

# A.080



extrusal



## Sistema A.080

### Conceito

Fachada cortina ligeira, versátil, com atenuação térmica e acústica. Estrutura composta por montantes e travessas, ambos com envergadura de 50mm, sendo os montantes os elementos verticais e as travessas os horizontais.

### Esqueleto

Os montantes, elementos estruturais da fachada são amarrados à estrutura de suporte por intermédio de peças de fixação. Permitem uma fixação de topo ou frontal e admitem os pequenos movimentos provenientes das dilatações verticais. As travessas funcionam como elementos de ligação entre montantes. Para a ligação travessa/montante, a travessa é malhetada para sobrepor o montante e assim evitar eventuais infiltrações. Esta ligação é consolidada por dois parafusos, ficando uma folga de 2mm, que funcionará como junta de dilatação horizontal, existindo para as travessas mais profundas um acessório específico de união.

### Soluções construtivas

Variam pela forma de fixação do vidro à estrutura base do sistema e sobretudo pelo aspecto exterior que proporcionam, permitindo adequar os envidraçados à linguagem arquitectónica dos edifícios. Admitem como preenchimento vidros simples, duplos, painéis ou grelhas de ventilação, podendo ainda serem utilizados perfis em alumínio, fixos ou orientáveis como controlo solar.

### Aberturas

Integradas - janelas projectantes do próprio sistema.  
Encastradas - recorrendo principalmente aos sistemas Extrusal A040 e A045.

### Perfis de alumínio

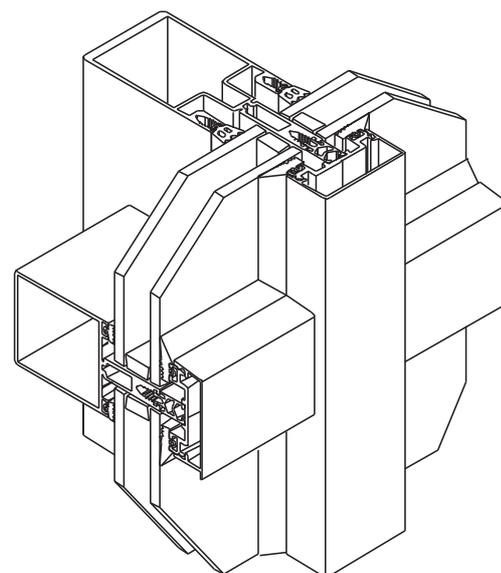
Liga/Designação – 6060 /EN AW AIMgSi  
Composição química – de acordo com a norma EN 573-3: 2003  
Tolerâncias nas dimensões e forma – de acordo com a norma NP EN 755-9: 2002  
Estado de propriedades mecânicas – EPM T5 (standard): Rp0,2 <sup>3</sup> 120 Mpa ; Rm <sup>3</sup> 160 Mpa; A\_50mm <sup>3</sup> 6%, de acordo com norma NP EN 755-2: 1999

### Tratamentos de superfície

Anodização (aspecto brilhante ou mate) – de acordo com as Directivas da QUALANOD (Quality Label for Anodic Oxide Coatings on Wrought Aluminium for Architectural Purposes). Licença de marca qualidade com inspeções periódicas a cargo do LNEC, desde 1983 – Licença n° 1405.

Lacagem (aspecto brilhante, mate ou metalizado) – de acordo com as Directivas da QUALICOAT (Association For Quality Control in the Lacquering, Painting and Coating Industry). Licença de marca de qualidade com inspeções periódicas a cargo do LENC, desde 1995 – Licença n° 808.

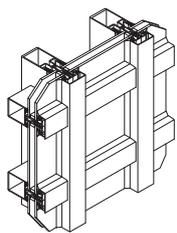
Lacagem com decoração com aspecto madeira (Castanho, Carvalho, Teca, Cerejeira e Mogno) - de acordo com a licença de marca de qualidade QUALIDECO, com inspeções periódicas a cargo do LNEC, desde 2005 - Licença n° PT002



## Sistema A.080

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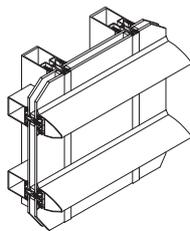


### A.080 - Clássica

Solução base do sistema A080.

Os vidros são fixos à estrutura por capas em alumínio com vedantes em EPDM, montam sobre uma barra de poliamida, e são aparafusadas aos montantes e travessas.

As capas de aperto verticais e horizontais são protegidas por capas com 50mm de vista, fixas por clipagem.

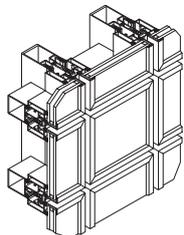


### A.080 - TH

Trama horizontal, esta solução consiste num processo misto de fixação dos vidros.

A fixação às travessas é feita por intermédio de capas com vedantes em EPDM aparafusadas às travessas e protegidas por capas clipadas, sendo a ogival a mais utilizada nesta solução.

O efeito linear horizontal é acentuado pela ausência de perfis exteriores verticais, a fixação dos vidros aos montantes é assegurada por colagem, protegida e rematada com um vedante em EPDM.

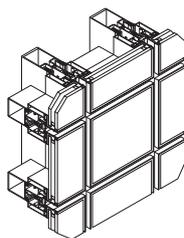


### A.080 - VEP

Vidro Exterior Preso - fixação dos vidros por processo mecânico.

Os vidros são encaixilhados, e só então fixos por peças e parafusos que asseguram a transmissão de esforços à estrutura base.

A modelação dos vidros é enfatizada pela aba de 15 mm alumínio que os emoldura.

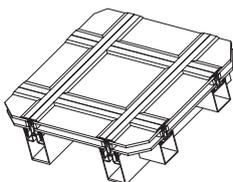


### A.080 - VEC

Vidro Exterior Colado - fixação dos vidros por colagem.

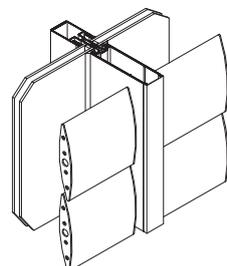
Os vidros são colados sobre um perfil em alumínio, integrado num caixilho, designado por quadro, que por sua vez está fixo por peças e parafusos que asseguram a transmissão de esforços à estrutura base.

A total ausência de perfis em alumínio no exterior é a principal característica desta solução.



### A.080 - Clarabóia

Lanternis, coberturas, planos inclinados envidraçados, com possibilidade de ventilação ou desenfumagem por intermédio de uma janela projectante, movida por um motor eléctrico.



### A.080 - Solução Helios

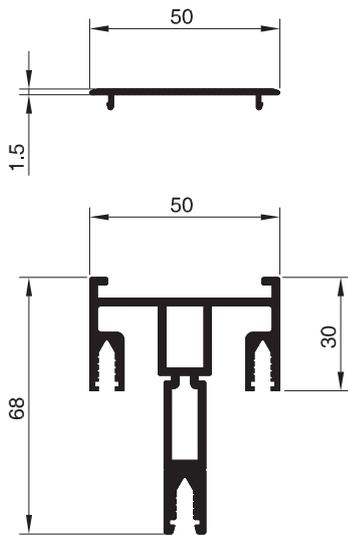
Solução integrada para envidraçados e controlo solar.

Vidro e perfis para sombreamento numa só estrutura.

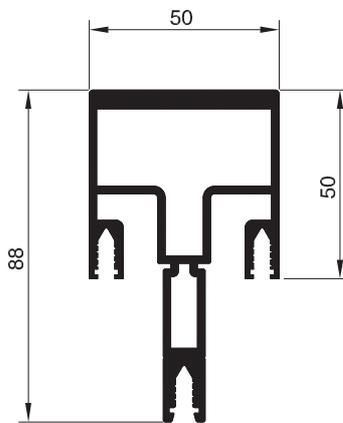
Admite perfis do sistema F016, com 170mm e 200mm de profundidade posicionados na horizontal, fixos ou orientáveis comandados por um motor eléctrico.

Mecanismos e motor ocultos.

