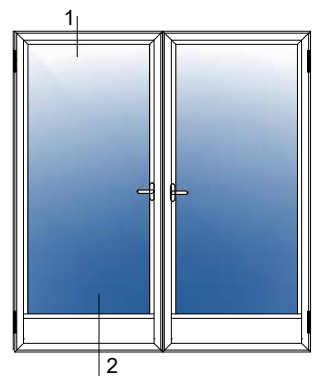
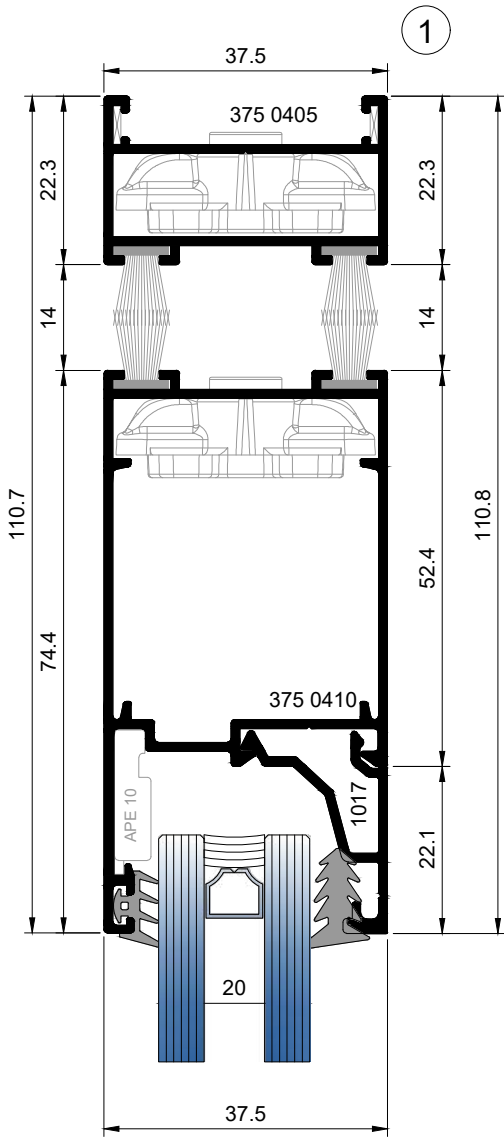


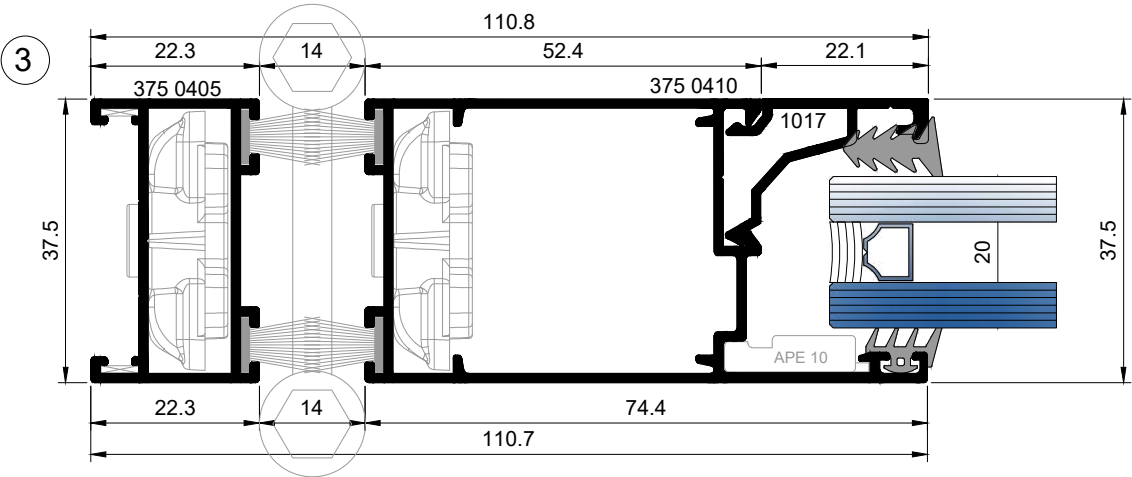
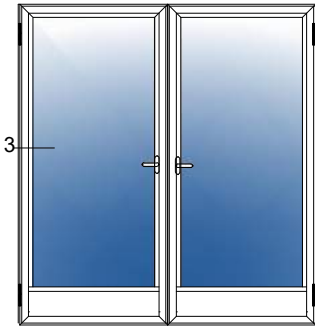


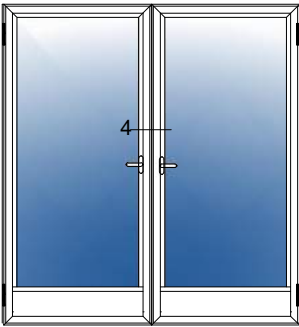
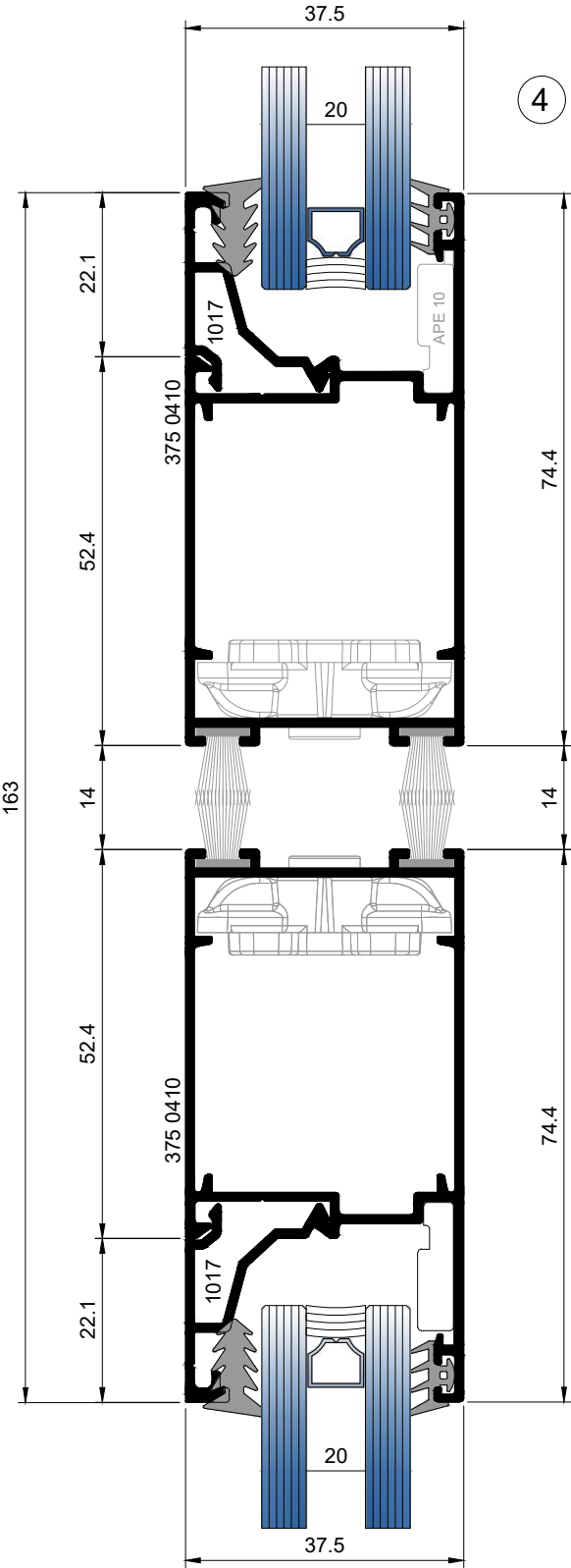


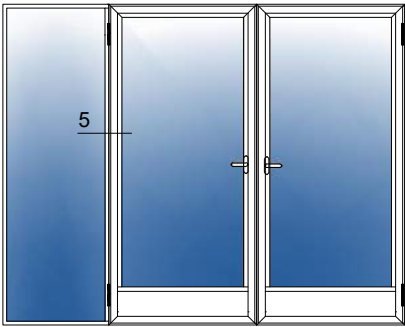
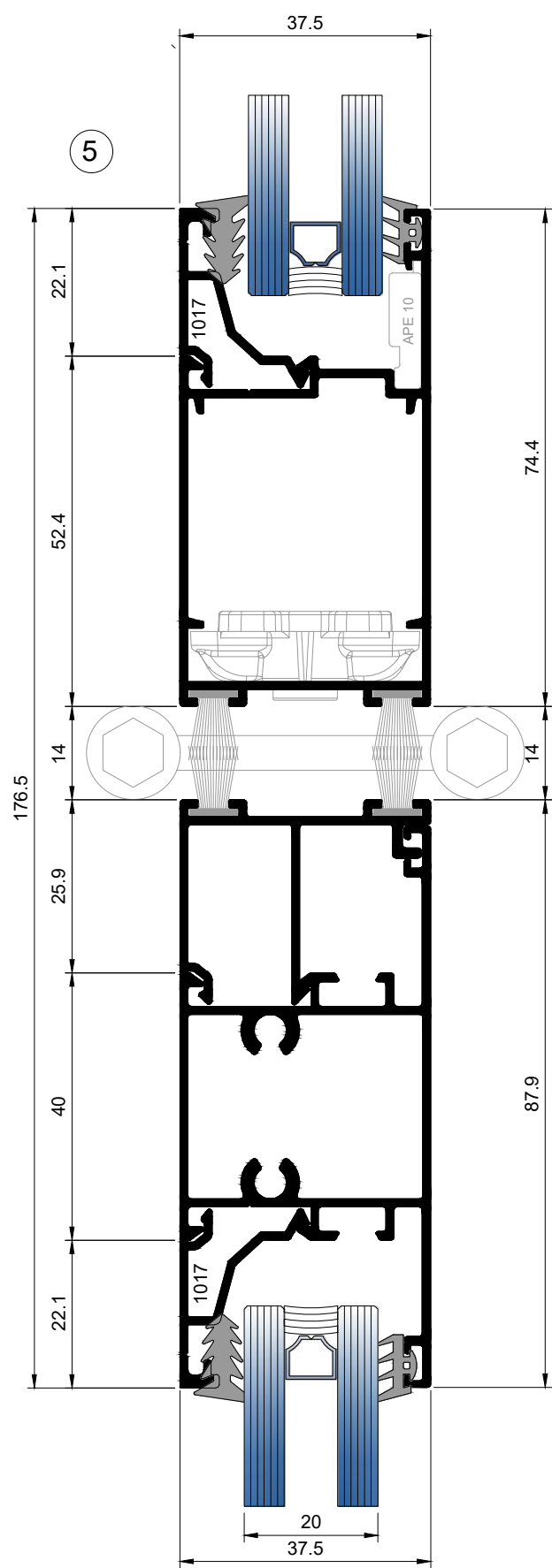


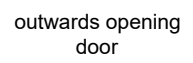


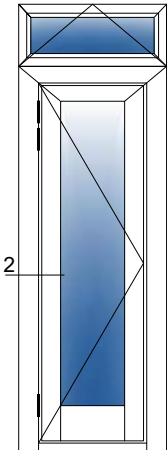




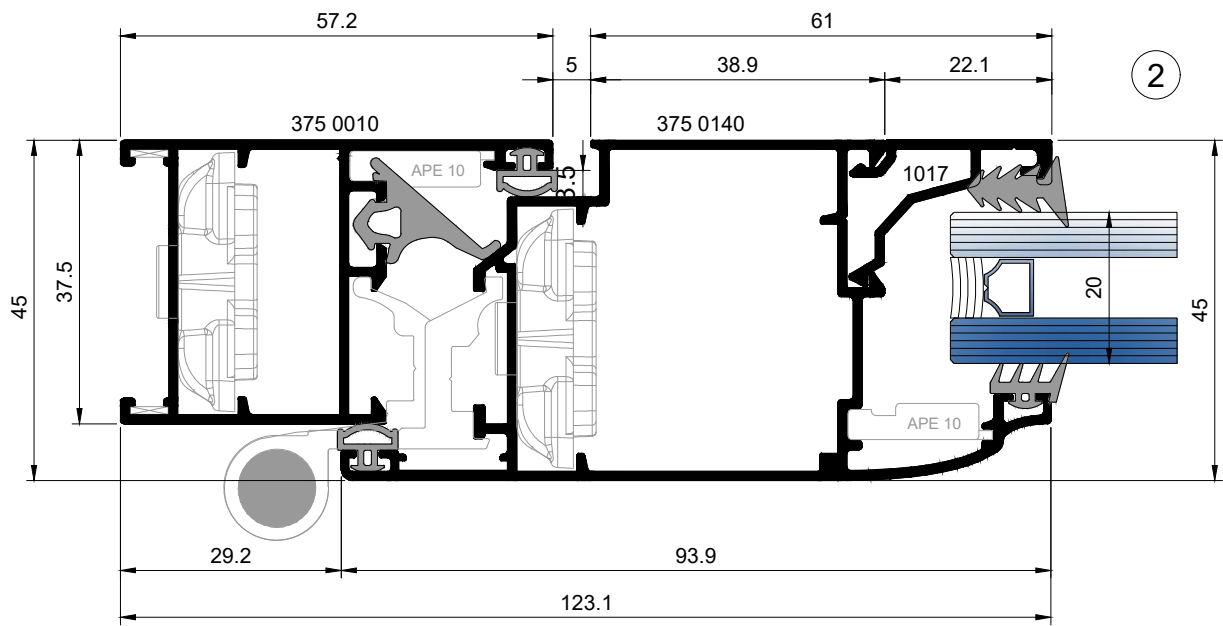


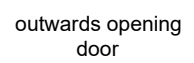


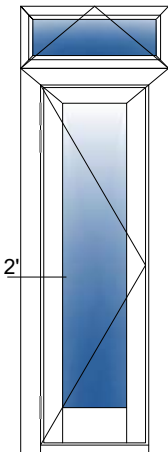




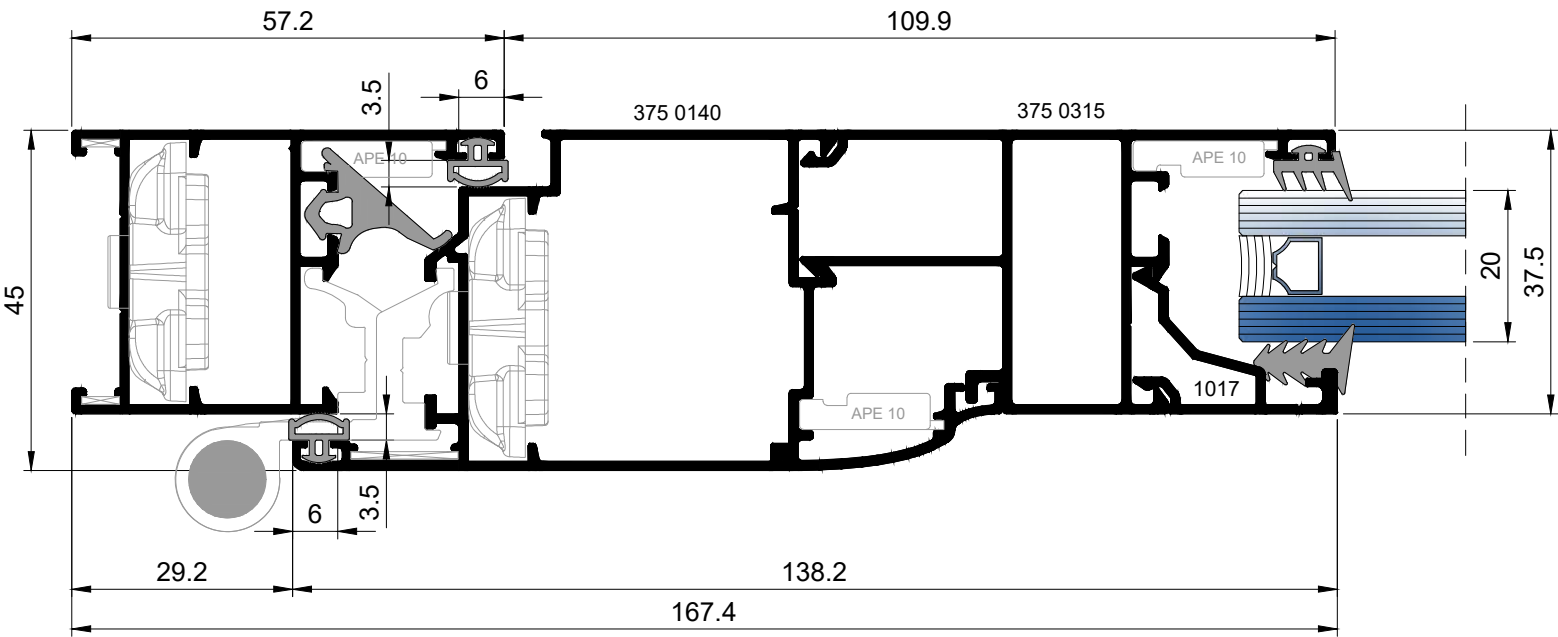
outwards opening
door

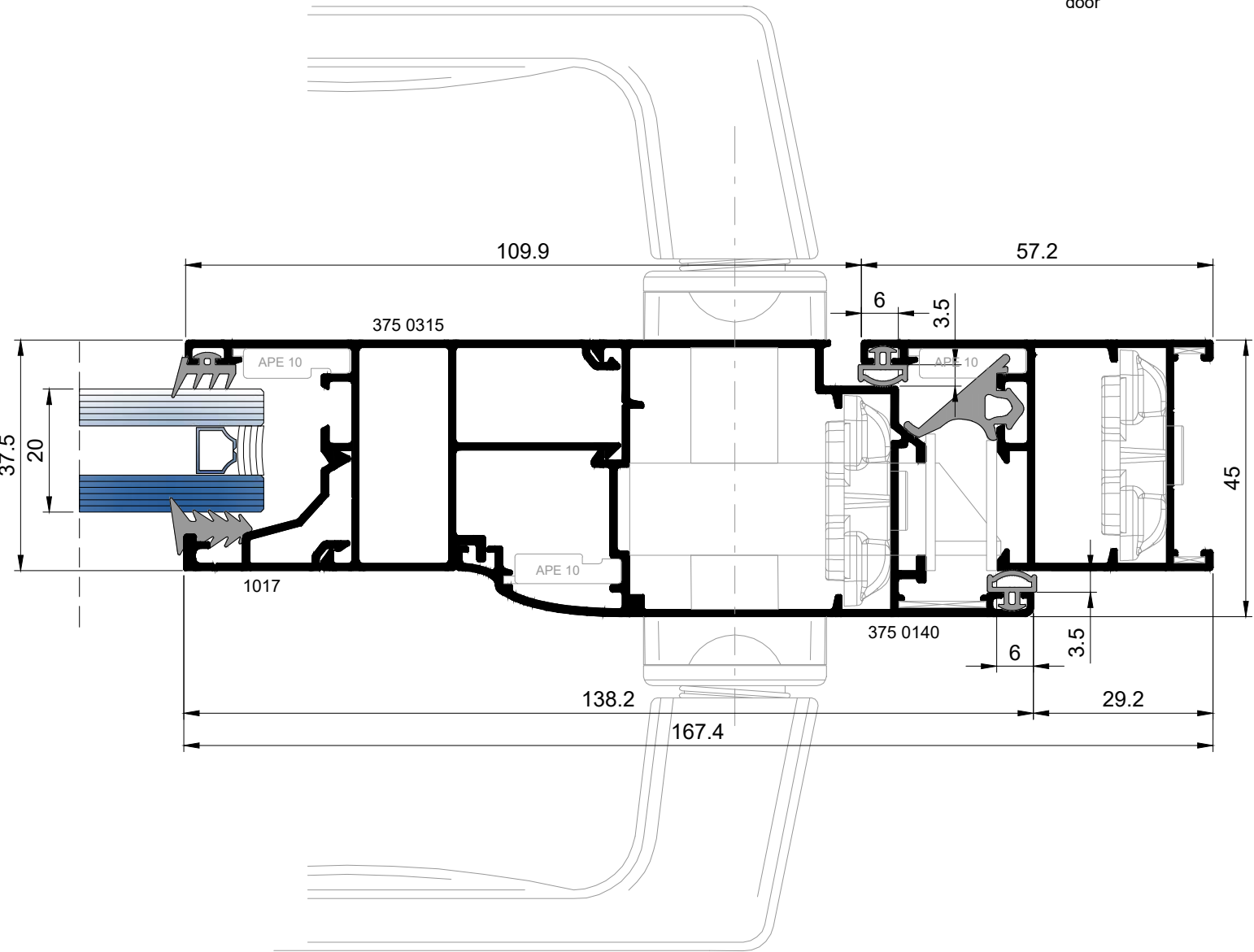
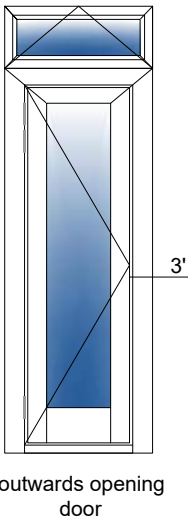


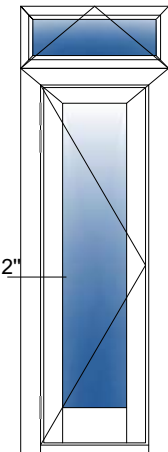




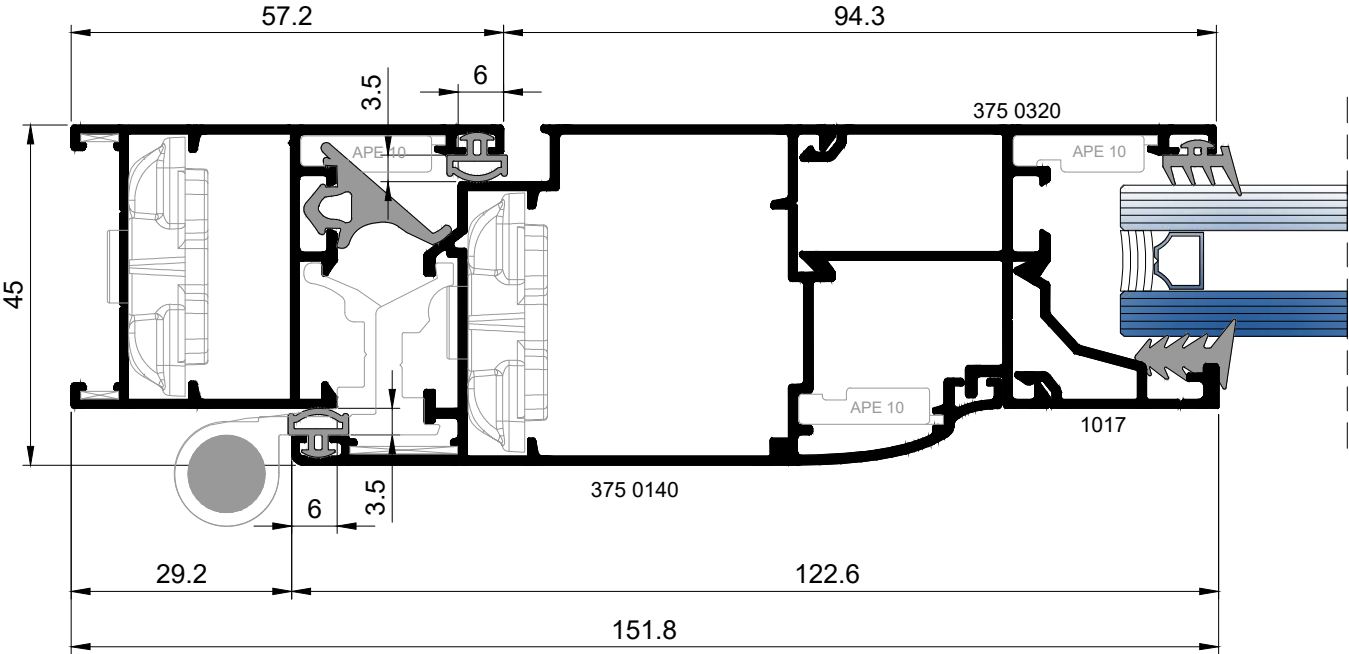
outwards opening
door

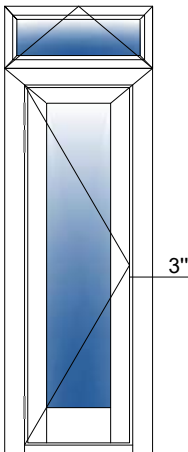




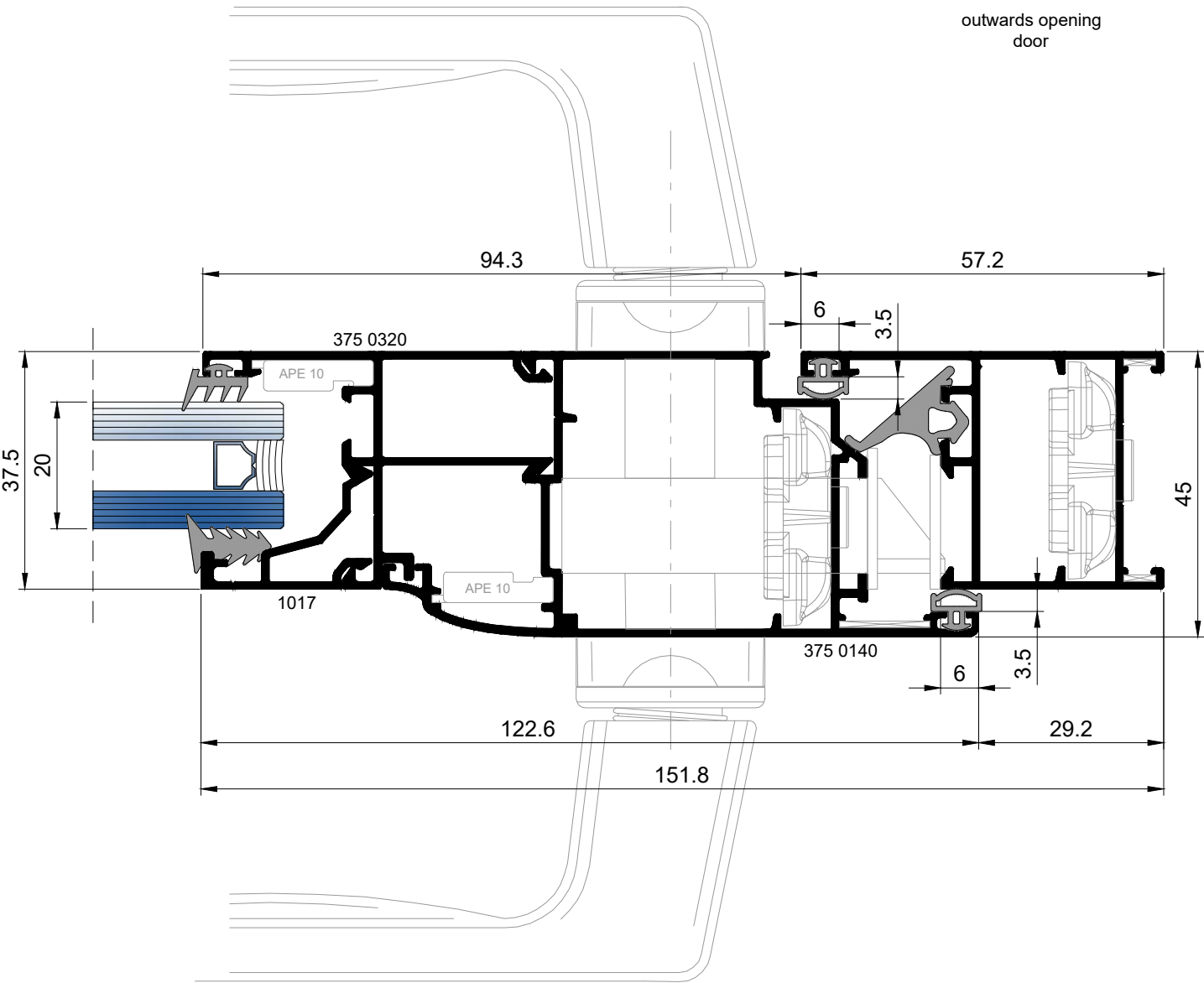


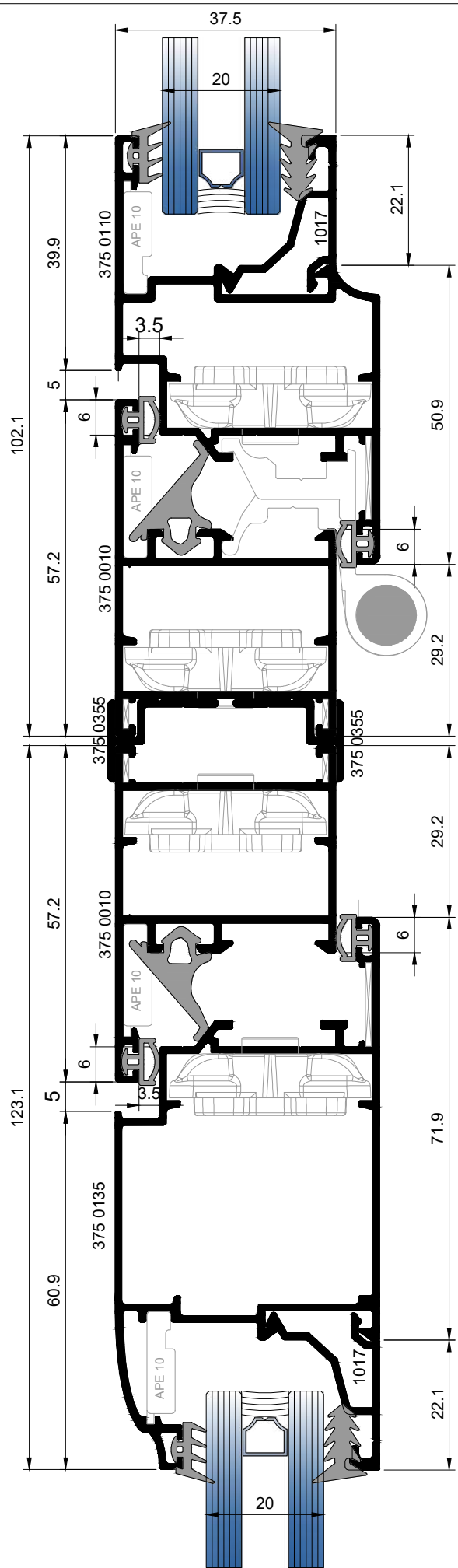
outwards opening
door



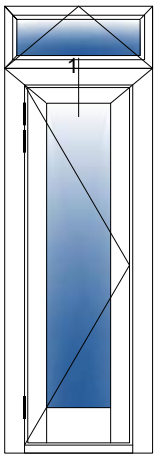


outwards opening
door

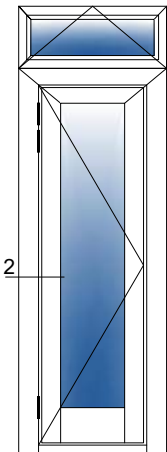




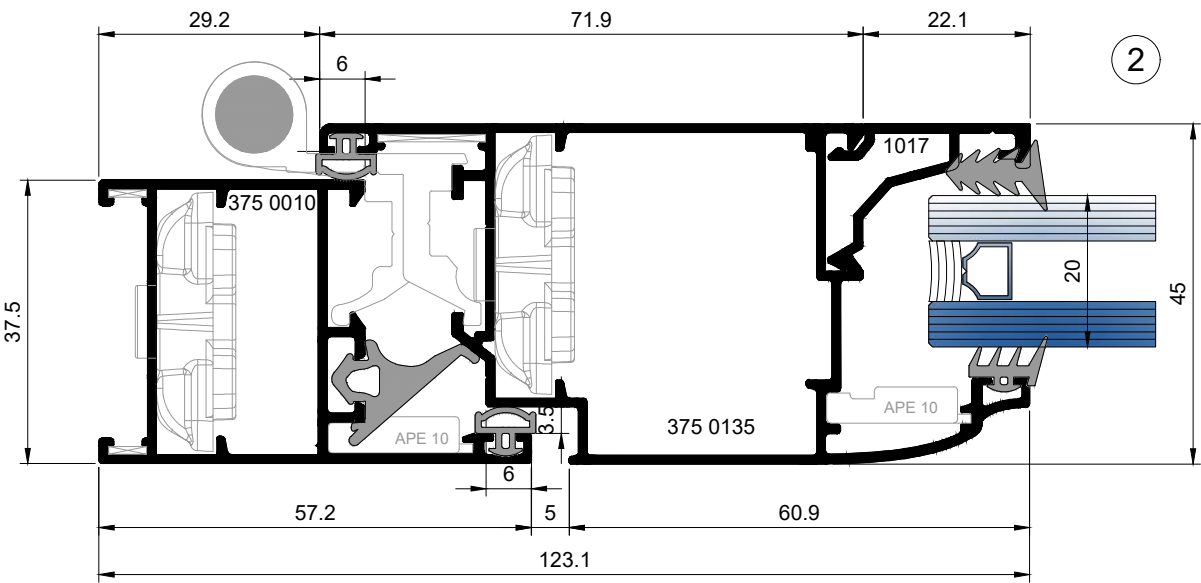
1

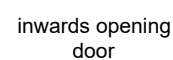


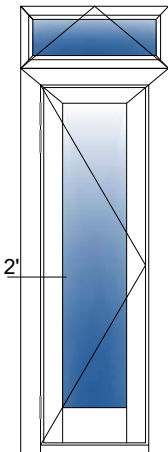
inwards opening
door



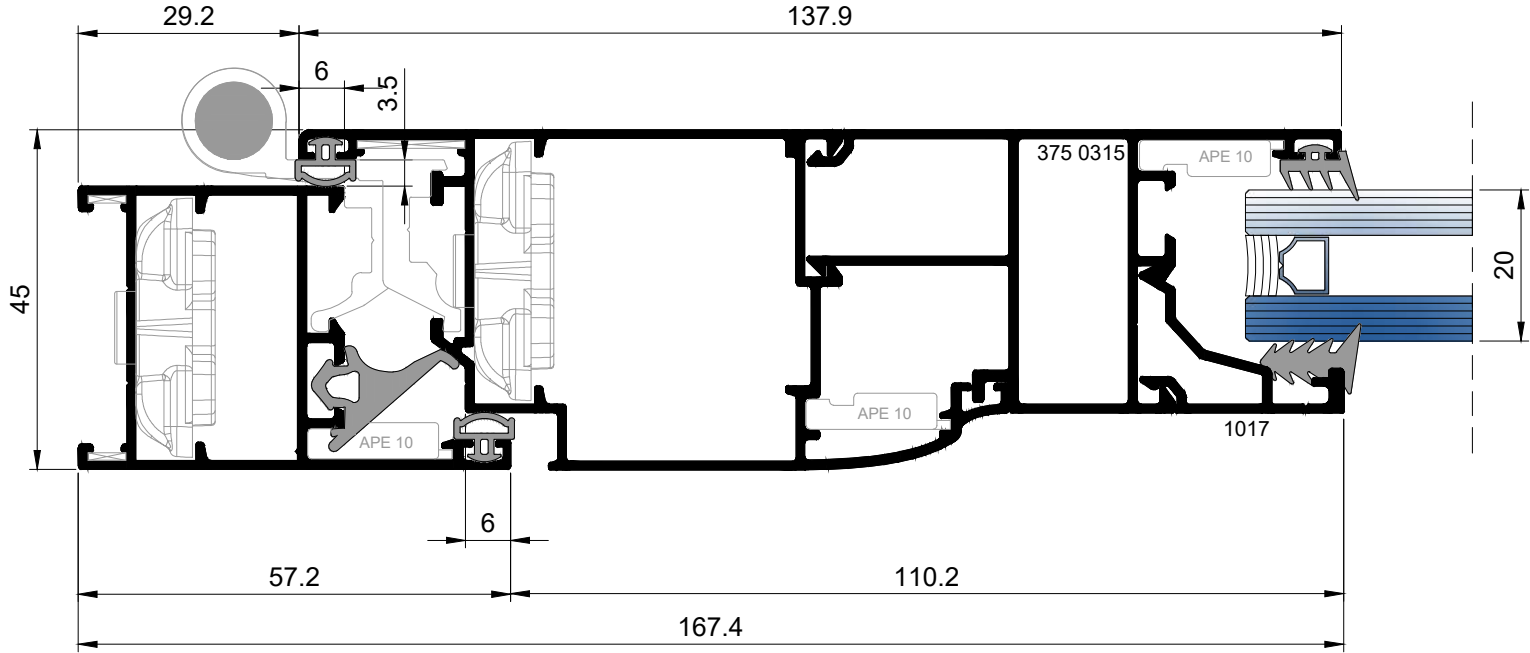
inwards opening
door

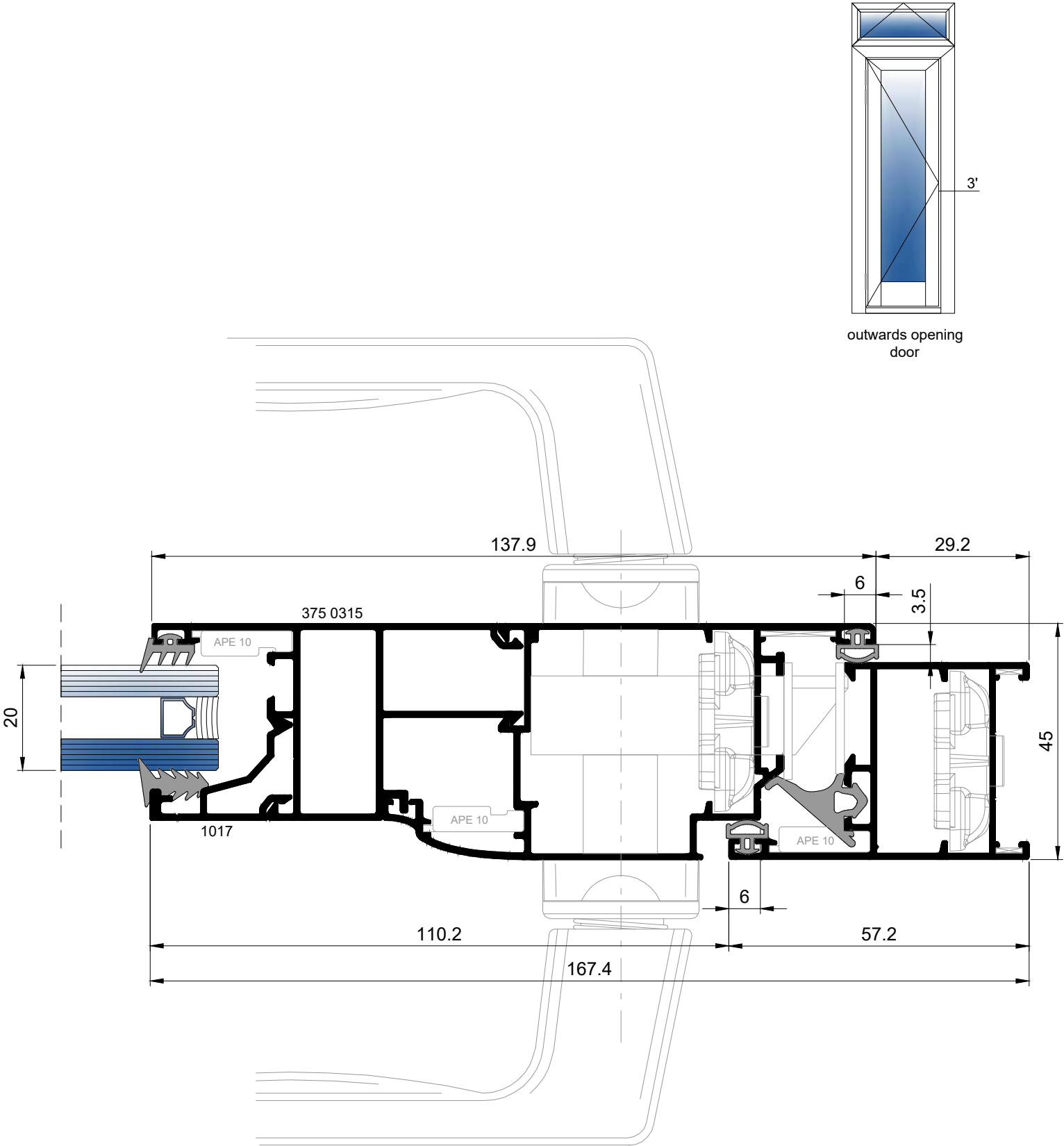


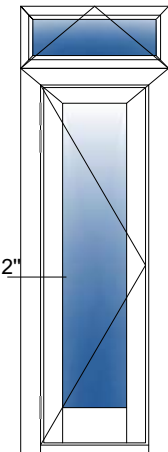




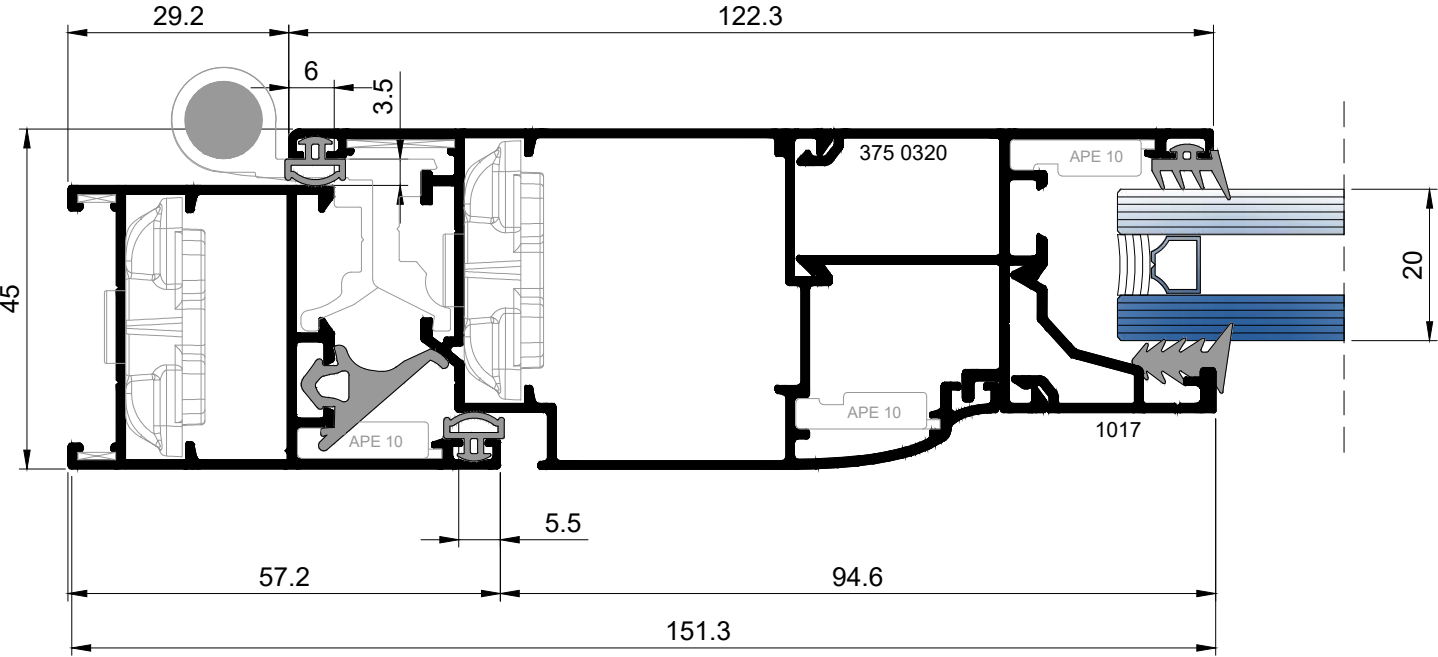
outwards opening
door

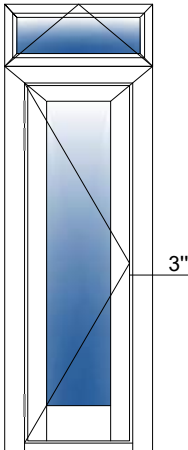




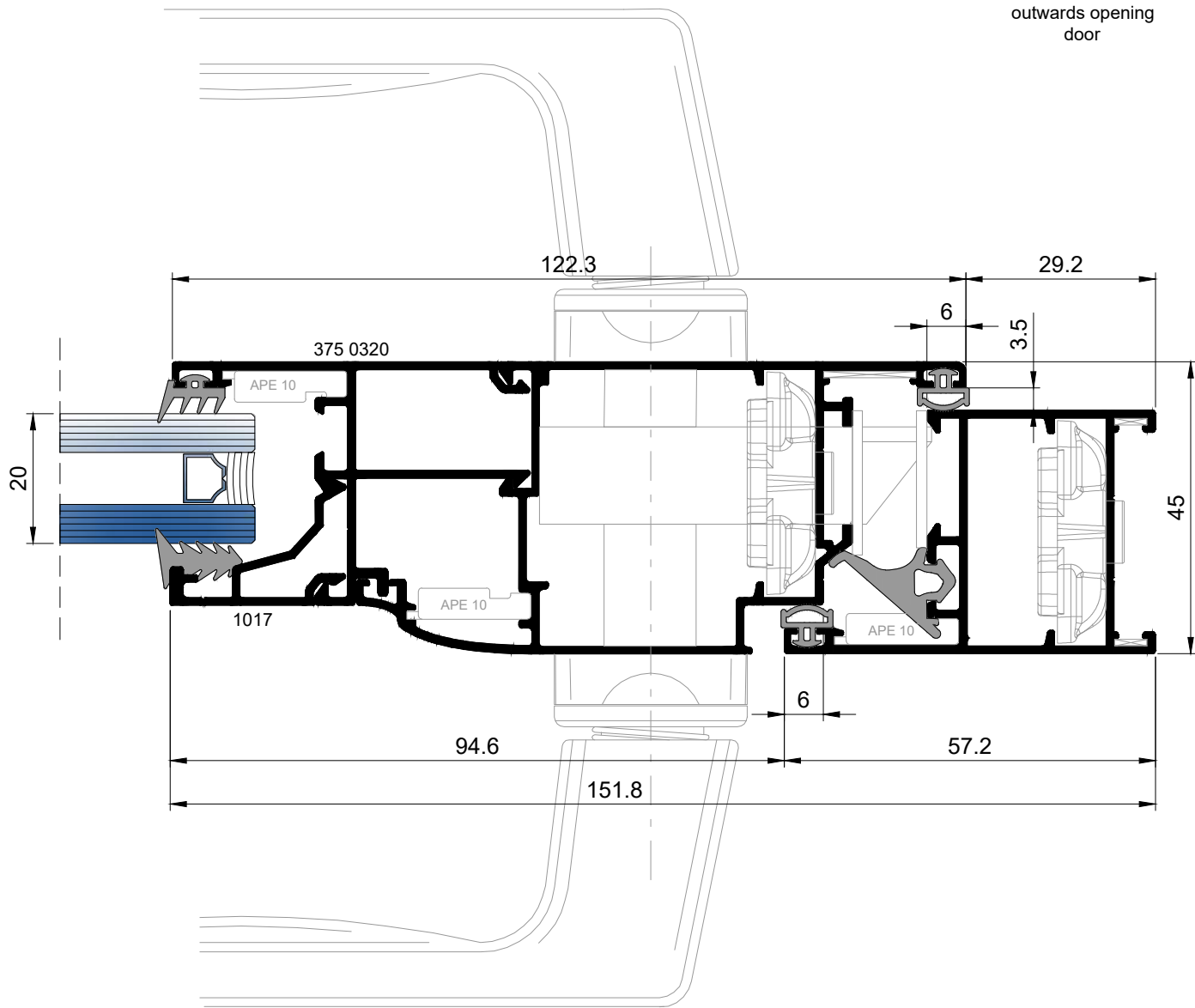


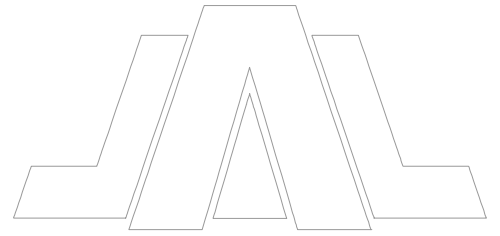
outwards opening
door



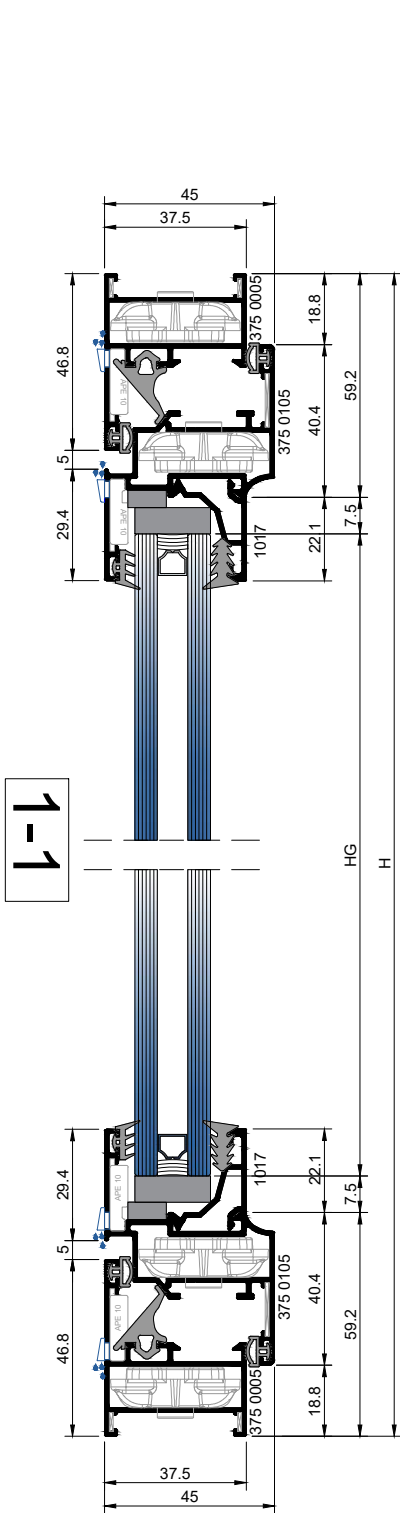


outwards opening
door

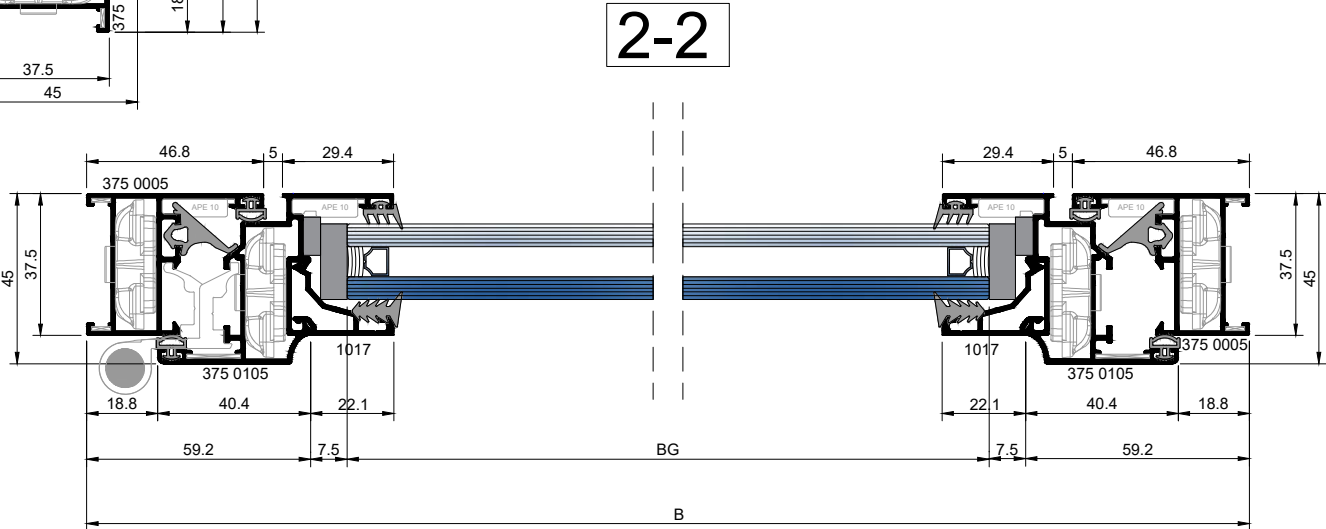
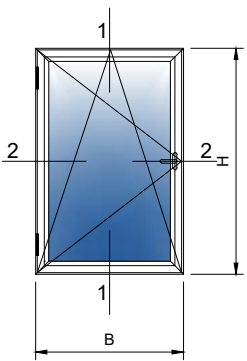




CUTTING ANALYSIS

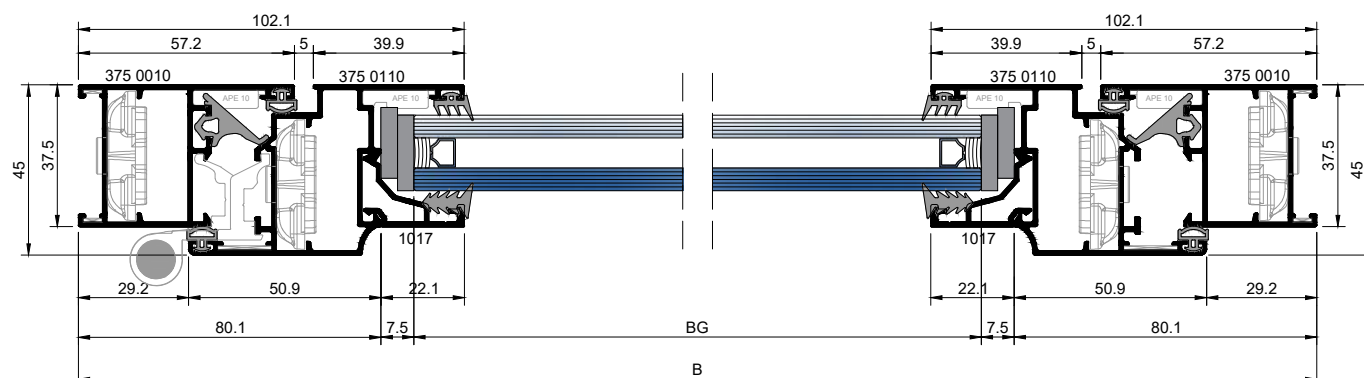
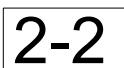
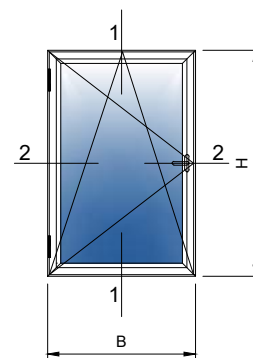


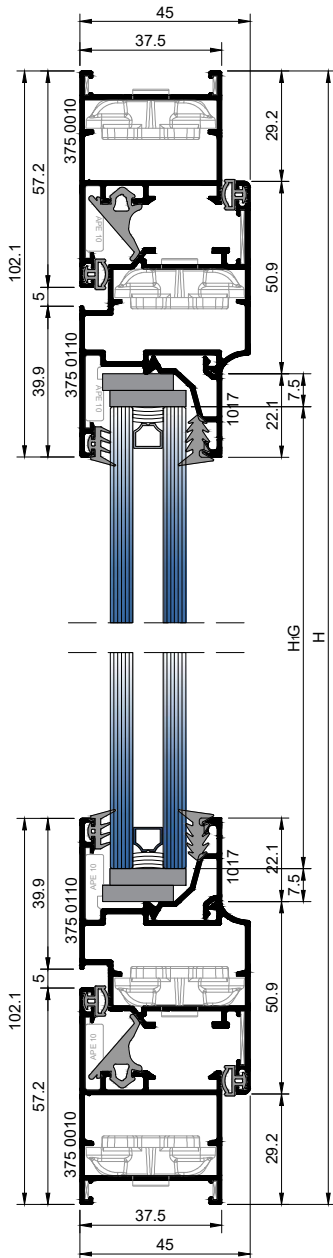
PROFILES		
FRAME	2pcs=B	
	2pcs=H	
SASH	2pcs=B-37.6 mm	
	2pcs=H-37.6 mm	
For frames: 375 0005, 375 0006, 375 0020, 375 0040, 375 0050		
GLASSHOLDER	2pcs=B-118.4 mm	
	2pcs=H-162.4 mm	
For frames: 375 0005, 375 0006, 375 0020, 375 0040, 375 0050		
For sashes: 375 0105, 375 0125, 375 0126		
GLASS	Glass width	BG=B-133.4 mm
	Glass height	HG=H-133.4 mm





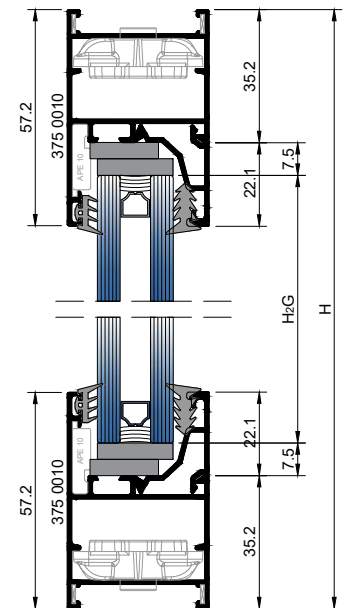
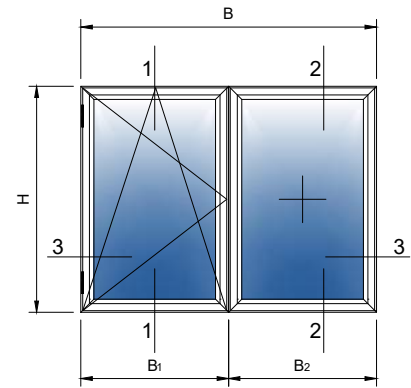
PROFILES		