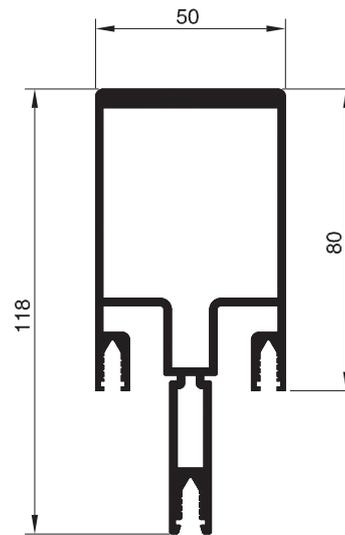
A.080.024



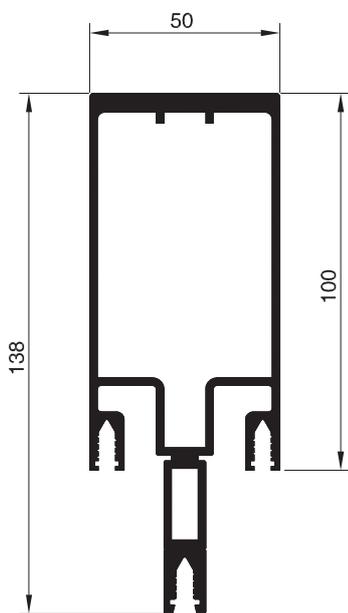
A.080.015



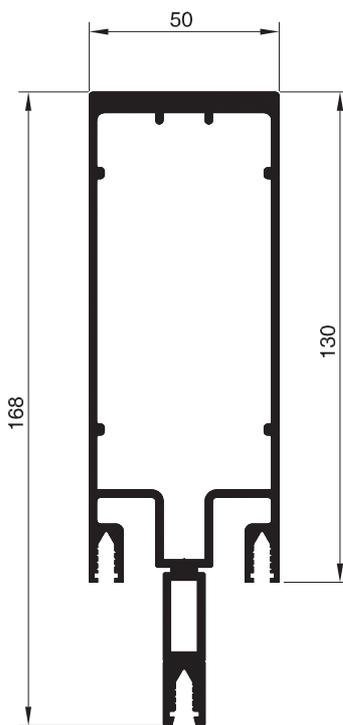
A.080.039



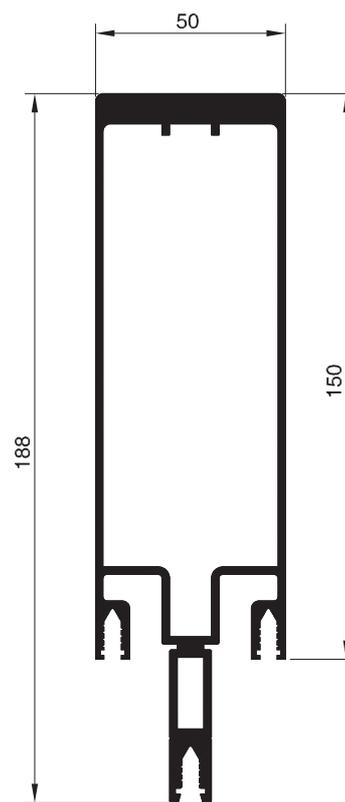
A.080.001



A.080.009

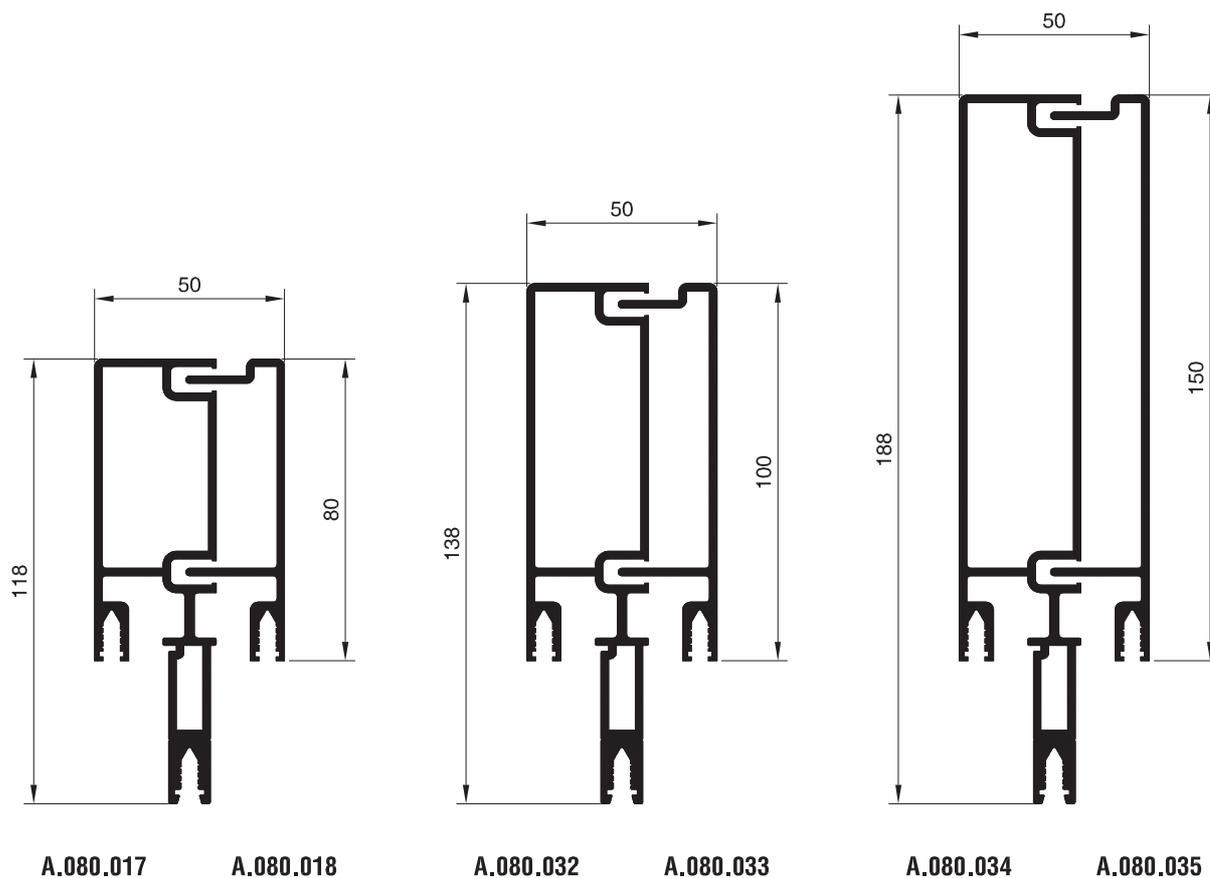


A.080.044



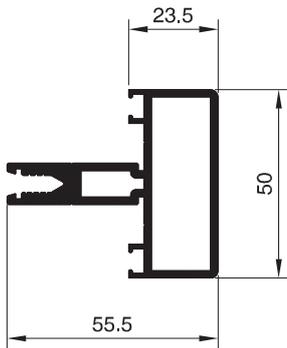
A.080.019

Referência	Áreas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.001	55.69	21.00	136.07	28.01
A.080.009	56.65	25.00	222.56	32.93
A.080.015	47.90	7.00	23.19	13.11
A.080.019	69.57	35.00	611.51	46.81
A.080.024	11.72	5.00	0.01	1.88
A.080.039	49.83	15.00	61.88	21.18
A.080.044	65.65	31.00	400.26	41.36

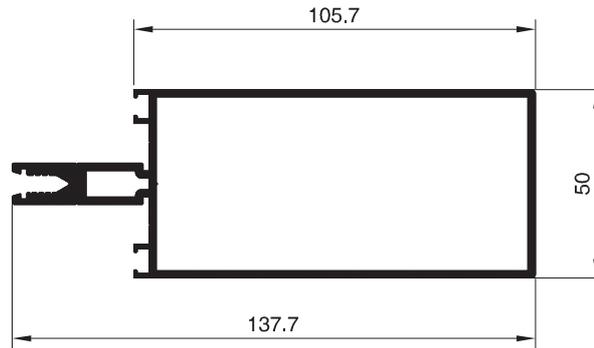


escala 1:2

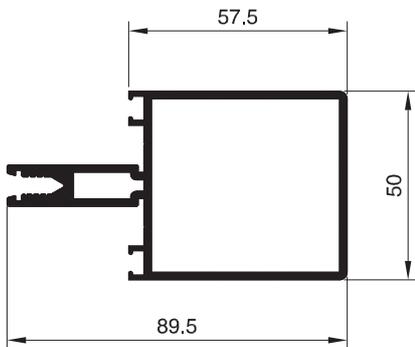
Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.017	49.68	11.20	95.40	9.09
A.080.018	30.92	10.00	21.38	1.45
A.080.032	53.68	13.20	147.80	11.03
A.080.033	34.92	12.00	39.32	1.55
A.080.034	63.68	18.20	356.20	15.75
A.080.035	44.92	17.00	116.44	1.72



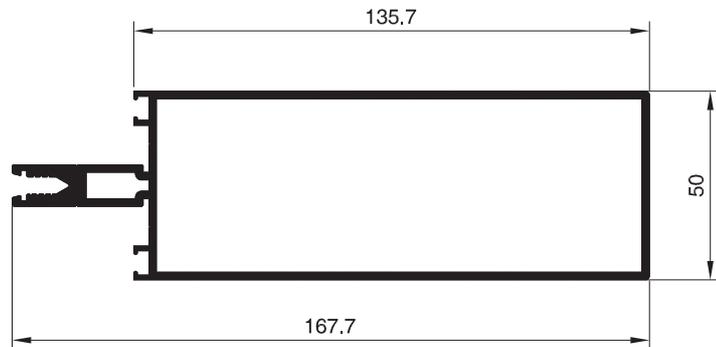
**A.080.016**



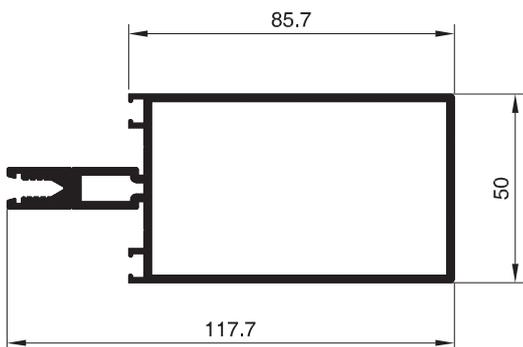
**A.080.056**



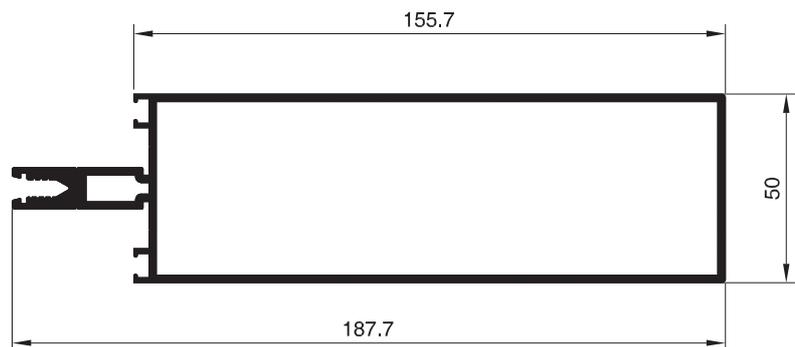
**A.080.002**



**A.080.046**



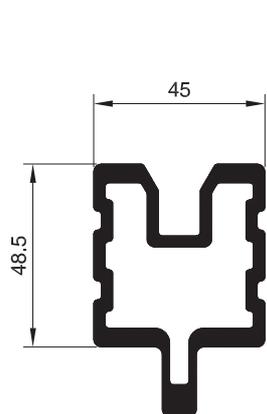
**A.080.028**



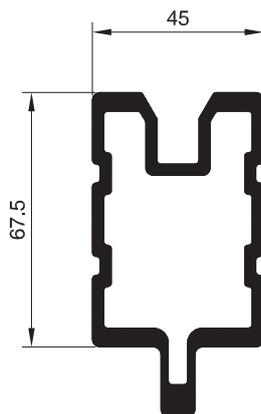
**A.080.040**

Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.002	35.79	16.50	16.85	47.48
A.080.016	29.04	9.70	9.01	13.28
A.080.028	41.57	22.20	23.43	104.96
A.080.040	55.57	36.20	39.57	381.36
A.080.046	51.57	32.20	34.96	279.78
A.080.056	45.57	24.60	162.35	28.04

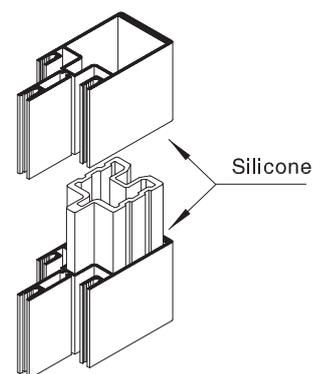
escala 1:2



A.080.029

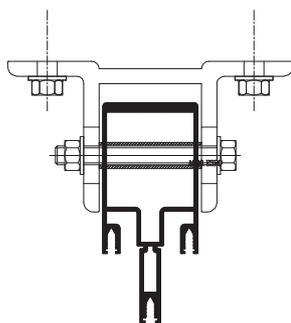


A.080.030

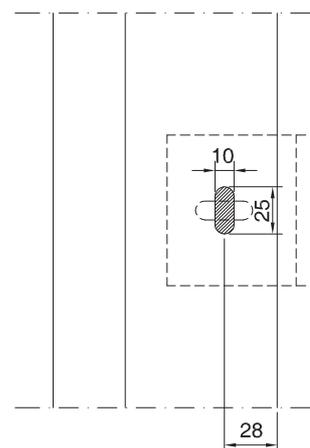
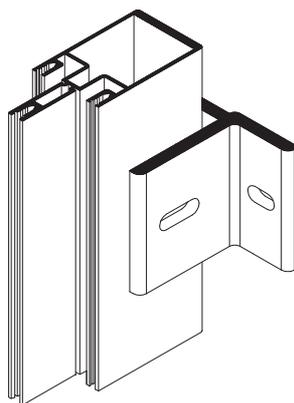


Fixações

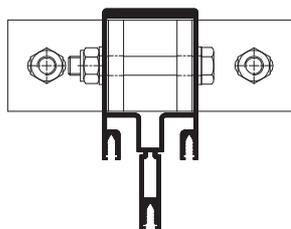
Frontal



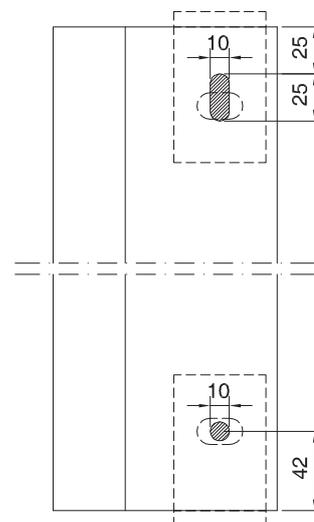
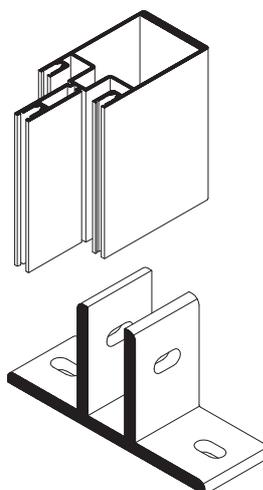
G.004.378



Topo



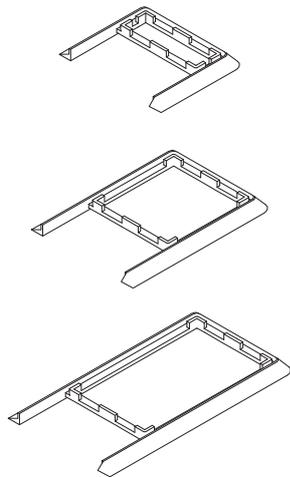
G.004.342



escala 1:2

Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento Inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.029	25.73	-	33.67	19.29
A.080.030	29.53	-	69.91	24.33

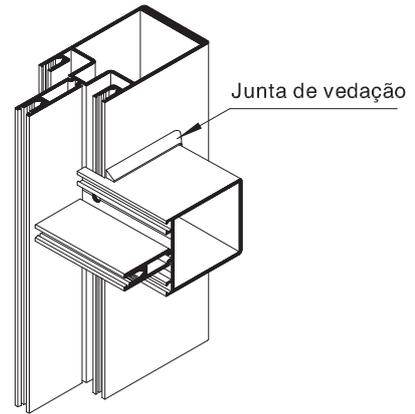
Junta vedação p/ travessa



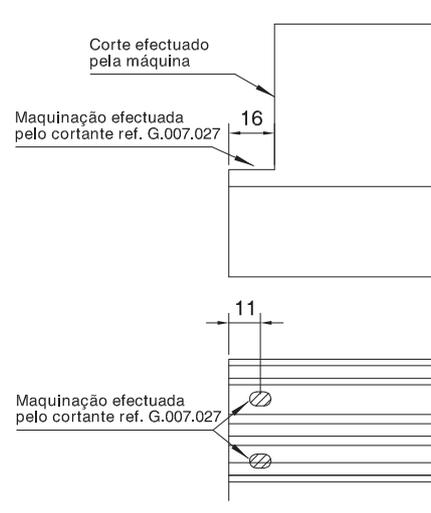
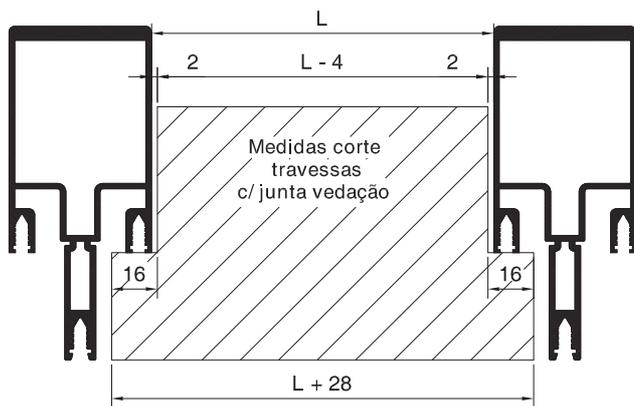
**G.001.067**  
(A.080.016)

**G.001.059**  
(A.080.002)

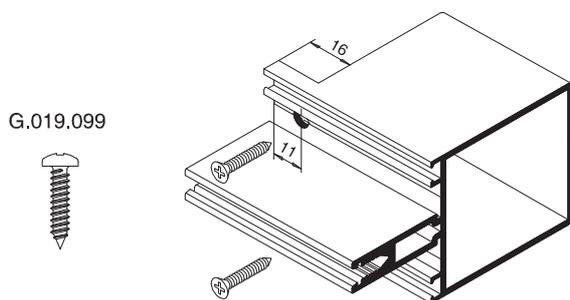
**G.001.095**  
(A.080.028)