FRAME	2pcs=B	
	2pcs=H	
SASH	2pcs=B-58.4 mm	
	2pcs=H-58.4 mm	
For frames: 375 0010, 375 0035,375 0045,375 0055		
GLASSHOLDER	2pcs=B-160.2 mm	
	2pcs=H-204.2 mm	
For frames: 375 0010, 375 0035,375 0045,375 0055		
For sashes: 375 0110,375 0130		
GLASS	Glass width	BG=B-175.2 mm
	Glass height	HG=H-175.2 mm





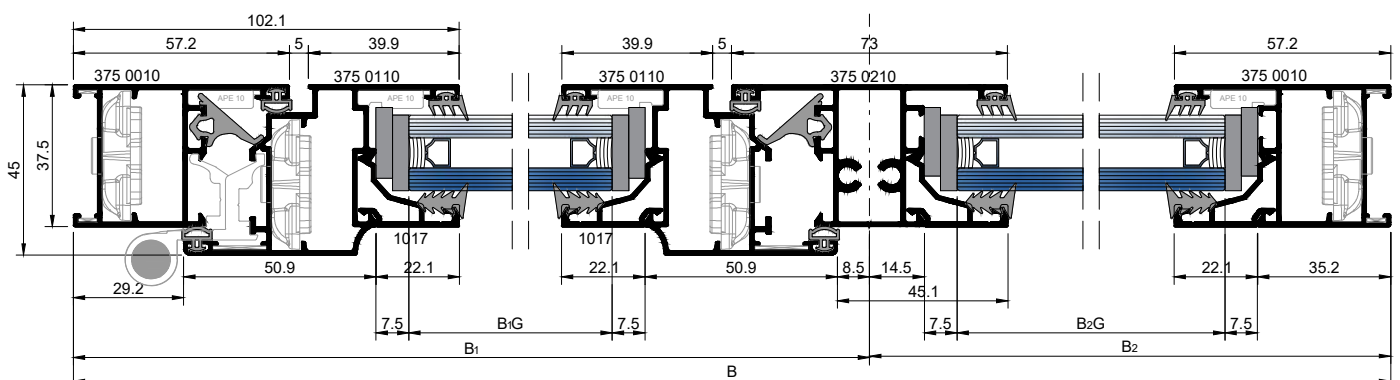
PROFILES		
FRAME	2pcs=B	
	2pcs=H	
SASH	2pcs=B _r -37.7 mm*	* Only for 375 0210
	2pcs=H-58.4 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
GLASSHOLDER	2pcs=B _r -139.5 mm*	* Only for 375 0210
	2pcs=H-204.2 mm	
	2pcs=B ₂ -49.7 mm*	* Only for 375 0210
	2pcs=H-114.4 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
For sashes: 375 0110, 375 0130		
GLASS	Glass width	B ₁ G=B _r -154.5 mm
		B ₂ G=B ₂ -64.7 mm
	Glass height	H ₁ G=H-175.2 mm
		H ₂ G=H-85.4 mm

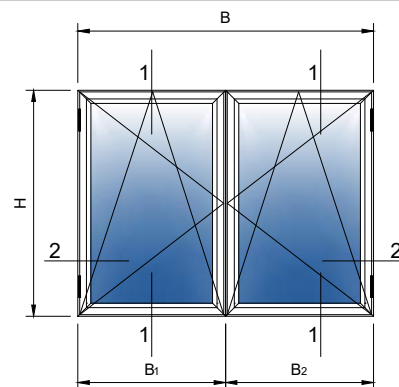
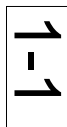
1-1



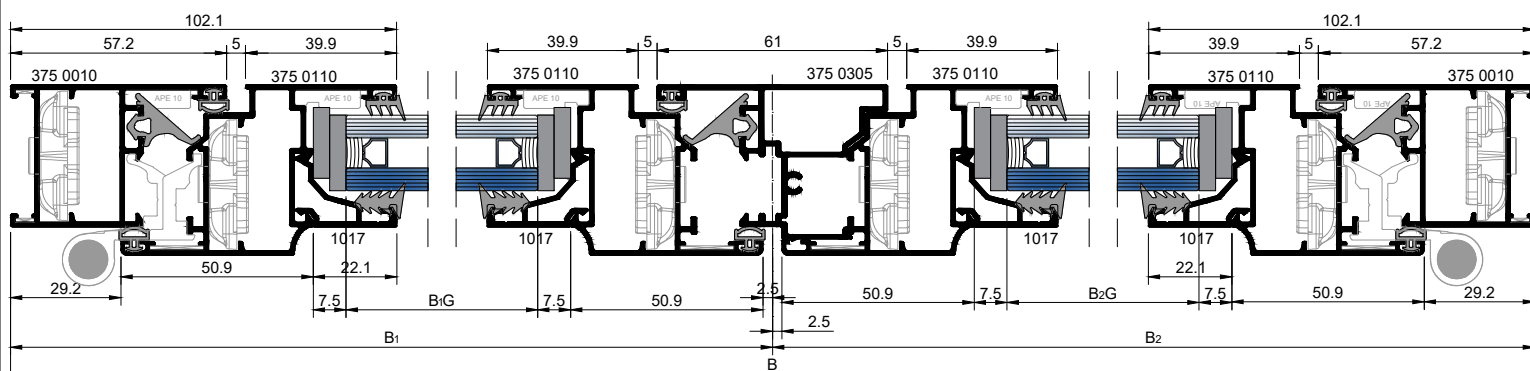
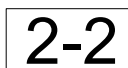
2-2

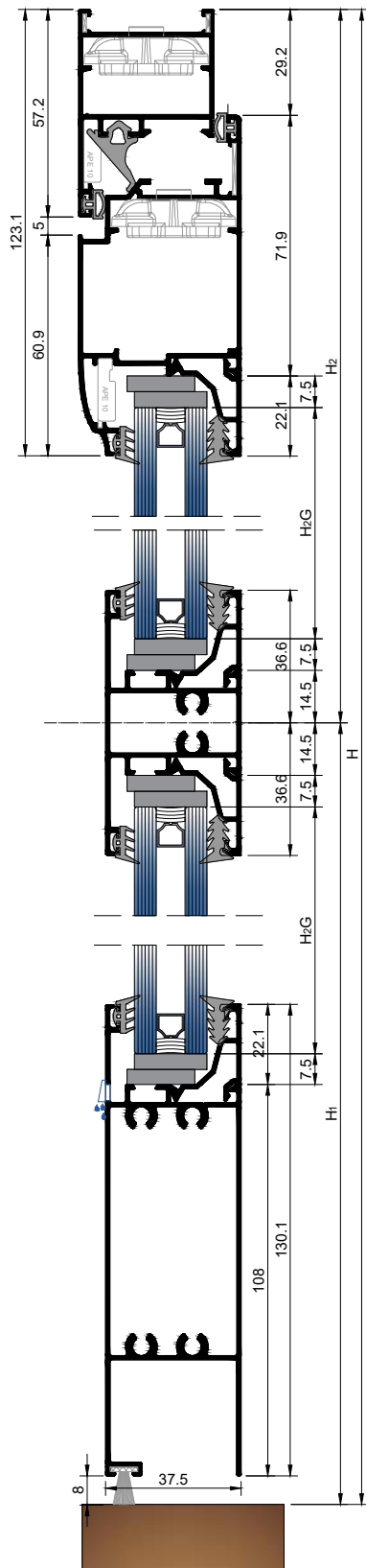
3-3



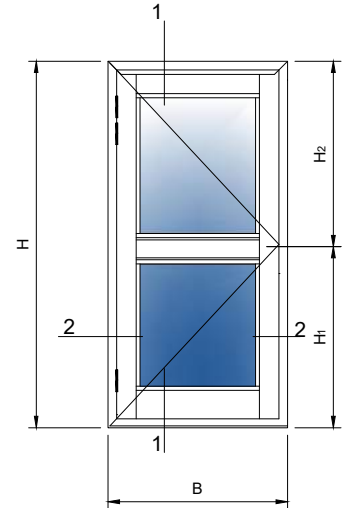


PROFILES			
FRAME	2pcs=B		
	2pcs=H		
SASH	2pcs=B ₁ -31.7 mm*	* also for 375 0310	
	2pcs=B ₂ -31.7 mm*	* also for 375 0310	
	4pcs=H-58.4 mm		
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
GLASSHOLDER	2pcs=B ₁ -133.5 mm*	* also for 375 0310	
	4pcs=H-204.2 mm		
	2pcs=B ₂ -133.5mm*	* also for 375 0310	
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
For sashes: 375 0110, 375 0130			
OVERHUNG	1pcs=H-130.8 mm*	* also for 375 0310	
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
GLASS	Glass width	B ₁ G=B ₁ -148.5 mm	
		B ₂ G=B ₂ -148.5 mm	
	Glass height	HG=H-175.2 mm	