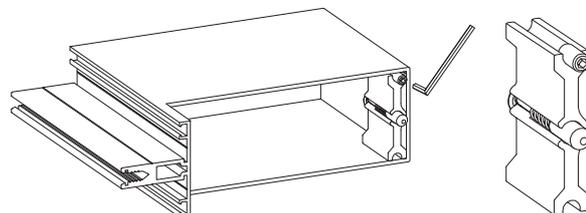
Medidas de corte



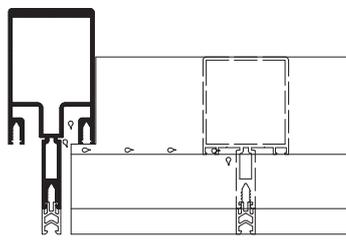
Fixação da travessa



G.004.490 - Fixação posterior



Encaminhamento das águas pluviais



## Sistema A.080 - Fachada Clássica

### Características

Vista exterior:

Vertical 50 mm

Horizontal 50 mm

Barra isoladora em Poliamida TK 6.6

Capacidade de envidraçamento:

Duplo 26 / 30 mm

Simples 6 / 10 / 12 / 16 mm

Junta de estanquidade do vidro assegurada por vedantes em EPDM

Peso máximo admissível por folha fixa: 500kg

Possibilidades de abertura:

Janela projectante

Portas e janelas dos sistemas A040 e A045

### Resultados no banco de ensaios

Permeabilidade ao ar - A 4

Estanquidade à água - R 750

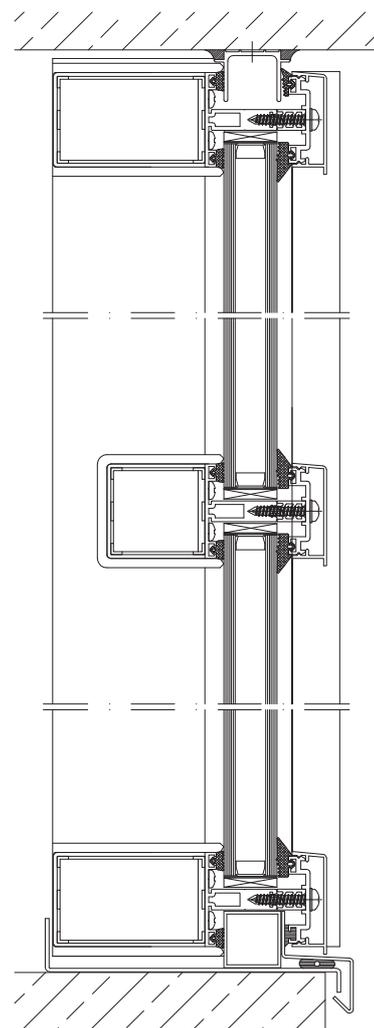
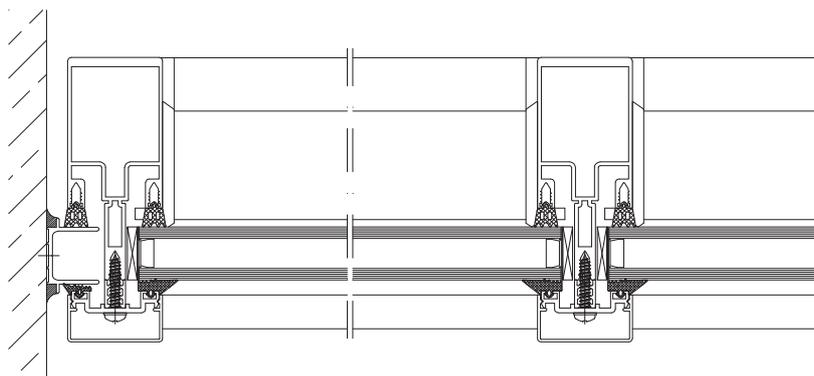
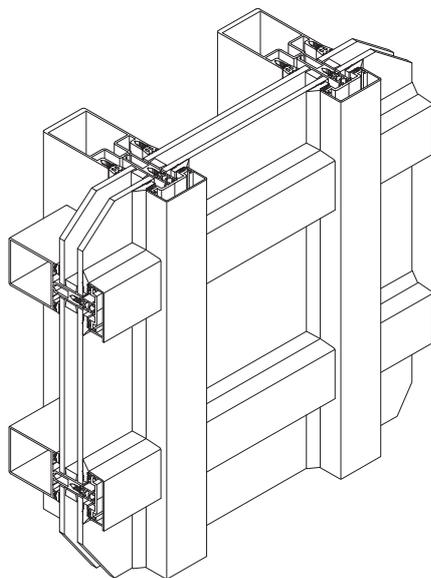
Índice de atenuação acústica  $RW = 38$  dB

Coef. de transmissão térmica da janela  $Uw = 3,1$  W/m<sup>2</sup>K

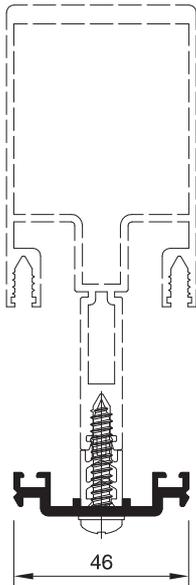
*Nota: Valores comprovados por ensaios realizados em laboratórios privados.*

*Para o cálculo  $Rw$  e  $Uw$  o preenchimento considerado foi um vidro de baixa emissividade ( $e \leq 0,05$ ) composto por 4.4.2+12+6mm, com  $Rw = 40$  dB e  $Uv = 2,7$  W/m<sup>2</sup>K.*

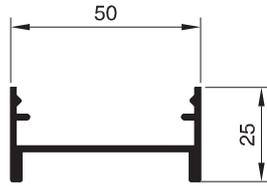
*Os valores apresentados estão condicionados pela dimensões e características do caixilho, sua localização e preenchimento utilizado.*



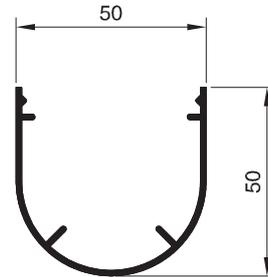
### Capas



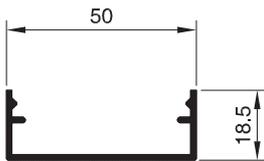
**A.080.003**



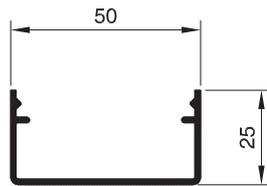
**A.080.052**



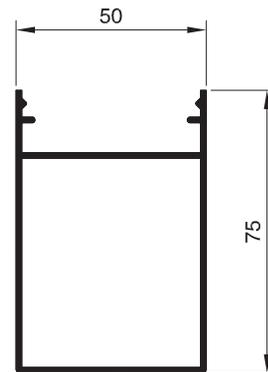
**A.080.038**



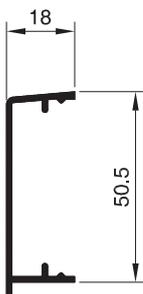
**A.080.036**



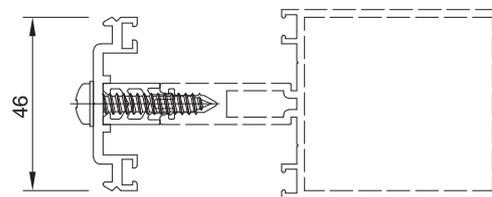
**A.080.004**



**A.080.055**



**A.080.005**



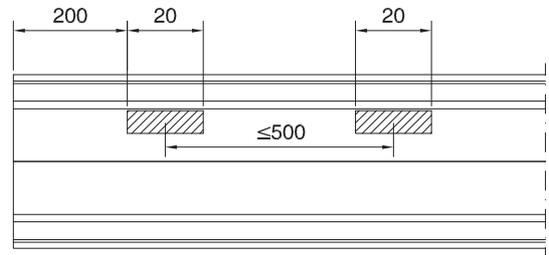
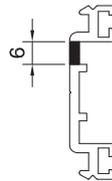
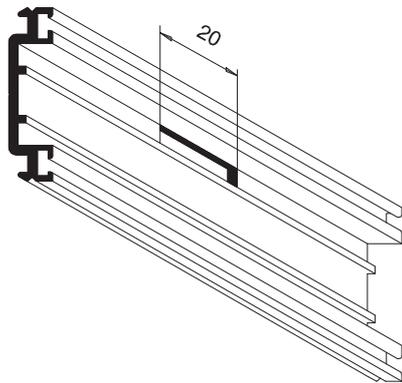
**A.080.003**



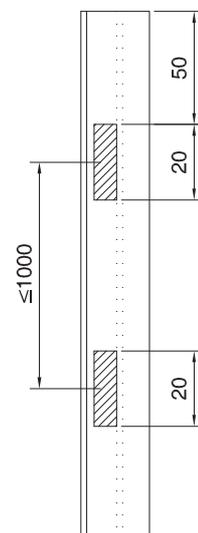
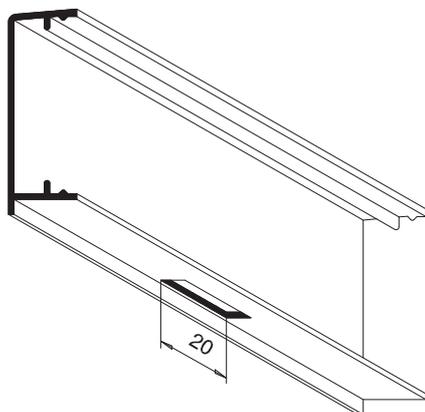
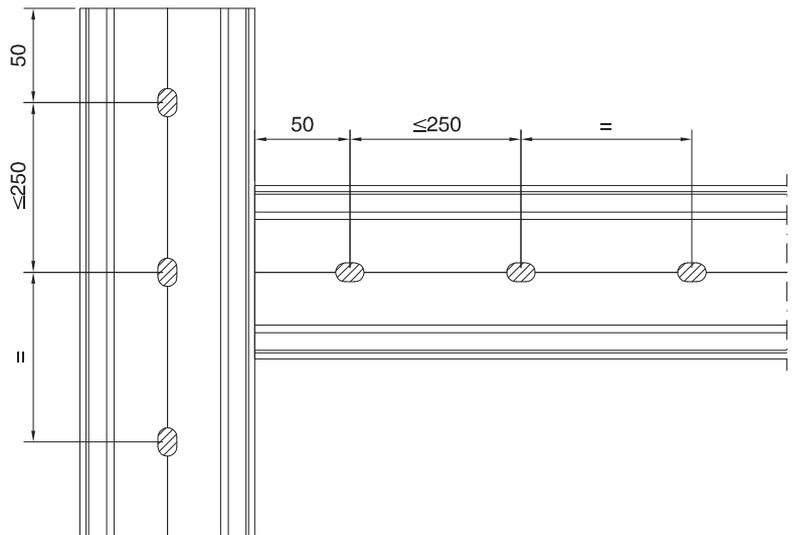
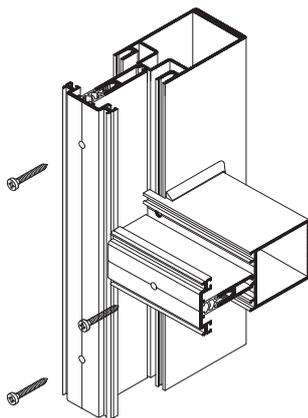
G.004.261 - Barra de poliamida

Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.003	17.66	-	0.19	3.84
A.080.004	20.91	9.80	1.06	6.31
A.080.005	18.86	9.30	5.43	0.43
A.080.036	18.48	8.70	0.46	5.26
A.080.038	29.43	13.00	5.49	8.87
A.080.052	21.04	12.00	0.65	7.64
A.080.055	29.64	20.00	24.13	16.51

Capas - Drenagem / Ventilação / Fixação



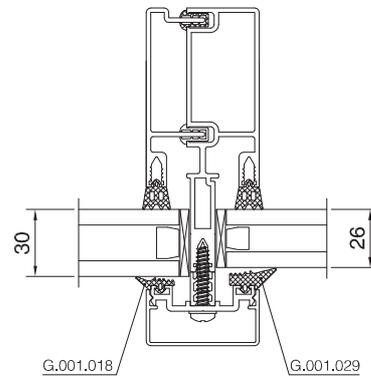
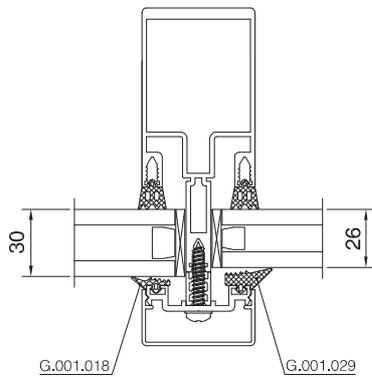
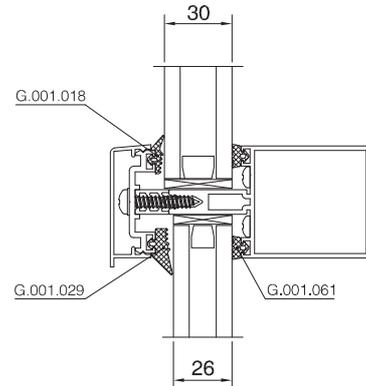
G.019.110



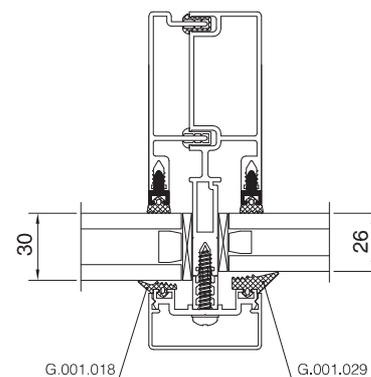
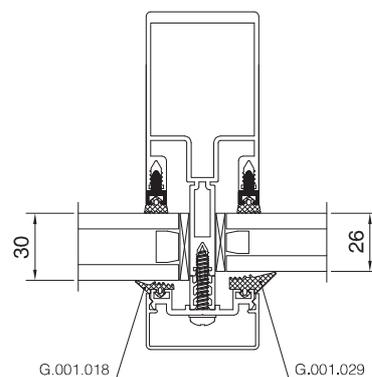
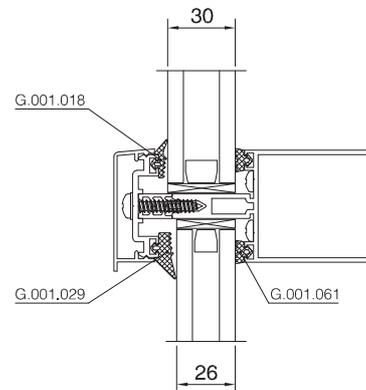
### Capacidade de envidraçamento

30 e 26 mm espessura

-  G.001.018 - Vedante EPDM p/ vidro
-  G.001.029 - Vedante EPDM p/ vidro
-  G.001.061 - Vedante EPDM p/ travessa
-  G.001.060 - Vedante EPDM p/ montante
-  G.001.010 - Vedante p/ juntas de ditalação



30 e 26 mm de espessura  
c/ vedante da travessa perimetral

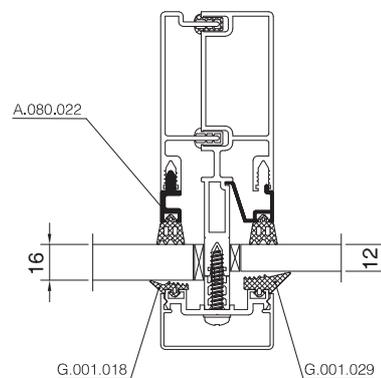
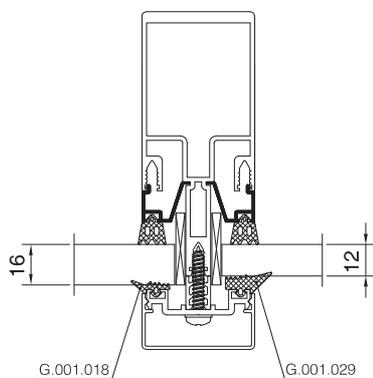
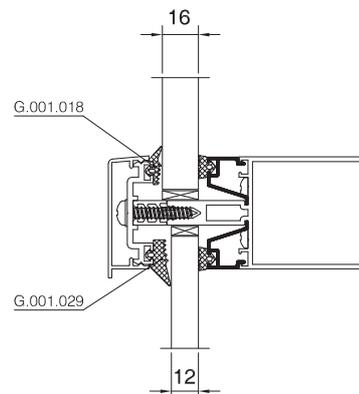
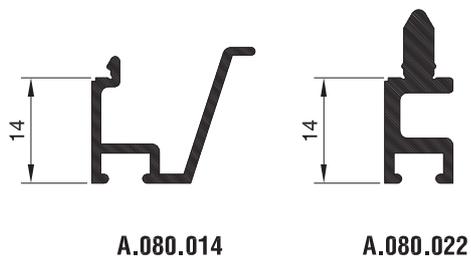