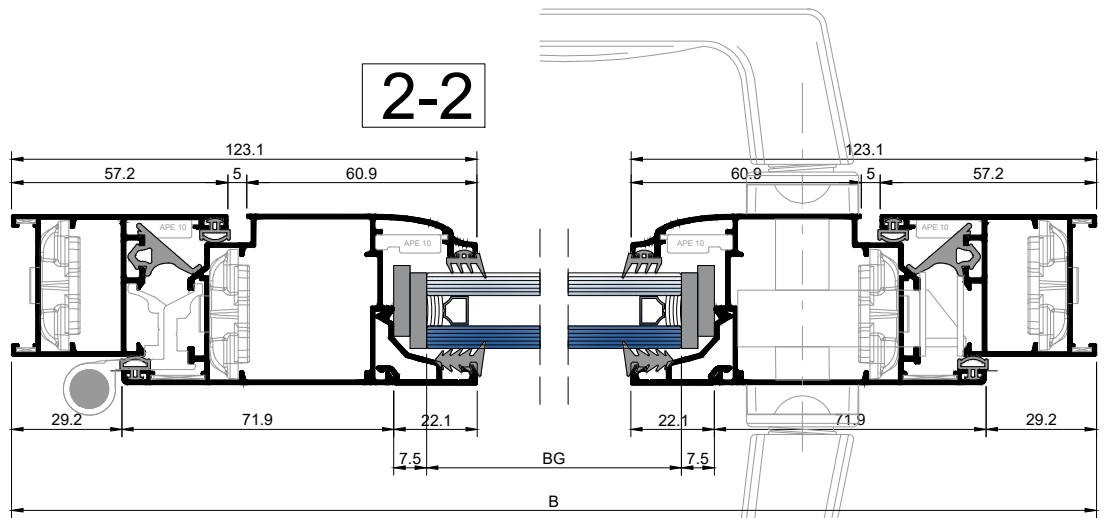


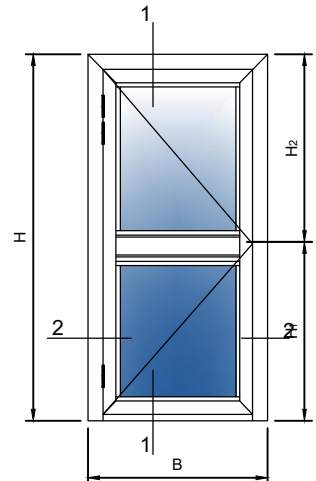
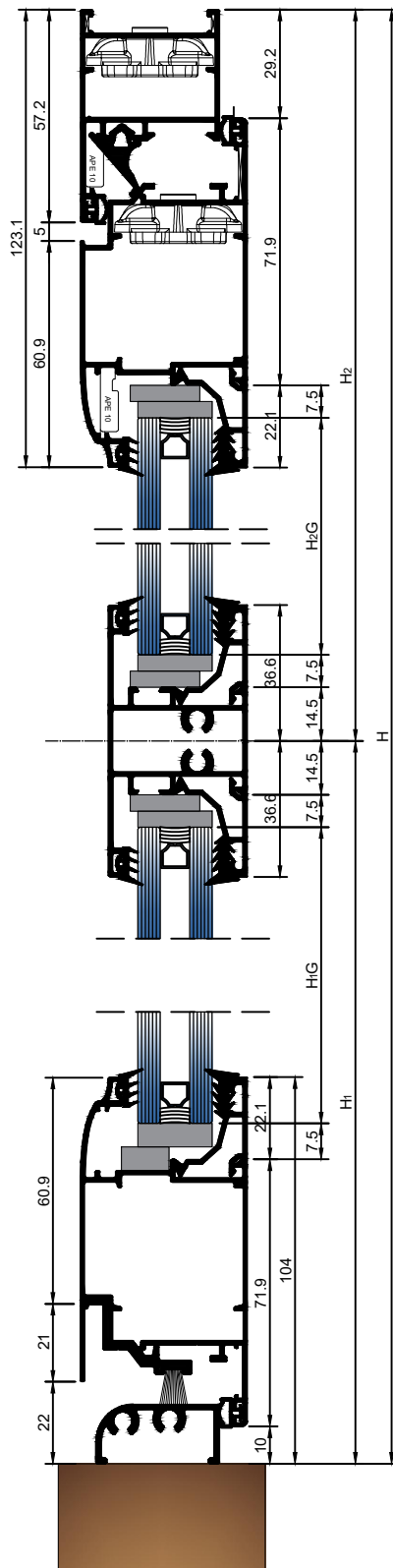
1-1



PROFILES		
FRAME	1pcs=B	
	2pcs=H	
SASH	1pcs=B-58.4 mm	
	2pcs=H-37.2 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
GLASSHOLDER	4pcs=B-202.2 mm	
	2pcs=H _r -174.7 mm*	*only for 375 0210
	2pcs=H ₂ -159.8 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
MULLION	1pcs=B-202.2 mm	
BOARD FOR DOOR	1pcs=B-202.2 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
GLASS	Glass width	BG=B-217.2mm
	Glass height	H ₁ G=H _r -145.5 mm
		H ₂ G=H ₂ -130.6 mm

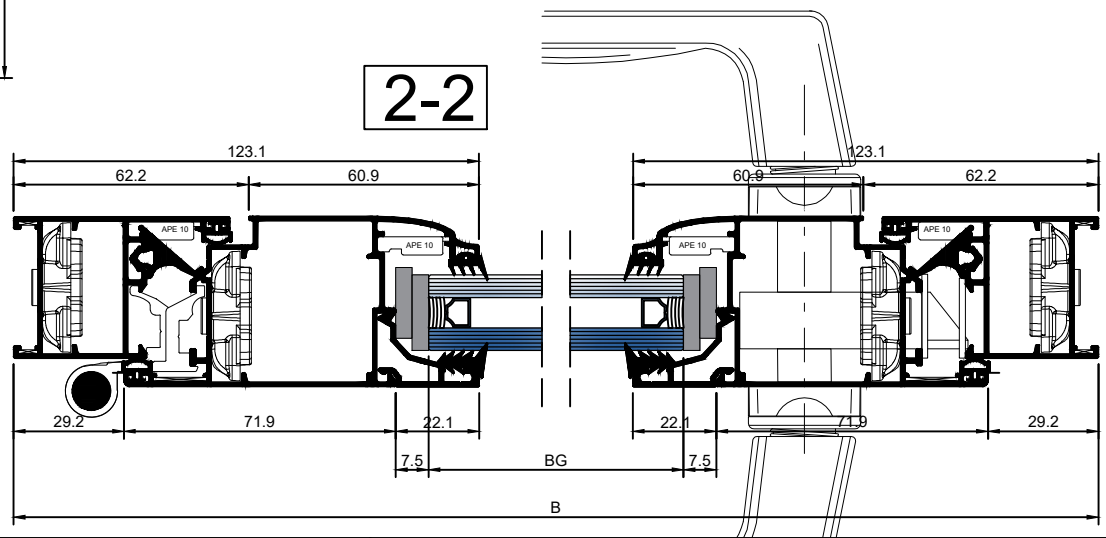
2-2

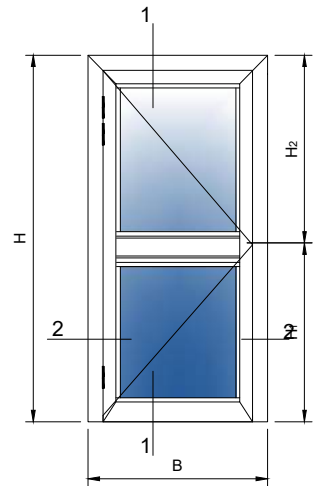
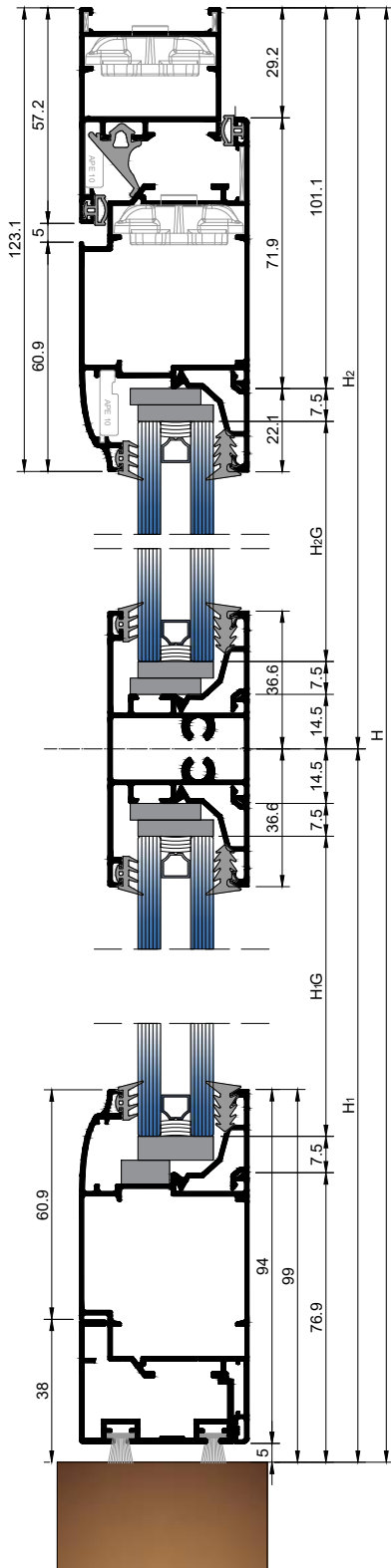




PROFILES			
FRAME	1pcs=B		
	2pcs=H		
SASH	2pcs=B-58.4 mm		
	2pcs=H-39.2 mm		
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
GLASSHOLDER	4pcs=B-202.2 mm		
	2pcs=H ₁ -140.6 mm*	*only for 375 0210	
	2pcs=H ₂ -159.8 mm		
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
MULLION	1pcs=B-202.2 mm		
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
ADDITION FOR DOOR with cap	1pcs=B-137 mm	375 0360	
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
DOOR-SILL	1pcs=B-58.4 mm	375 0365 without cap	
	1pcs=B-78 mm	375 0365 with cap	
For frames: 375 0010, 375 0035, 375 0045, 375 0055			
GLASS	Glass width	BG=B-217.2mm	
	Glass height	H ₁ G=H ₁ -111.4 mm	
		H ₂ G=H ₂ -130.6 mm	

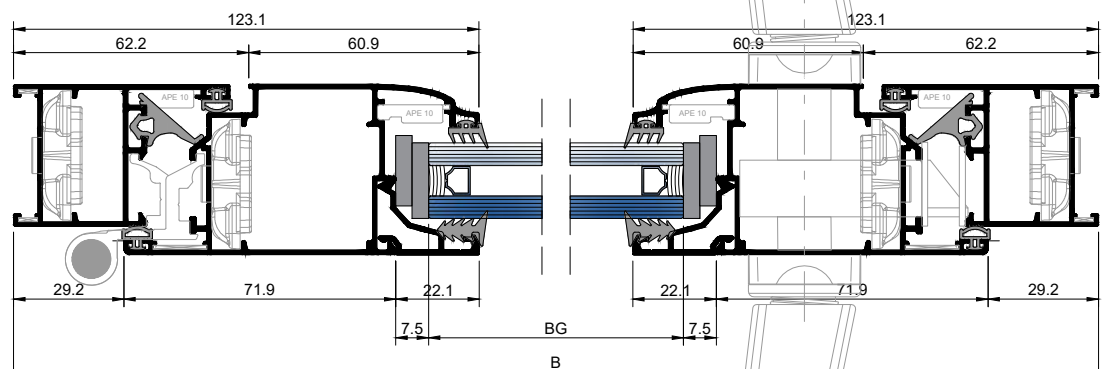
2-2

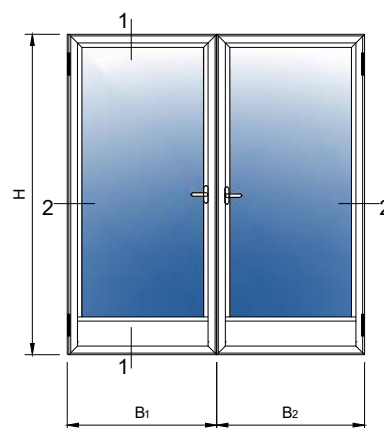
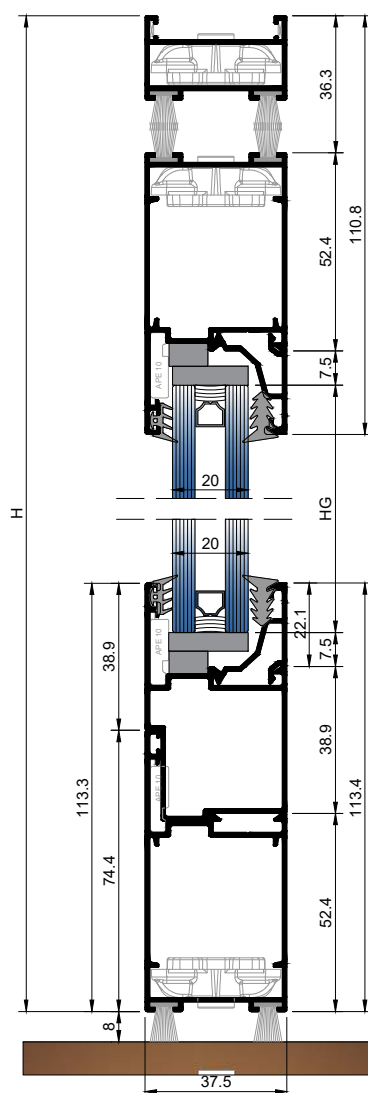




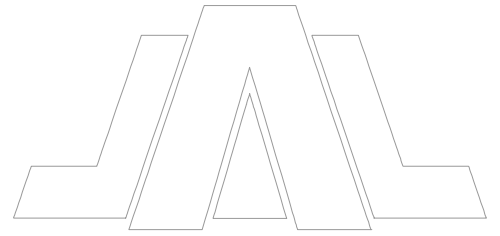
PROFILES		
FRAME	1pcs=B	
	2pcs=H	
SASH	2pcs=B-58.4 mm	
	2pcs=H-34.2 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
GLASSHOLDER	4pcs=B-202.2 mm	
	2pcs=H ₁ -135.6 mm*	*only for 375 0210
	2pcs=H ₂ -159.8 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
MULLION	1pcs=B-202.2 mm	
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
ADDITION FOR DOOR	1pcs=B-124.4 mm	375 0361 without cap
For frames: 375 0010, 375 0035, 375 0045, 375 0055		
GLASS	Glass width	BG=B-217.2mm
	Glass height	H ₁ G=H ₁ -106.4 mm
		H ₂ G=H ₂ -130.6 mm

2-2





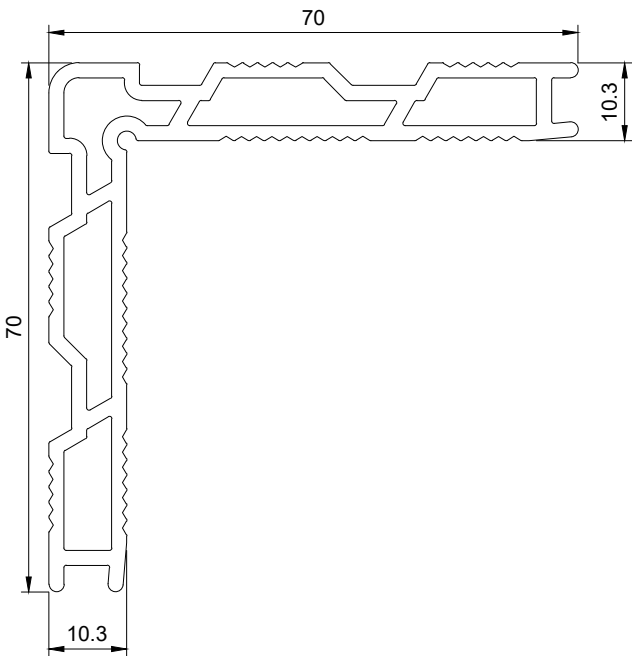
PROFILES		
FRAME	1pcs=B	
	2pcs=H	
SASH	2pcs=B ₁ -43.3 mm	
	2pcs=B ₂ -43.3 mm	
	4pcs=H-44.3 mm	   
GLASSHOLDER	2pcs=B ₁ -148.1mm	
	2pcs=B ₂ -148.1 mm*	
	4pcs=H-244.2 mm	   
ADDITION	2pcs=B ₁ -148.1mm	
	2pcs=B ₁ -148.1mm	
GLASS	Glass width	B ₁ G=B ₁ -163.1mm
		B ₂ G=B ₂ -163.1mm
	Glass height	HG=H-203 mm



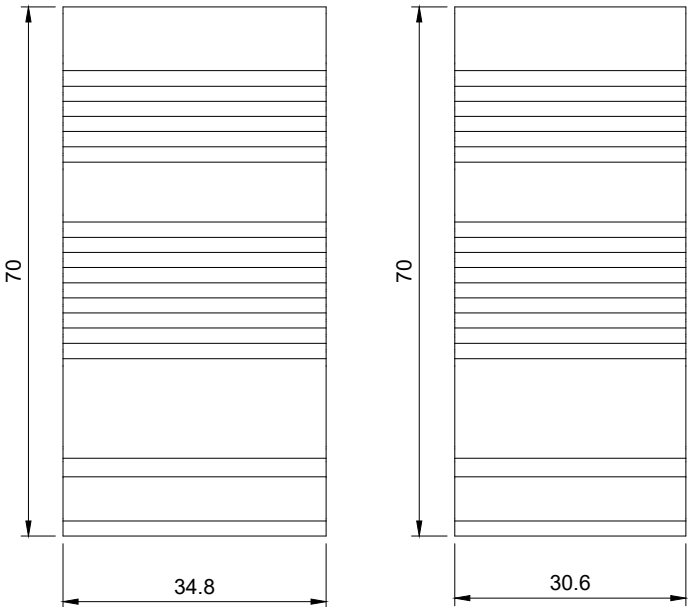
3D DETAILS

press corners for crimping machine

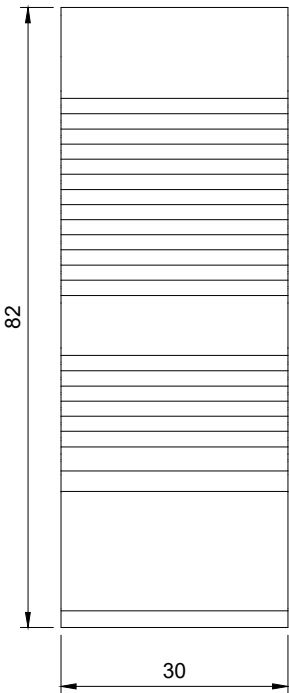
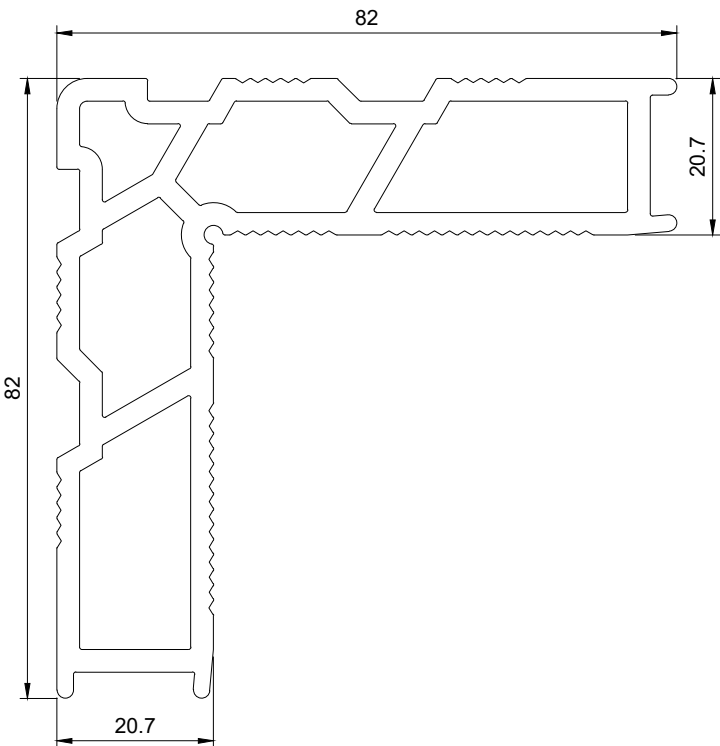
APE 1030
Dimensions:
70x10.3x34.8