escala 1:2

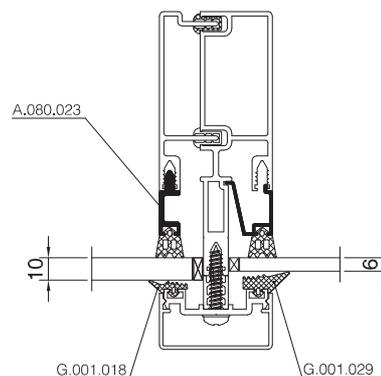
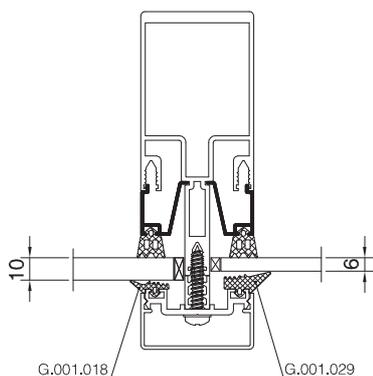
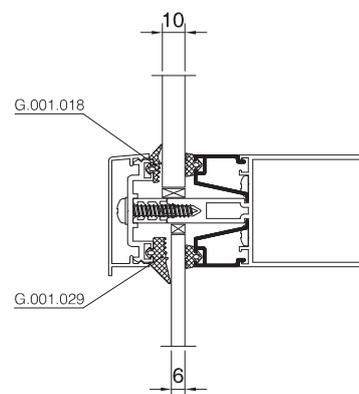
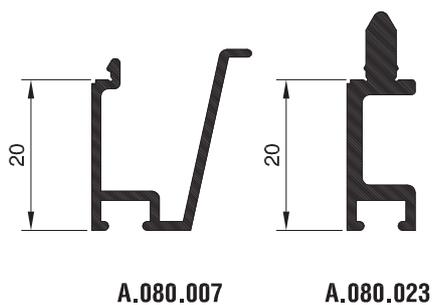
Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.045	5.78	0.60	0.09	0.03

Capacidade de envidraçamento

16 e 12 mm de espessura



10 e 6 mm de espessura

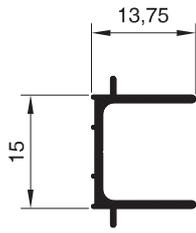


Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.007	13.89	2.20	0.51	0.30
A.080.014	11.56	1.40	0.17	0.33

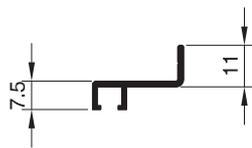
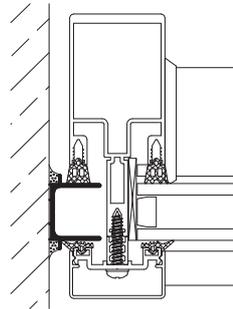
Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.022	8.65	1.40	0.37	0.06
A.080.023	9.85	2.00	0.76	0.07

escala 1:2

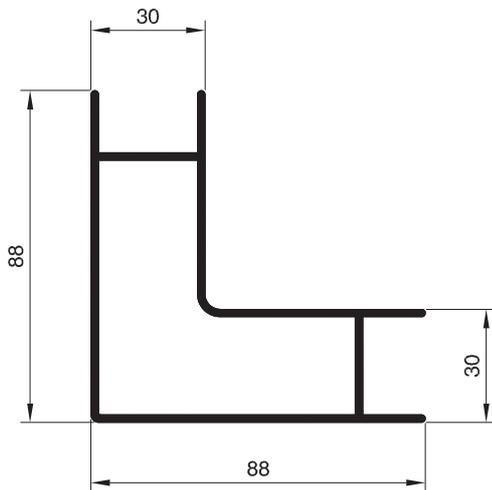
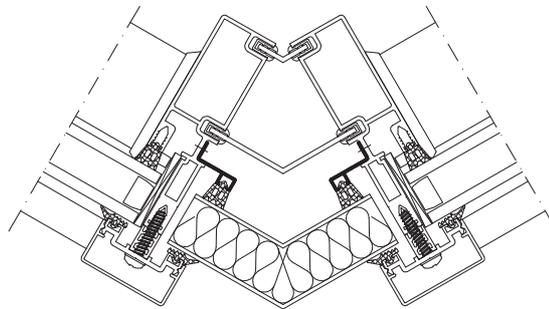
### Remates



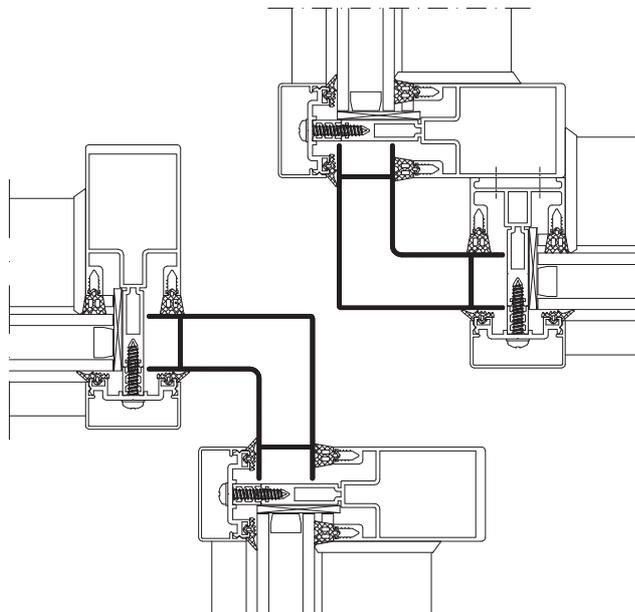
**A.080.021**



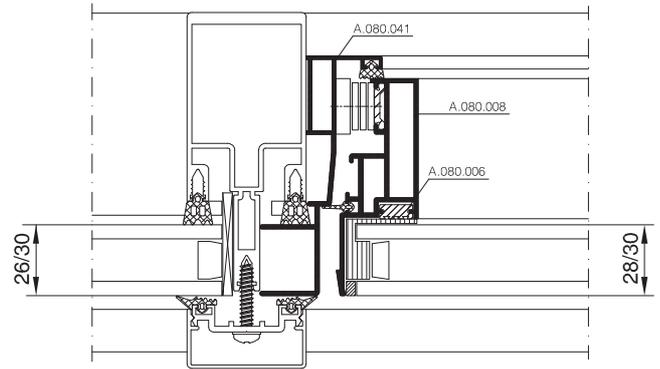
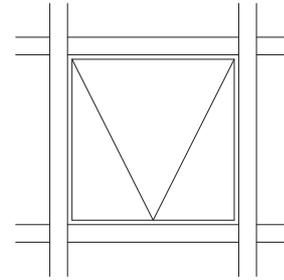
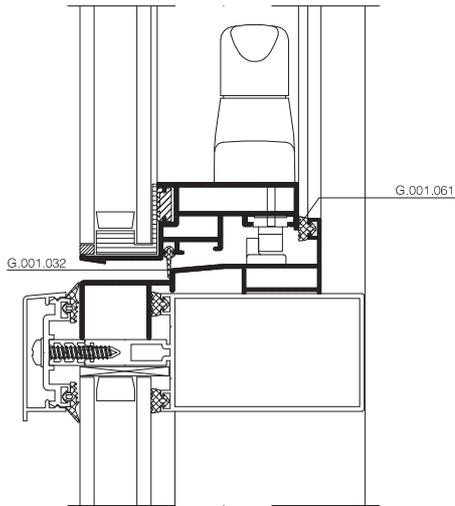
**A.080.031**



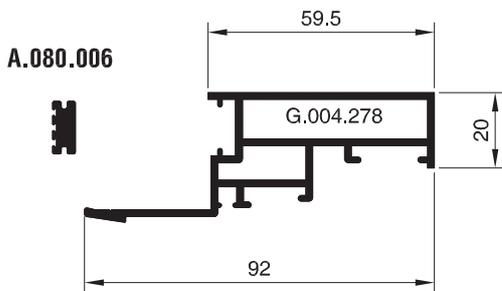
**A.080.025**



Referência	Áreas Anod.	Momento inércia	
		(dm <sup>2</sup> /m) Polir	lx cm <sup>4</sup> ly cm <sup>4</sup>
A.080.021	18,30	-	2,90 1,19
A.080.025	41,20	29,20	73,44 29,14
A.080.031	9,61	-	0,51 0,04

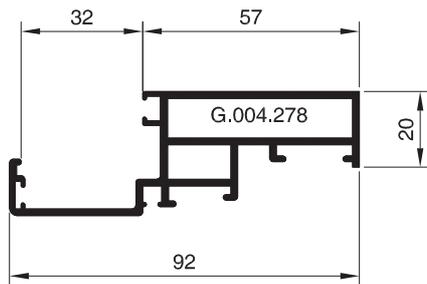


Projectante vidro colado



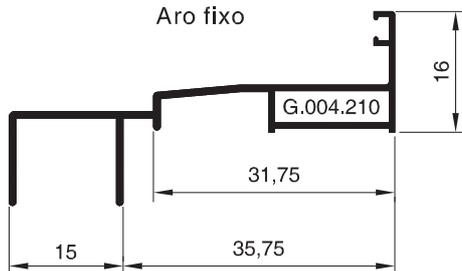
A.080.008

Projectante vidro preso

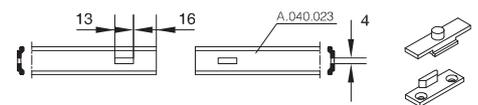
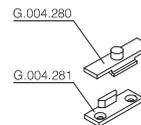
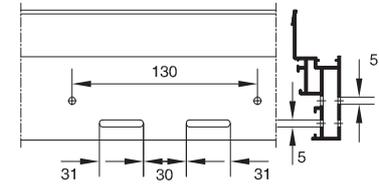
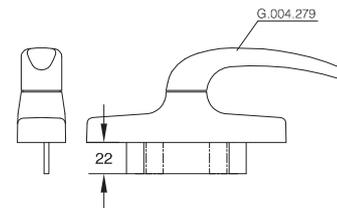