APE 1031
Dimensions:
70x10.3x30.6



APE 2070
Dimensions:
82x20.7x30

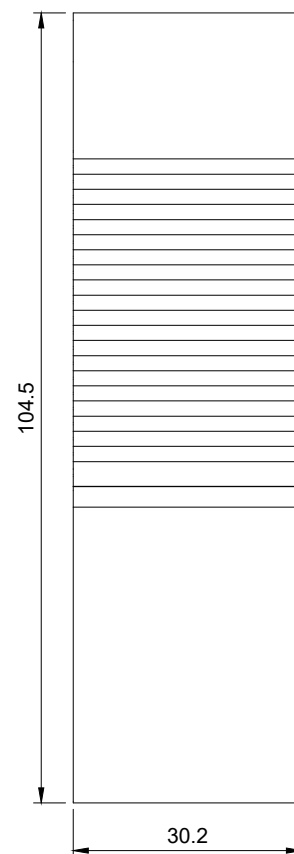
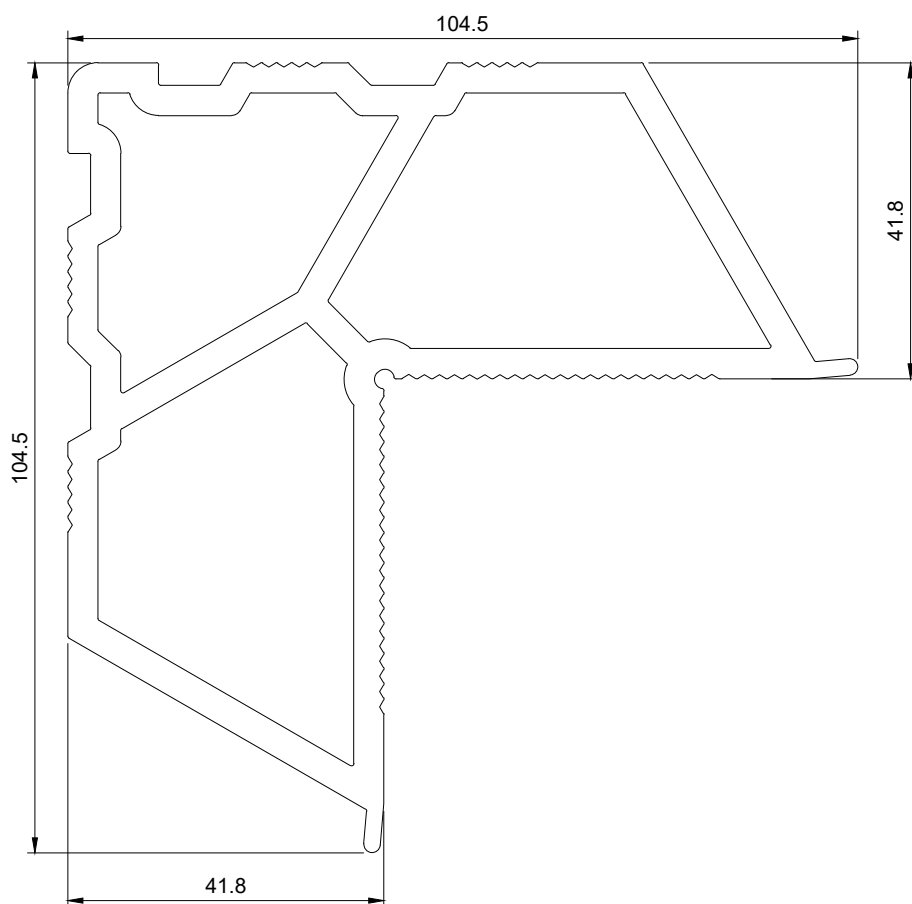


press corners for crimping machine

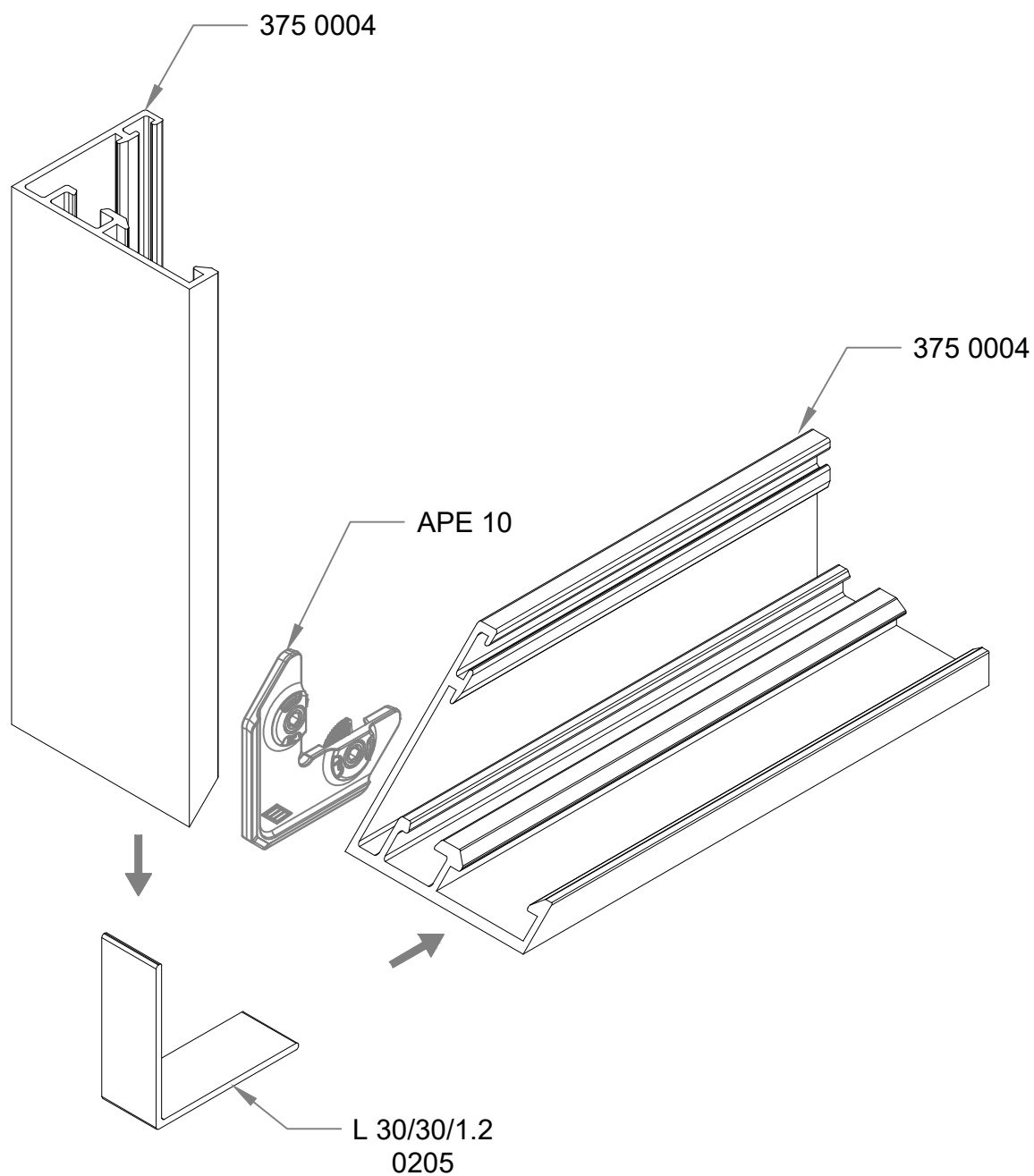
APE 4180

Dimensions:

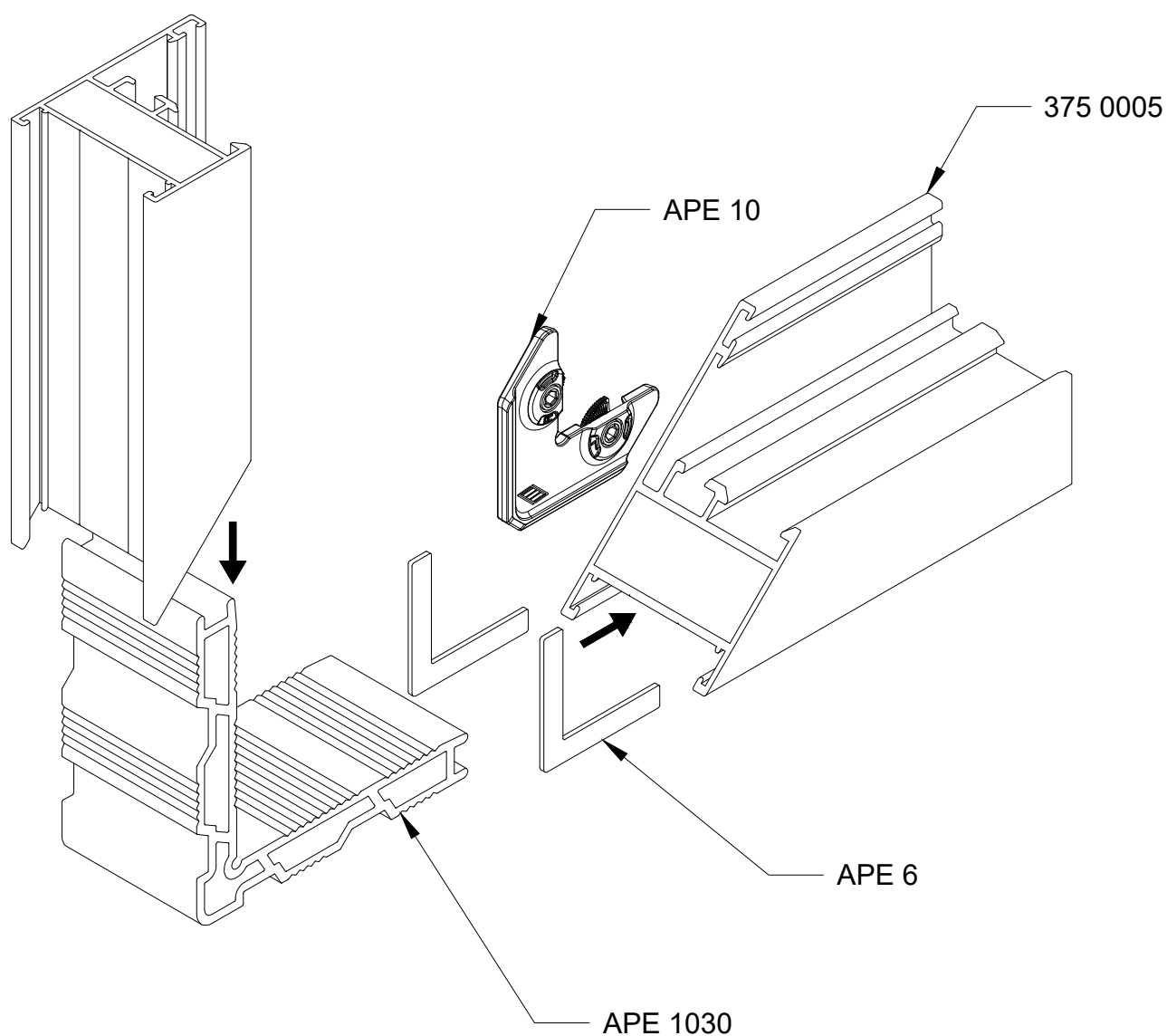
104.5x41.8x30.2



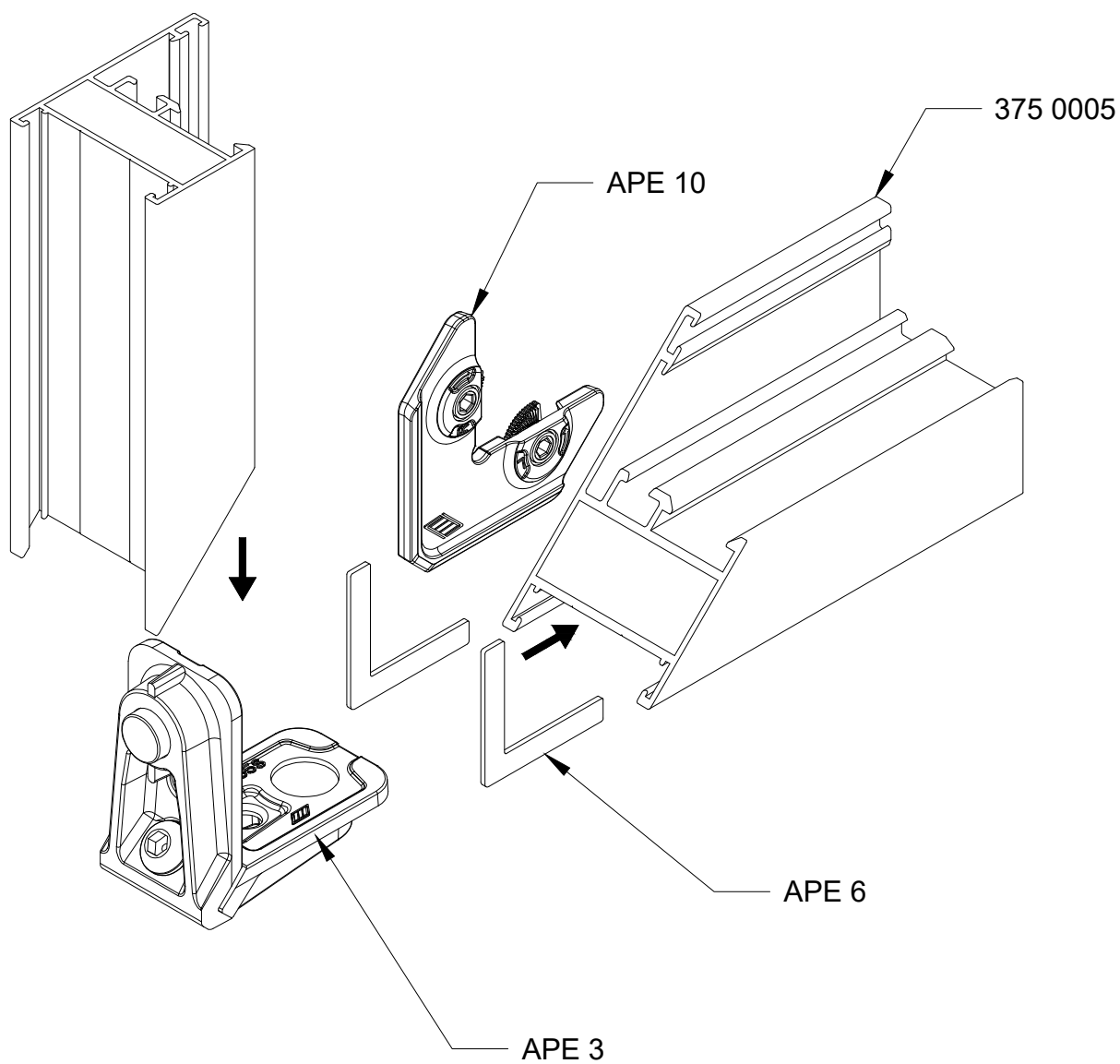
***corner connection 375 0004 frame
with press corner***



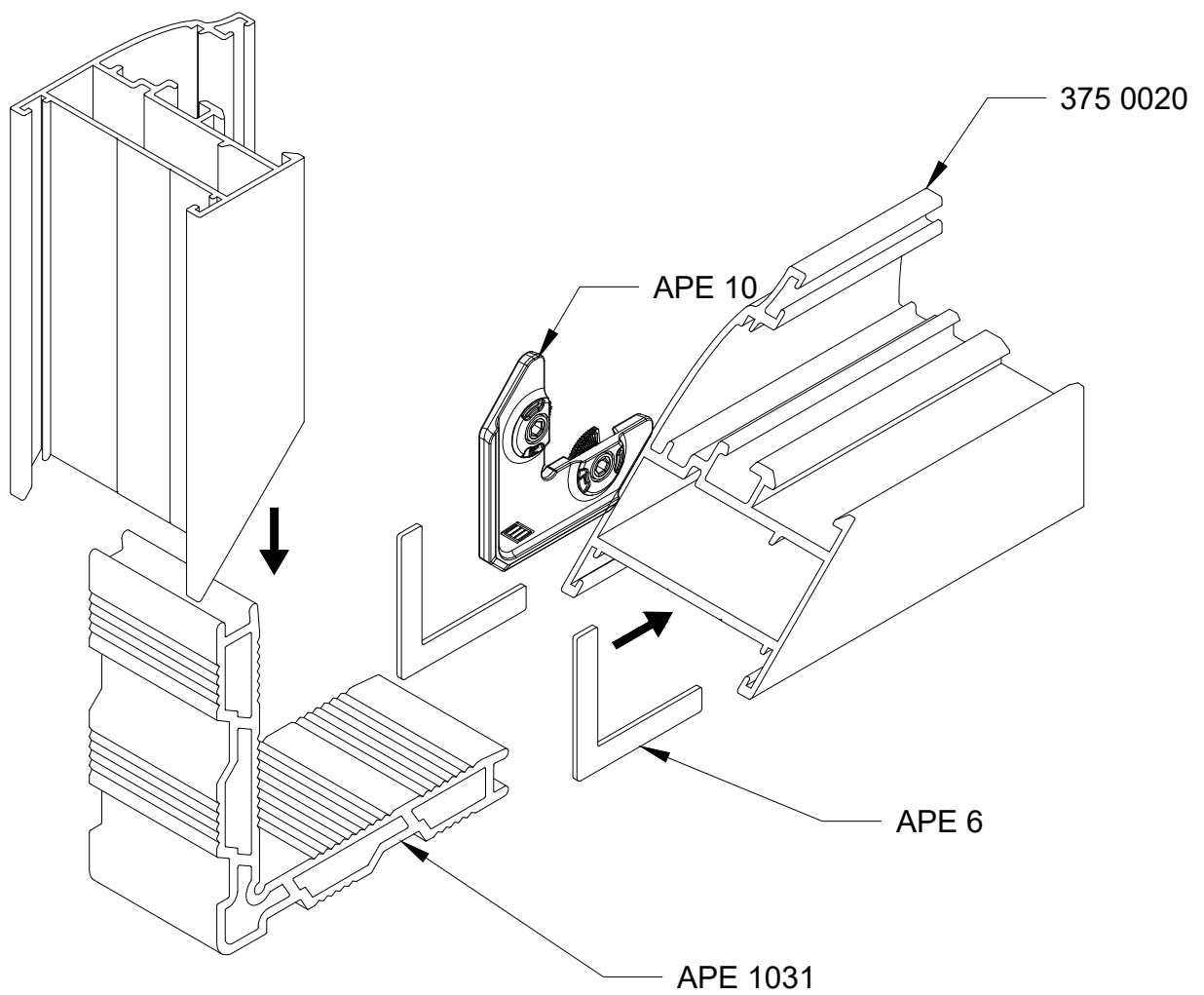
***corner connection 375 0005 frame
with press corner***



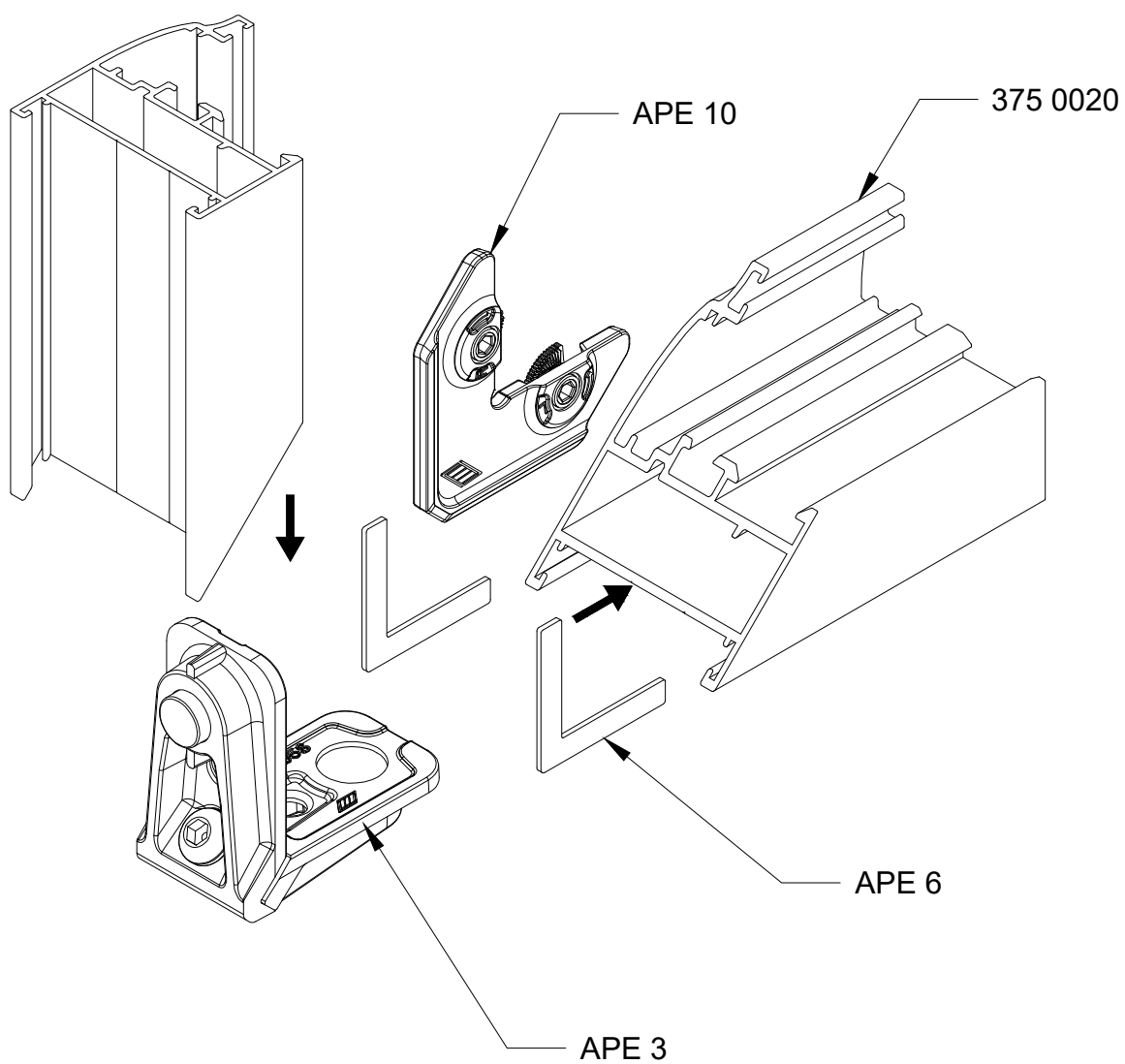
***corner connection 375 0005 frame
with mechanical corner***



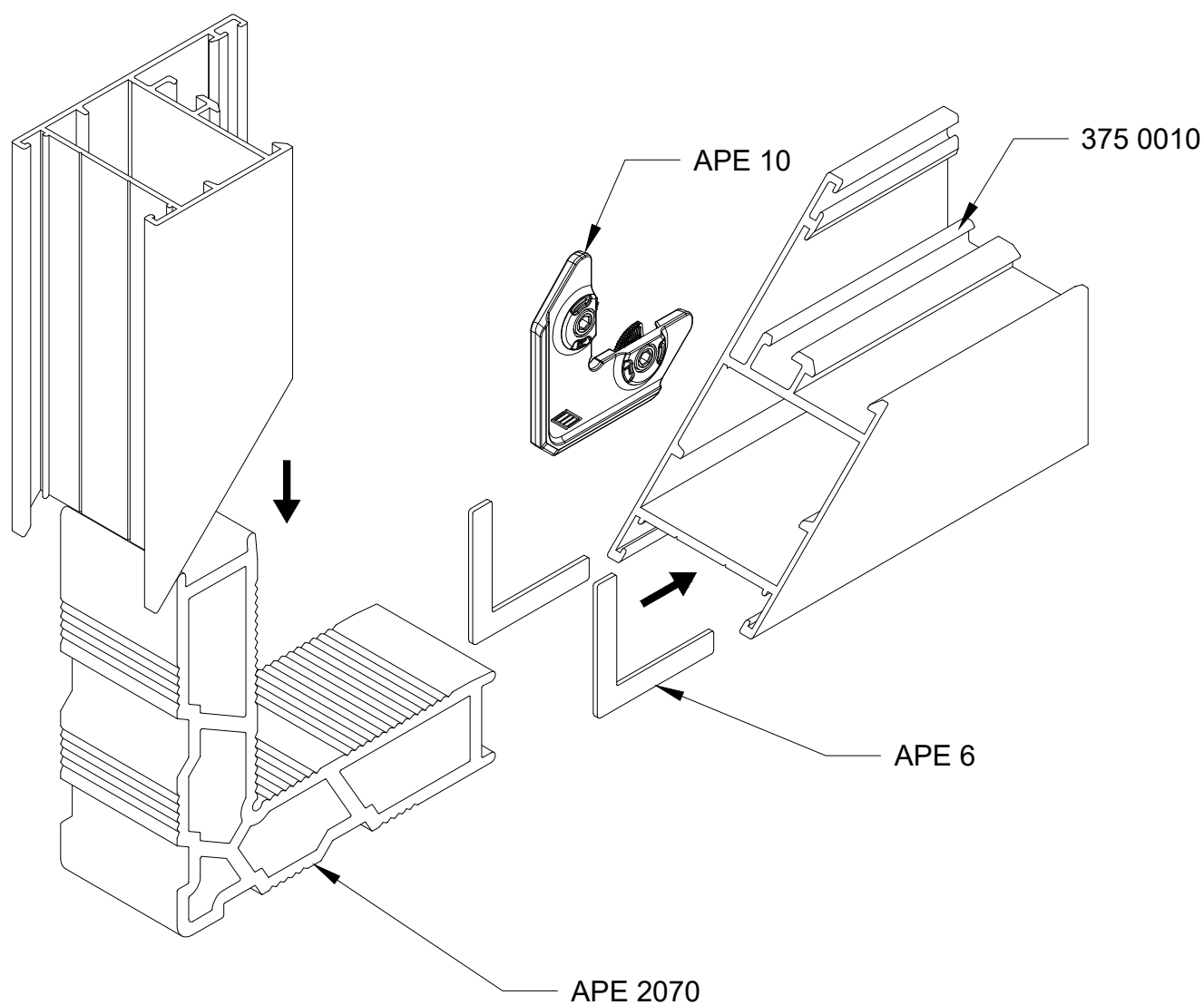
***corner connection 375 0020 frame
with press corner***



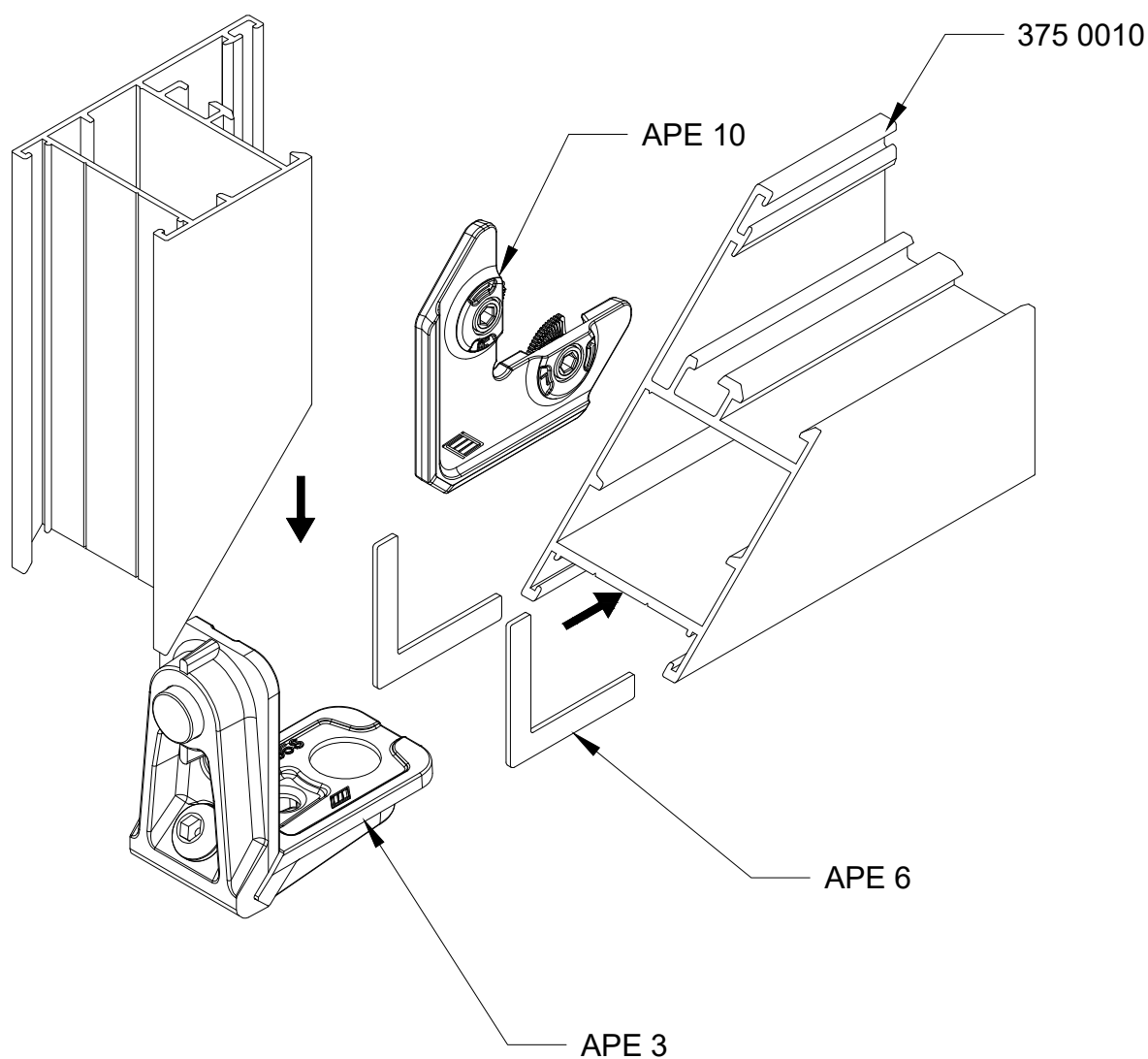
***corner connection 375 0020 frame
with mechanical corner***



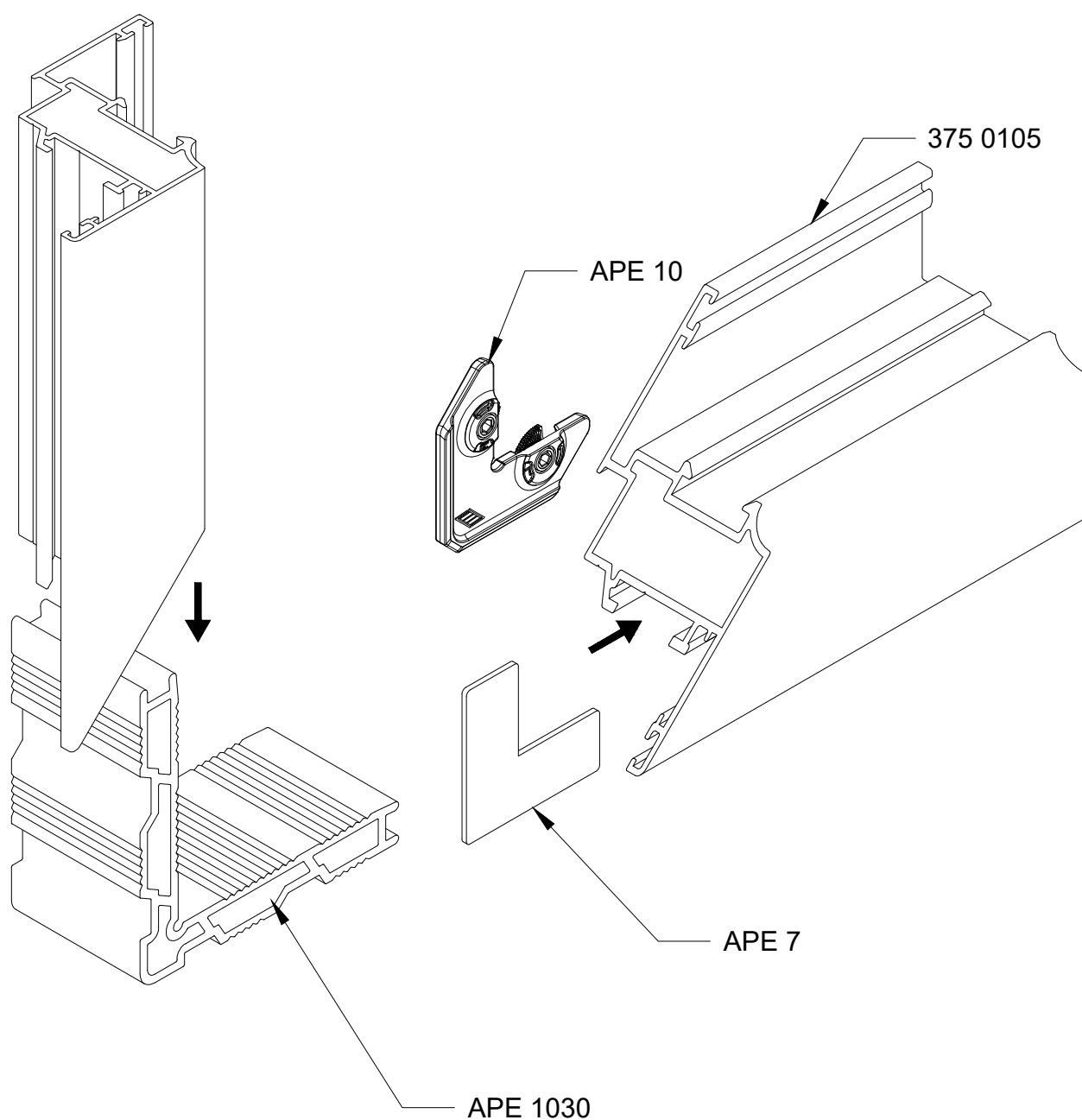
***corner connection 375 0010 frame
with press corner***



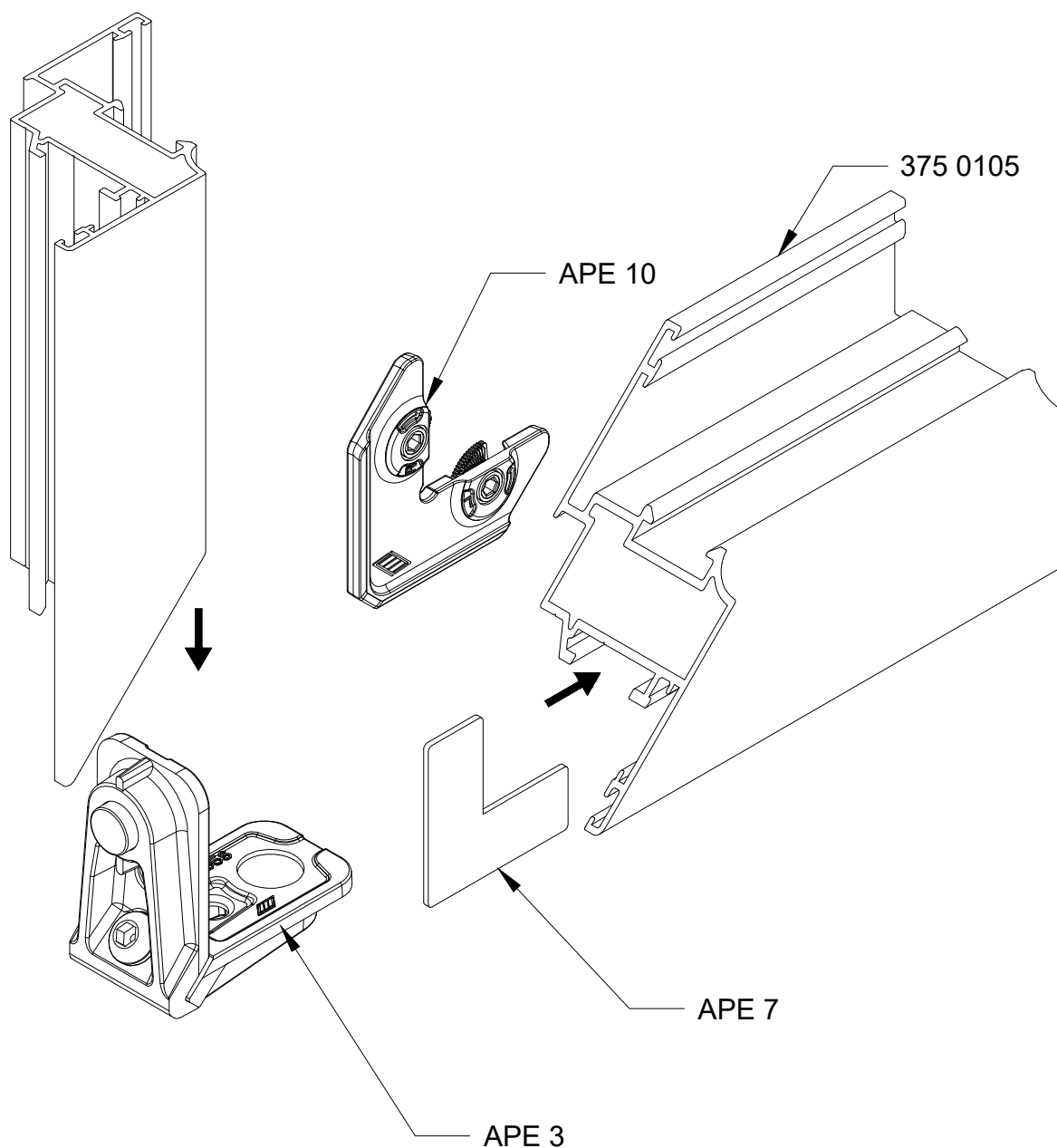
***corner connection 375 0010 frame
with mechanical corner***



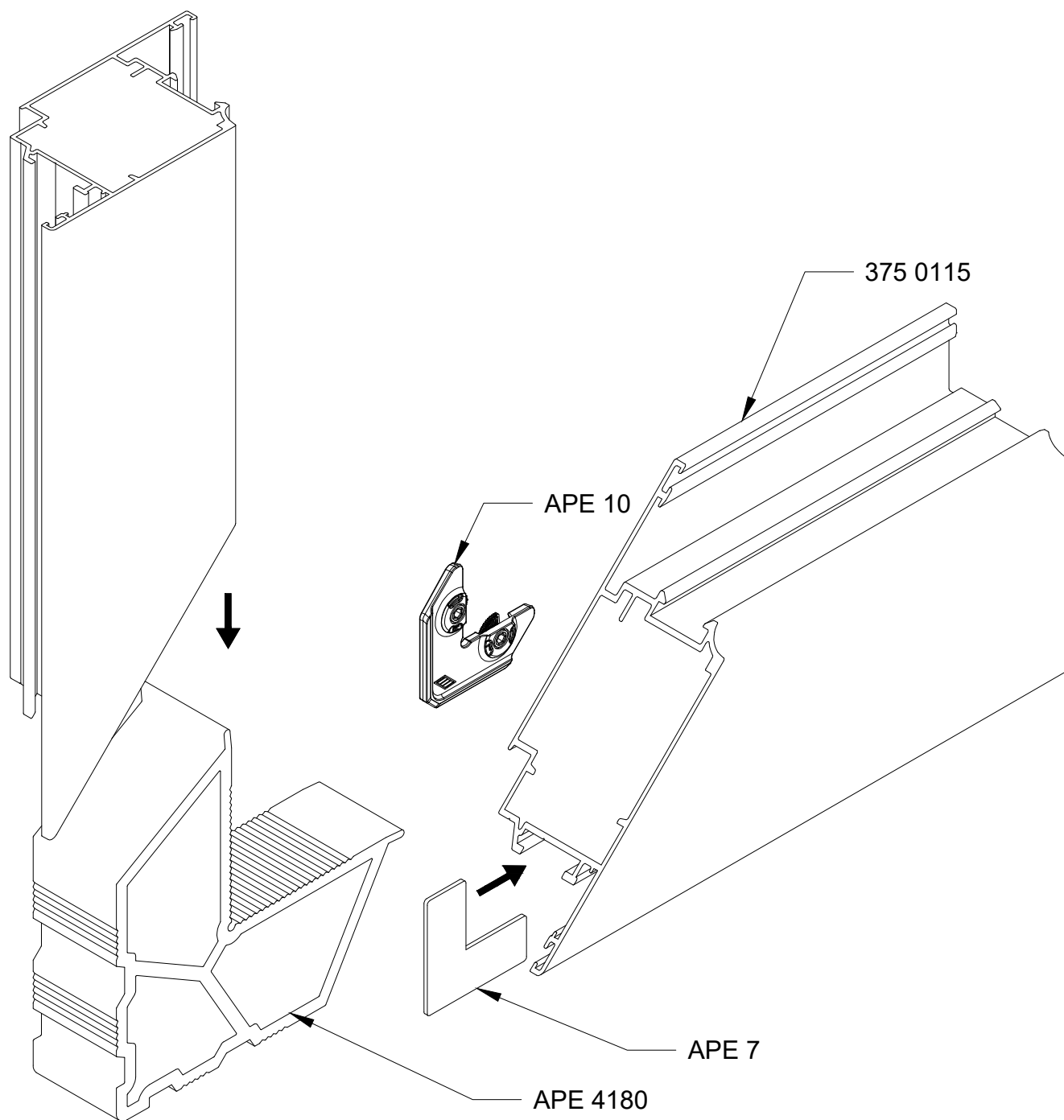
*corner connection 375 0105 sash with
press corner*



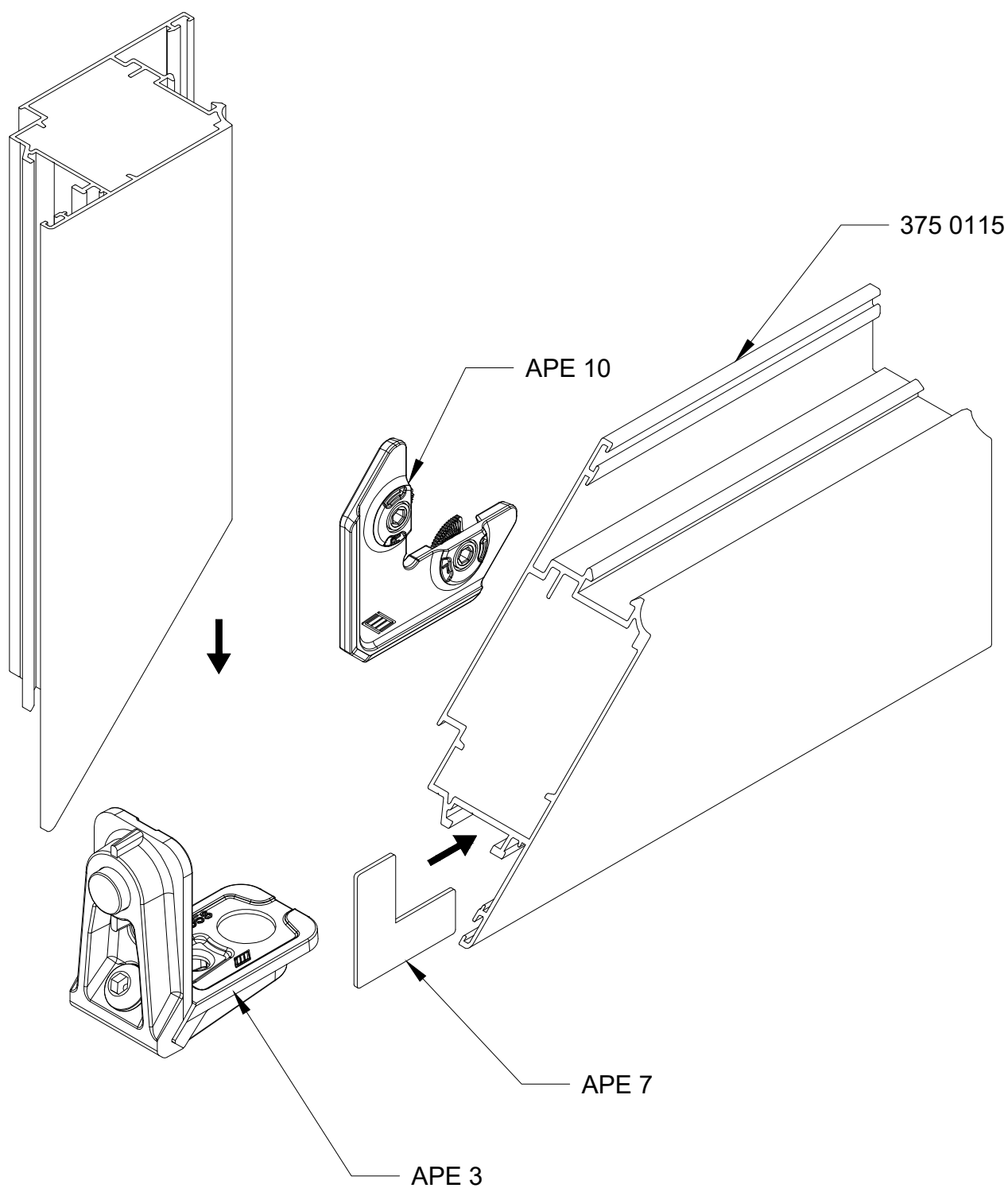
***corner connection 375 0105 sash with
mechanical corner***