A.080.026

Aro fixo



A.080.041



Compassos disponíveis p/ largura máxima 2000mm:

- G.004.426 - 20 Kg - 350 > H < 550mm
- G.004.379 - 24 Kg - 400 > H < 700mm
- G.004.393 - 55 Kg - 787 > H < 1090mm
- G.004.275 - 100 Kg - 1270 > H < 2000mm



G.001.008 - Vedante p/ vidro

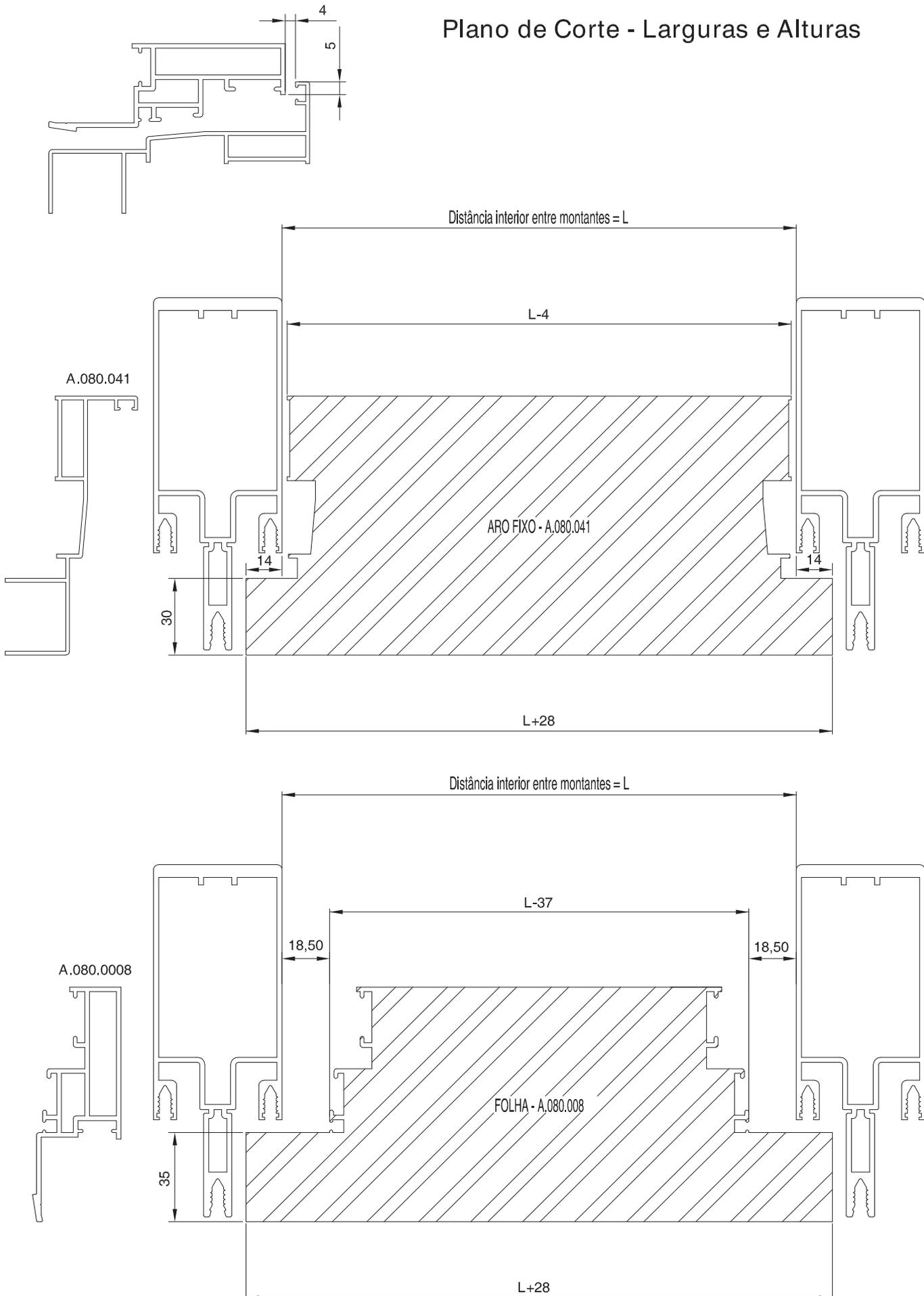
G.001.032 - Vedante EPDM

G.001.061 - Vedante EPDM

G.004.433 - Fixação p/ vidros

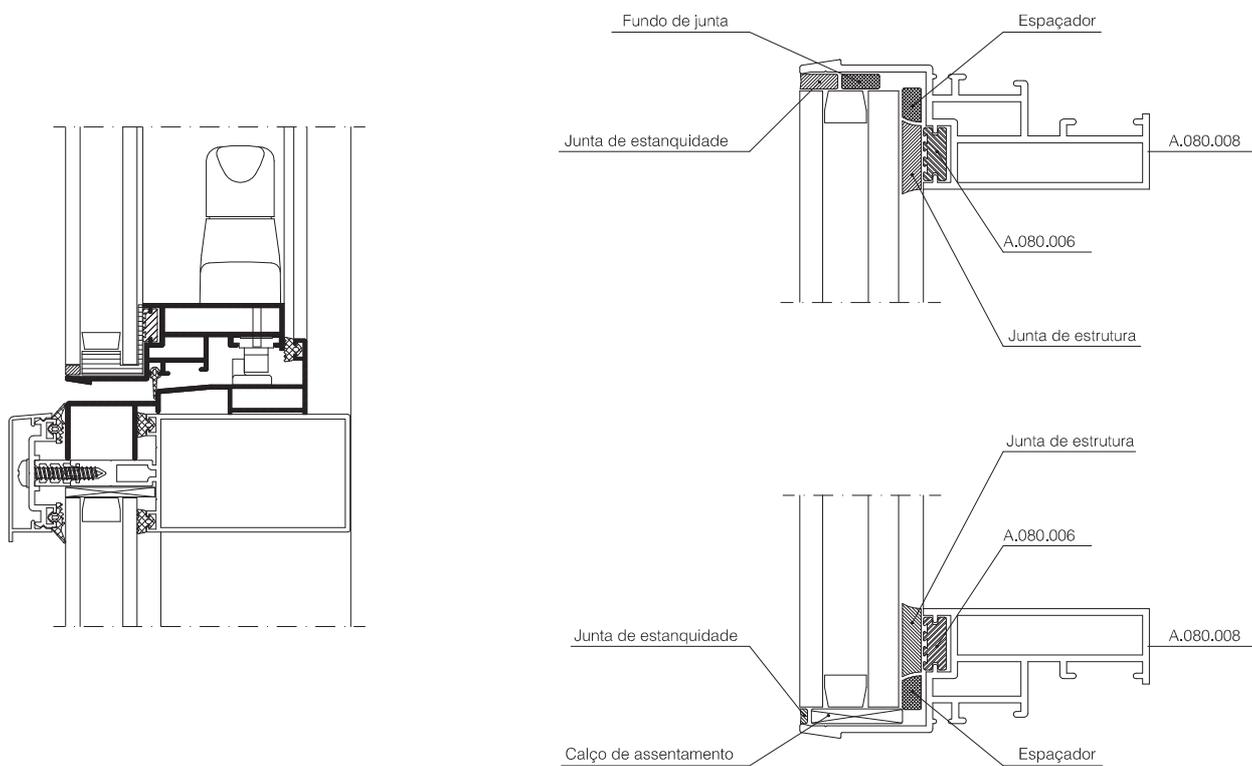
Referência	Áreas Anod. (dm <sup>2</sup> /m)	Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.006	5.47	-	0.11	0.02
A.080.008	32.94	9.50	3.35	27.88
A.080.026	36.37	11.00	3.29	32.61
A.080.041	39.33	14.00	2.21	48.22