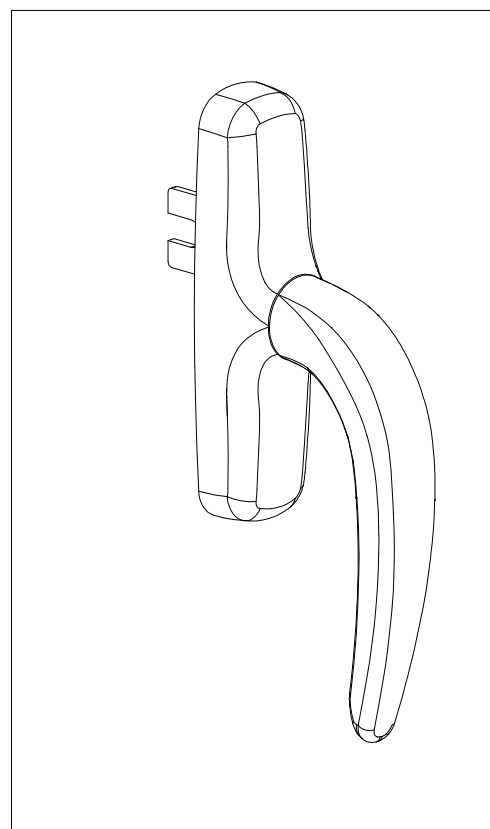
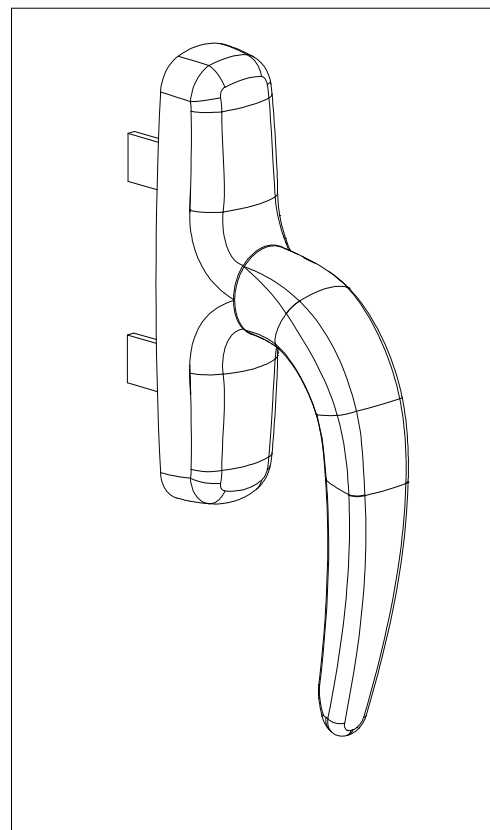
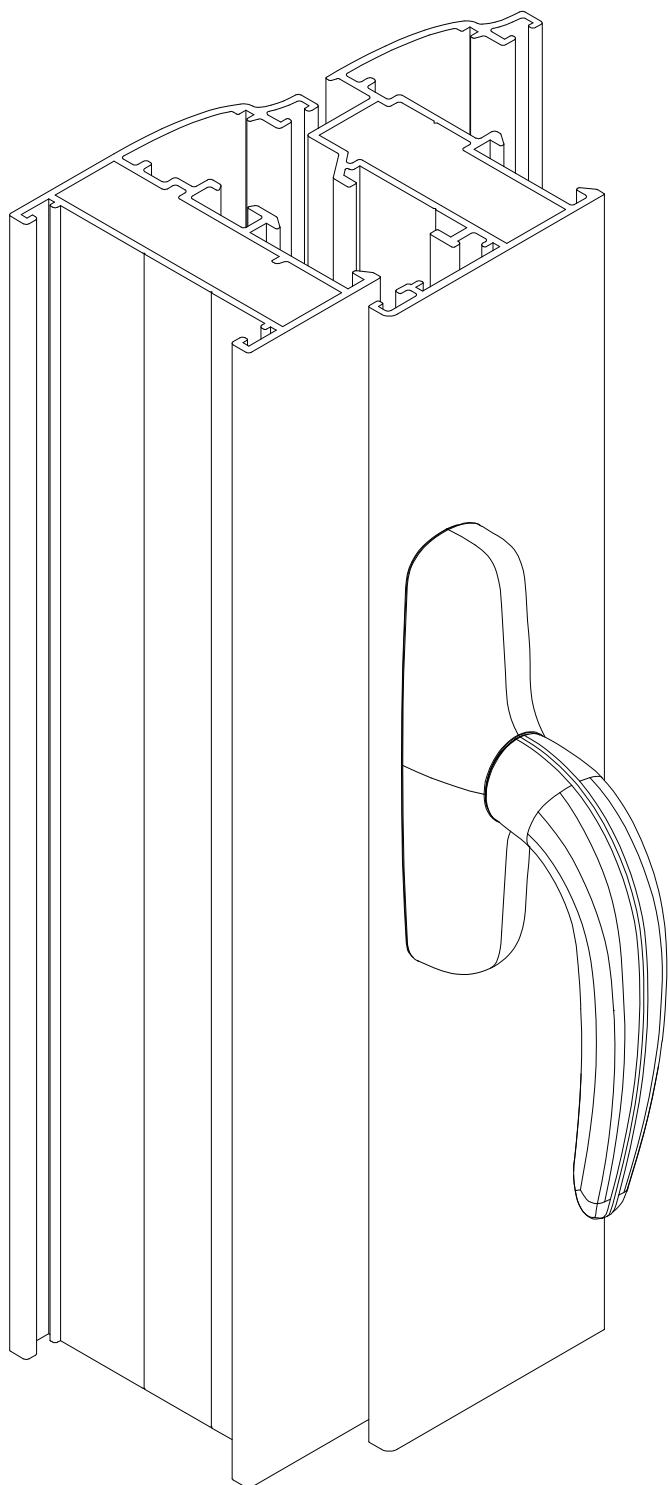
*corner connection 375 0115 sash with
press corner*

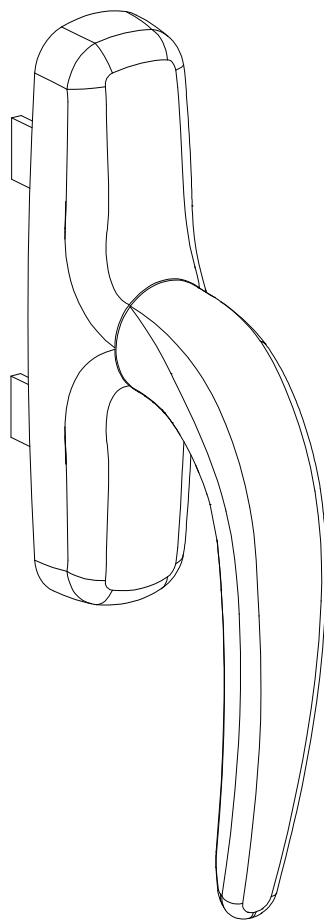
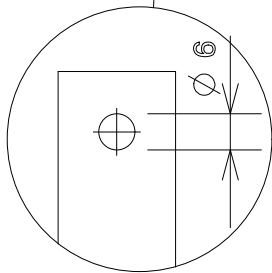
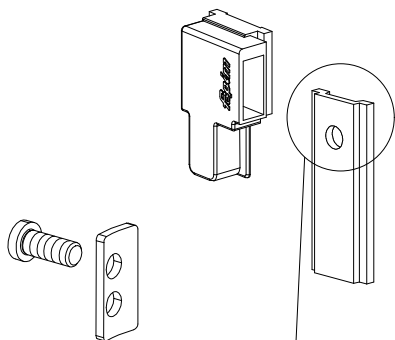
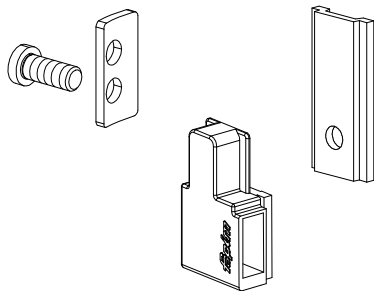
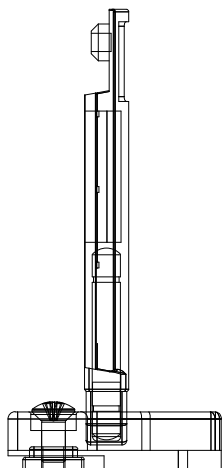
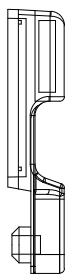
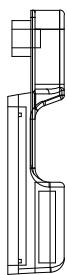
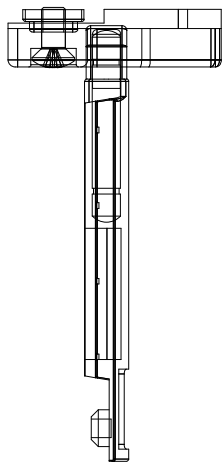


***corner connection 375 0115 sash with
mechanical corner***

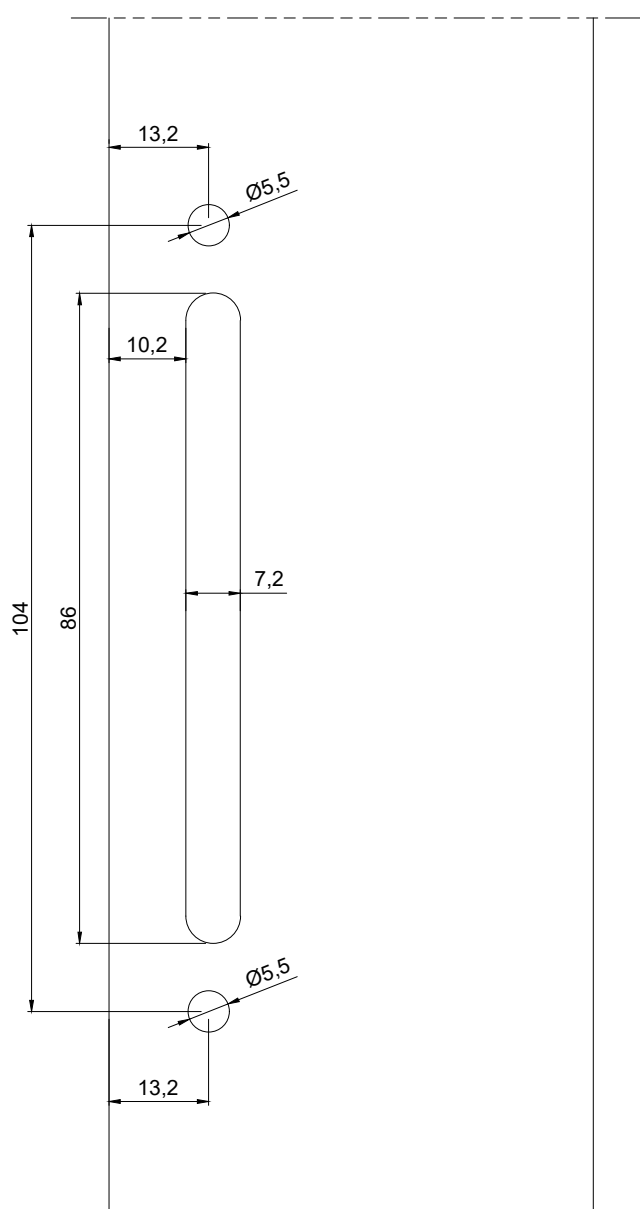
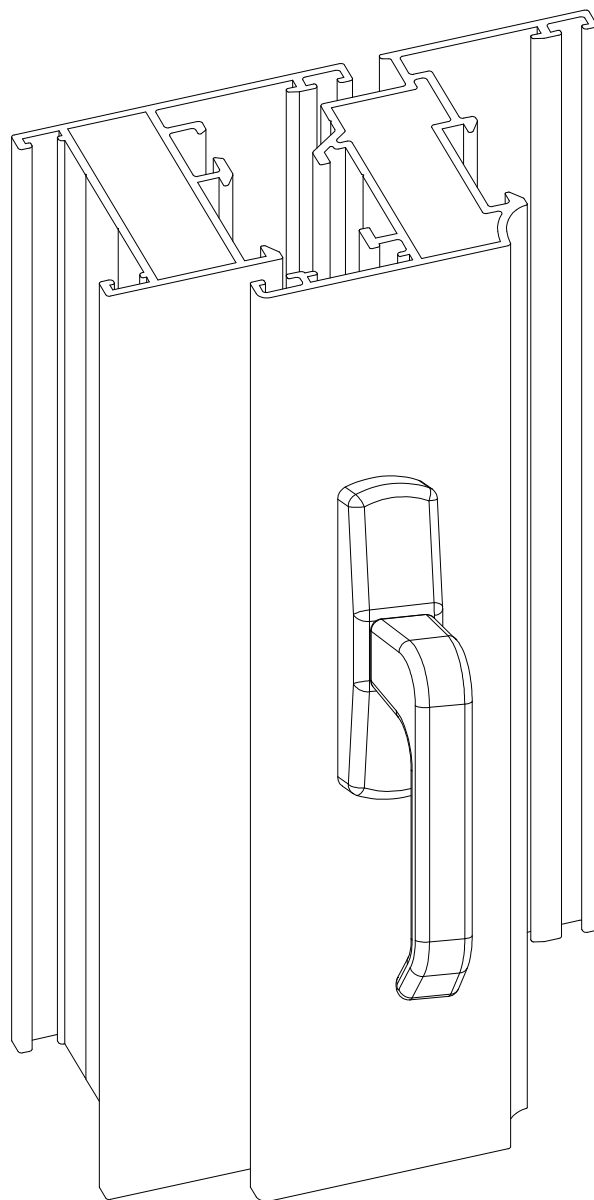
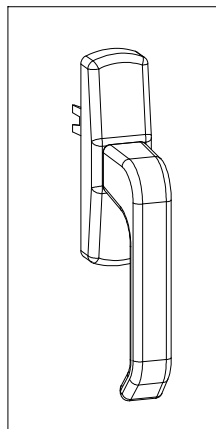


handles for windows

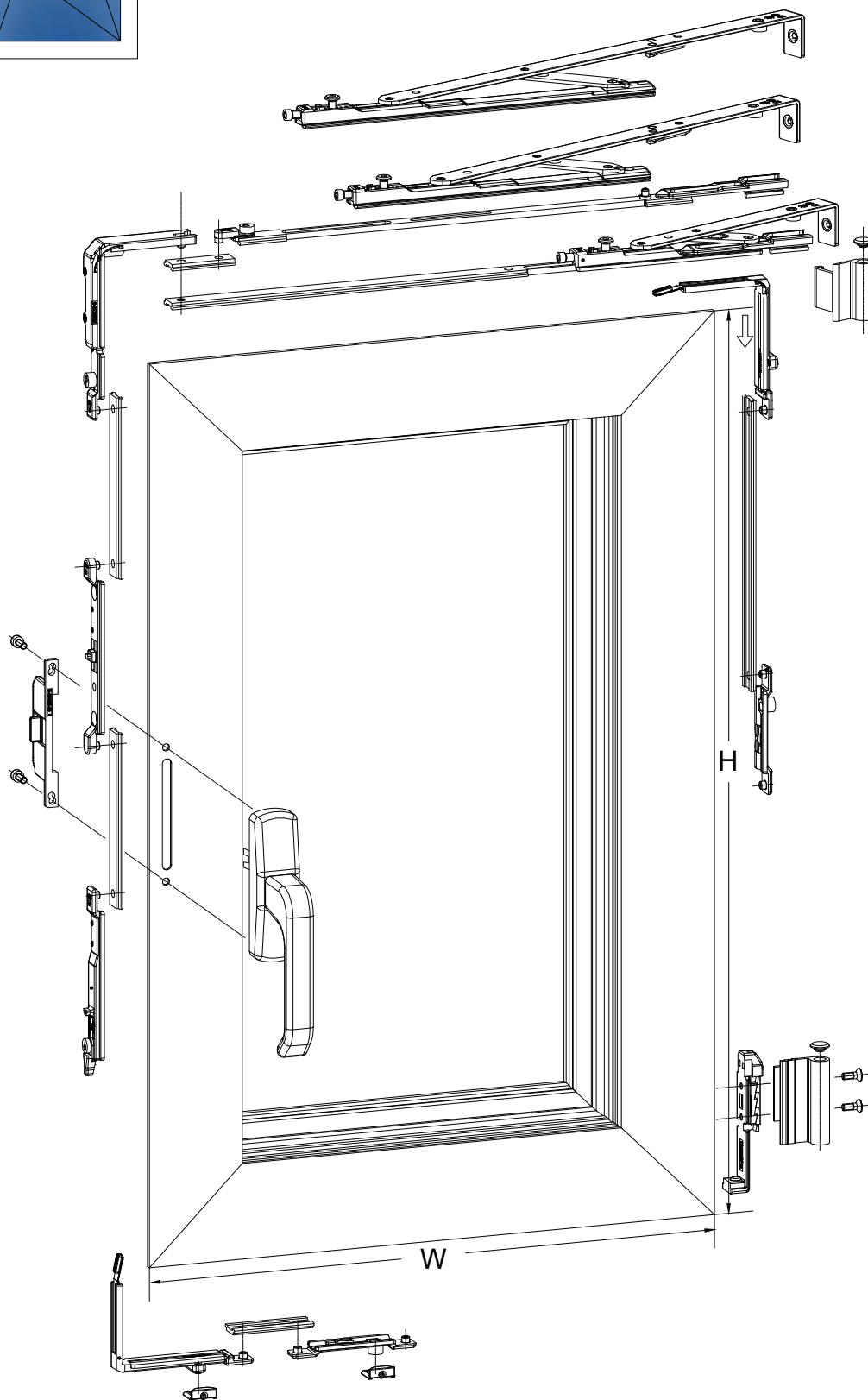
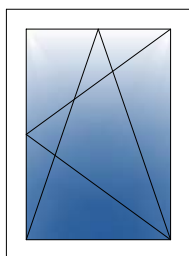




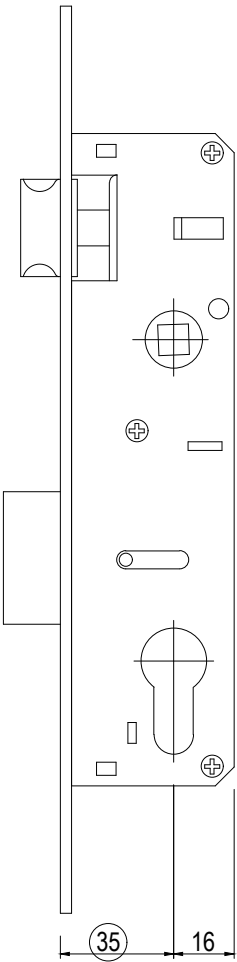
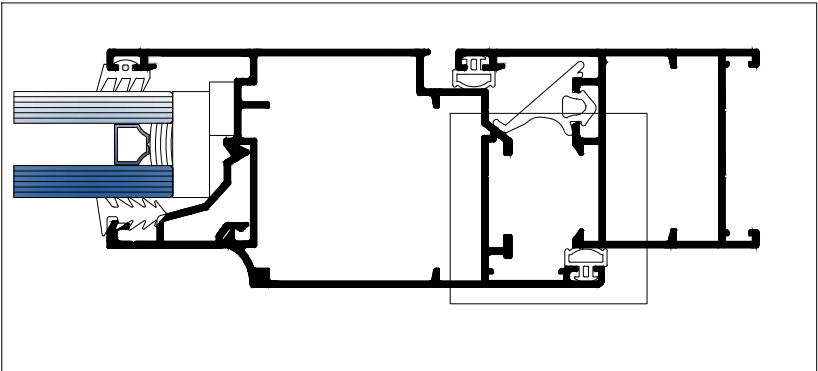
*milling & drilling dimensions for
geared handle*



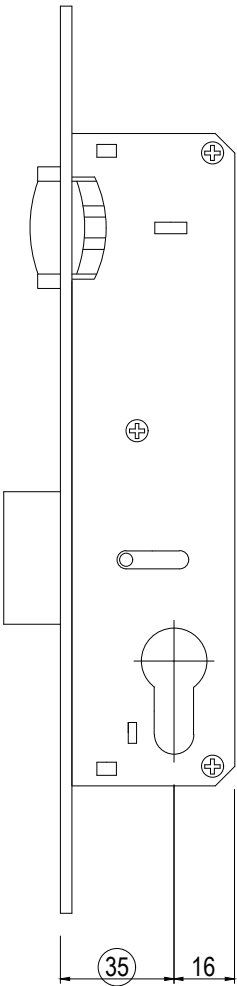
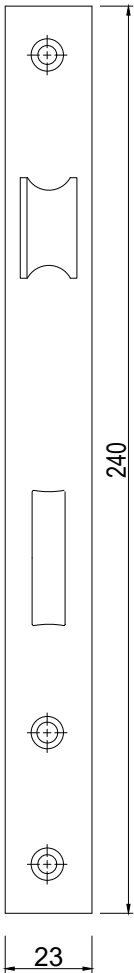
*perimetrical lock for windows
tilt & turn sash*



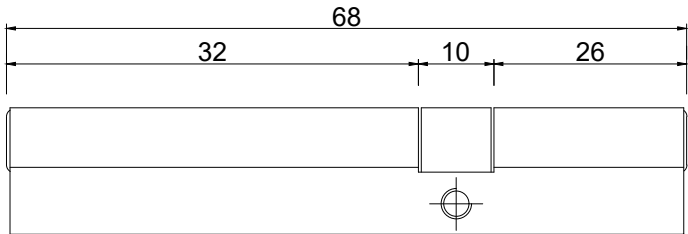
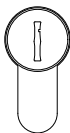
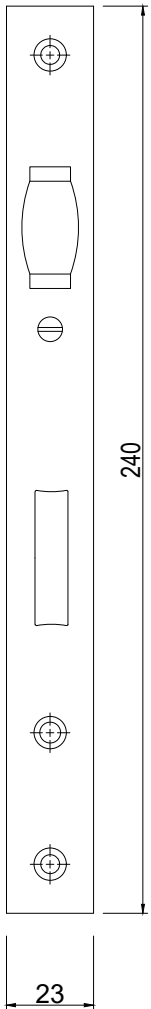
Door lock



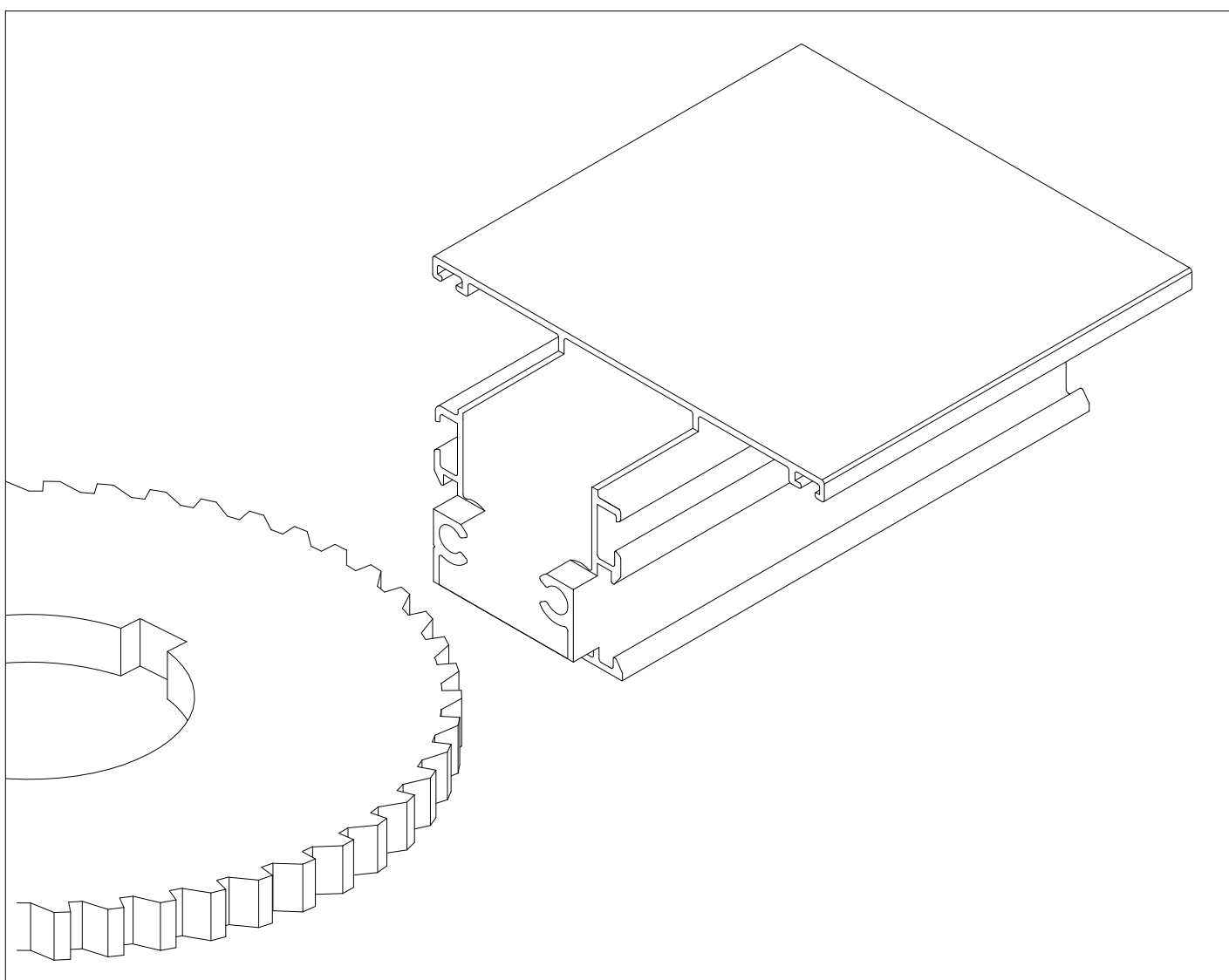
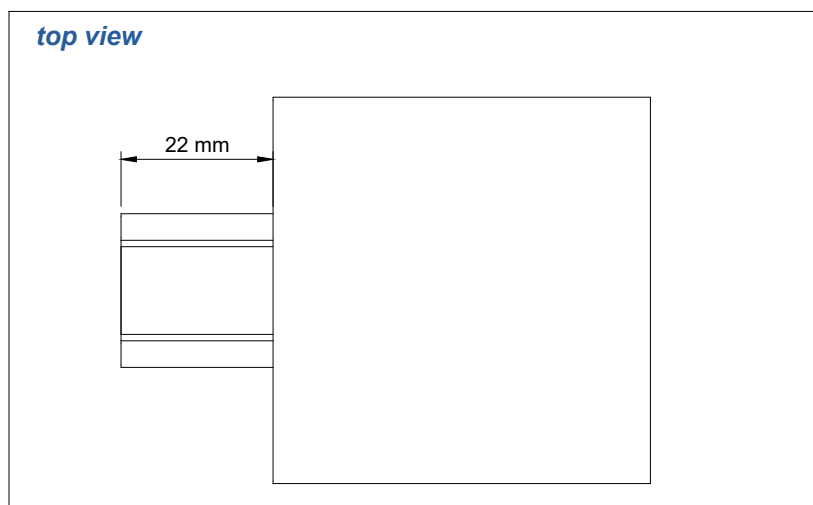
153 35



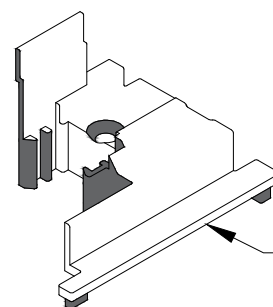
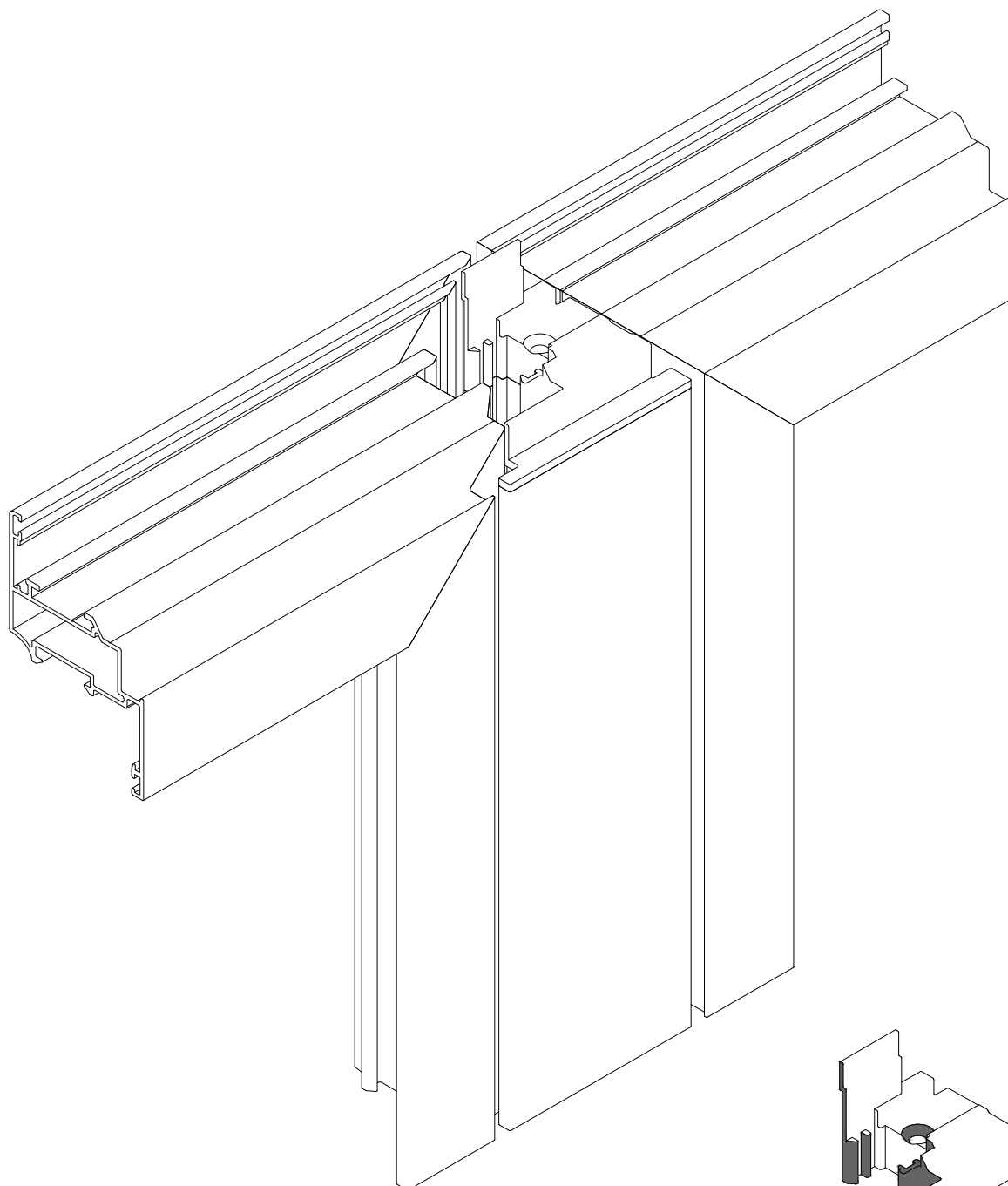
155 35



Milling of the mullion

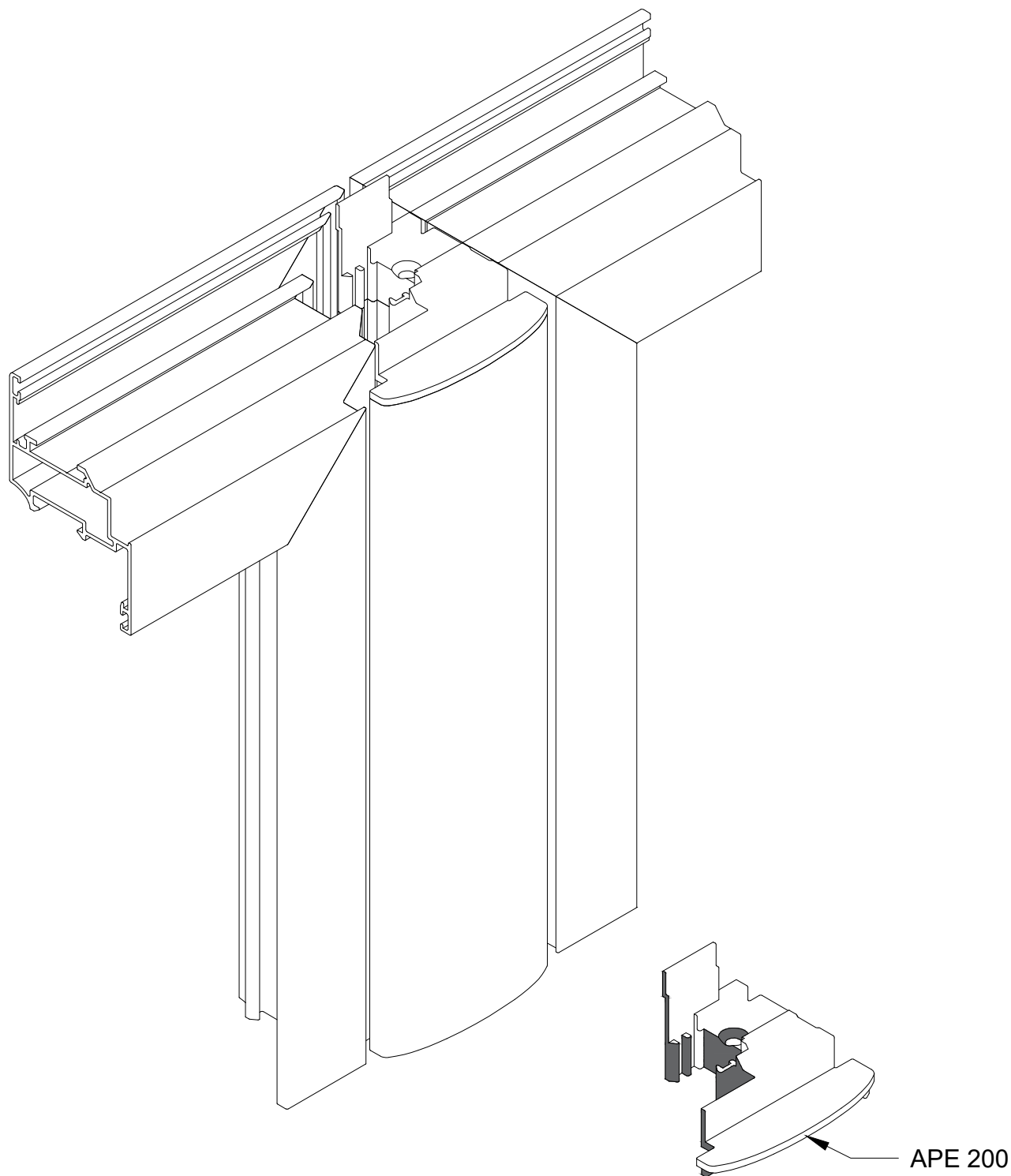


cap for overhung 375 0305

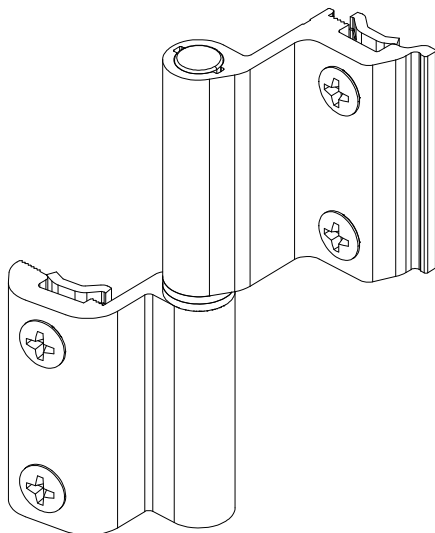
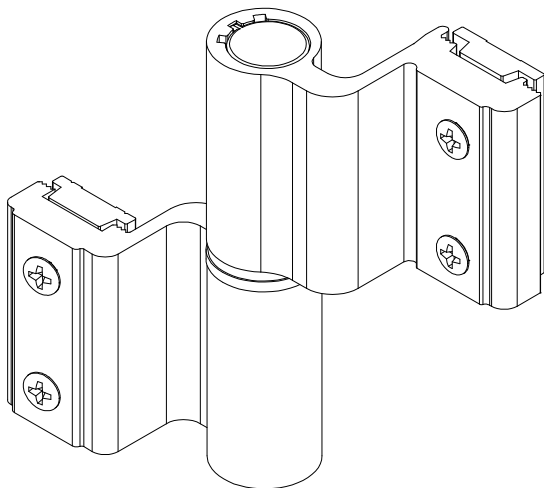
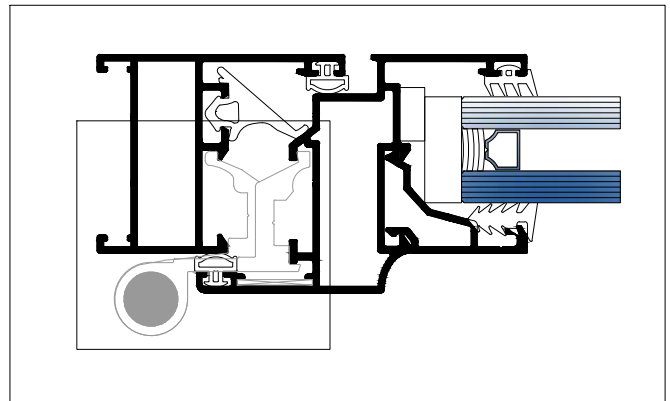


APE 211

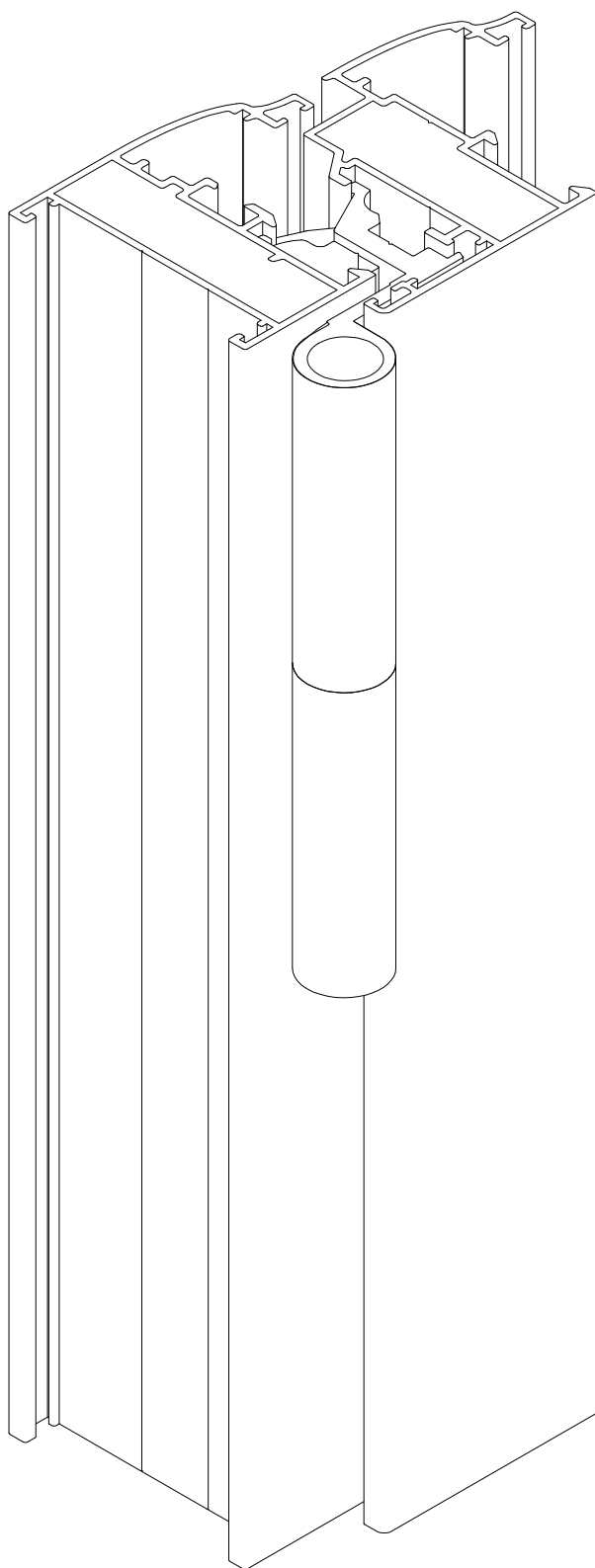
cap for overhung 375 0310



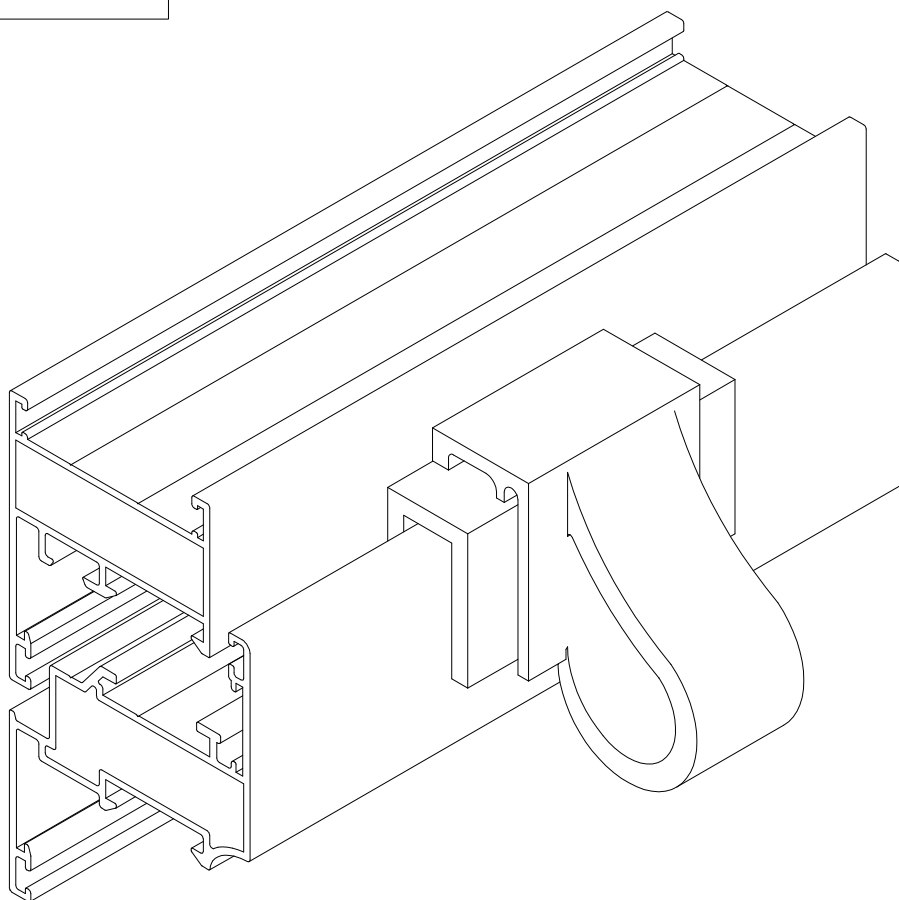
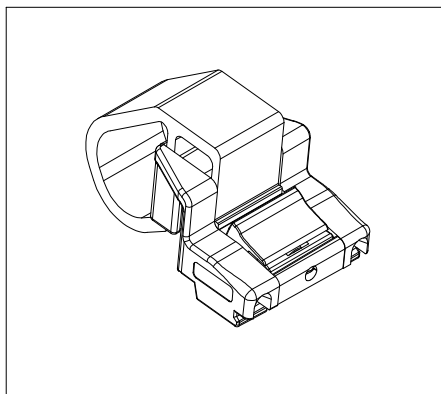
hinges for window



hinges for window



latch for window



hinges for two-side opening