Plano de Corte - Larguras e Alturas

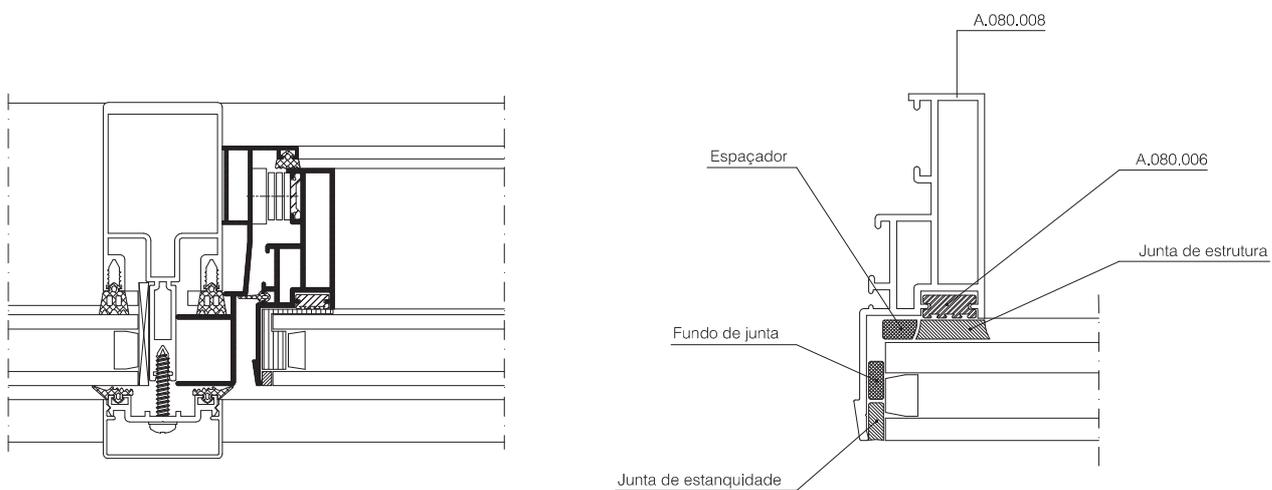


## Colagem dos vidros

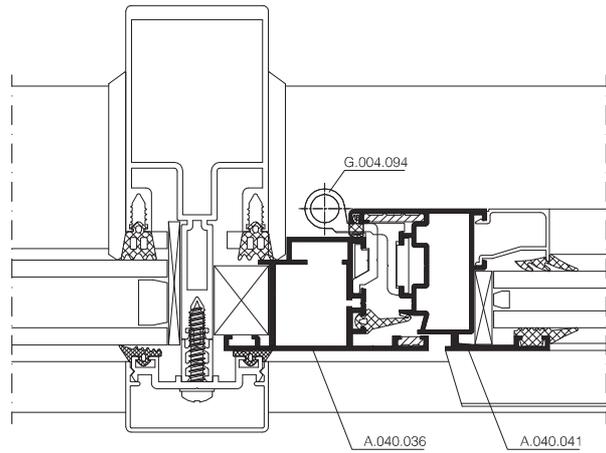
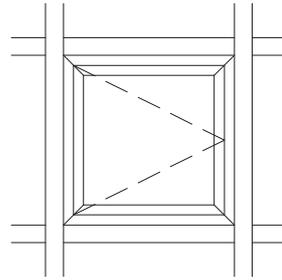
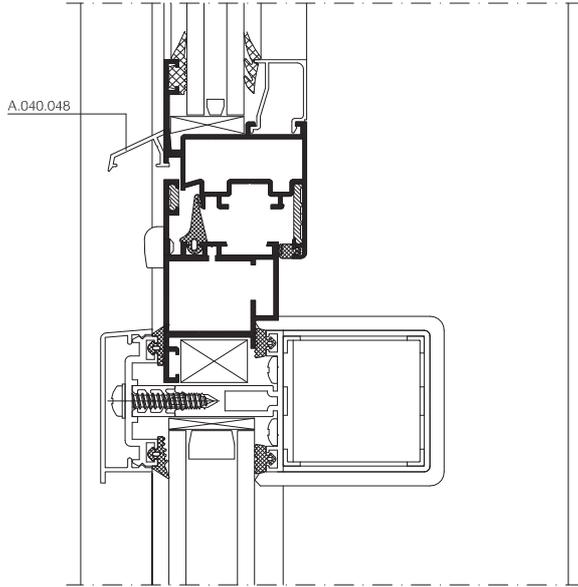
### Larguras



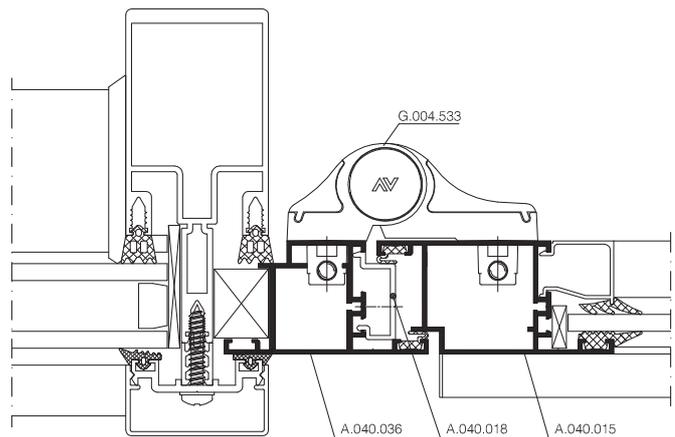
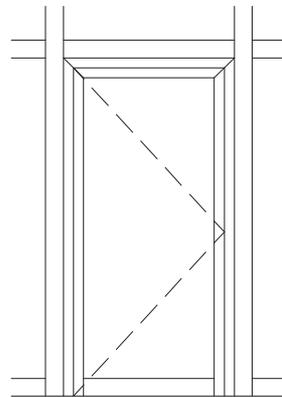
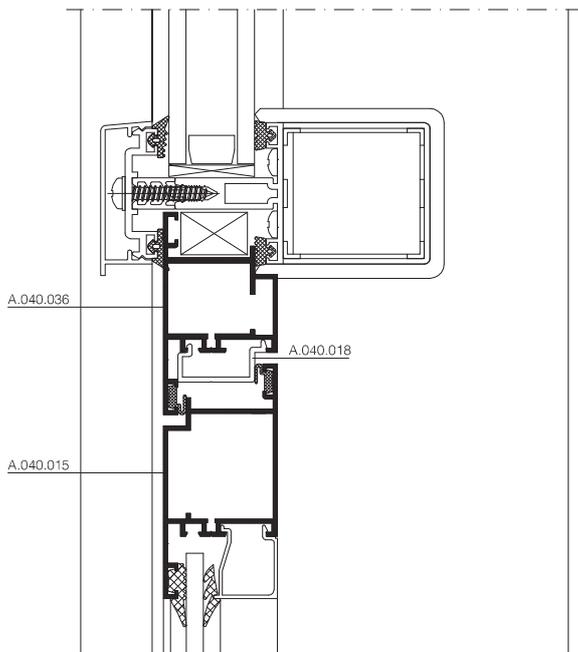
### Alturas



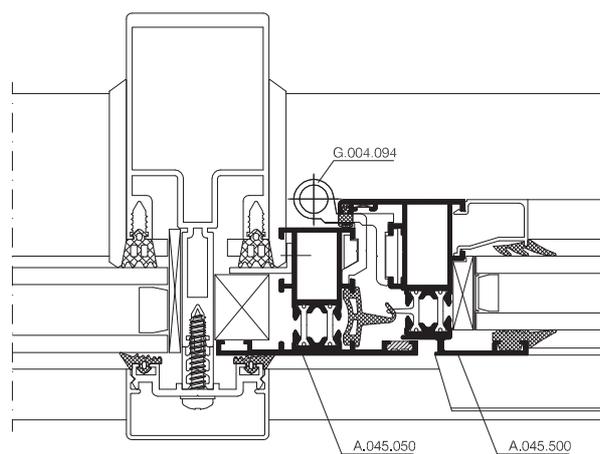
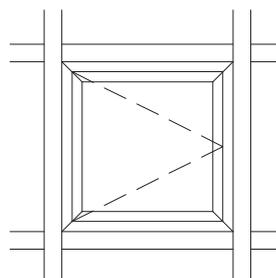
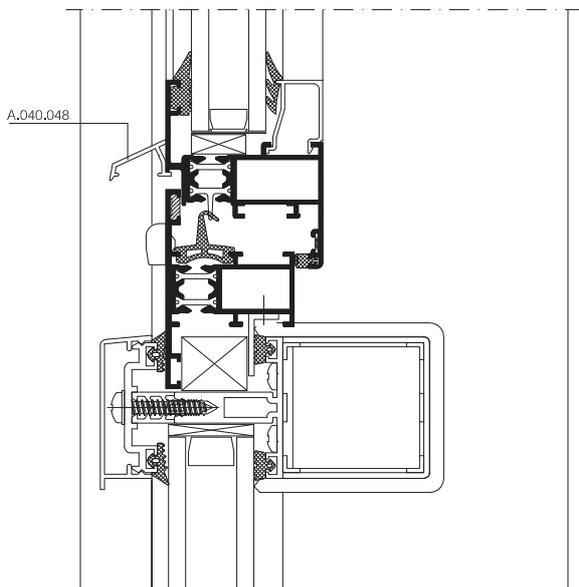
A.040 - Janelas



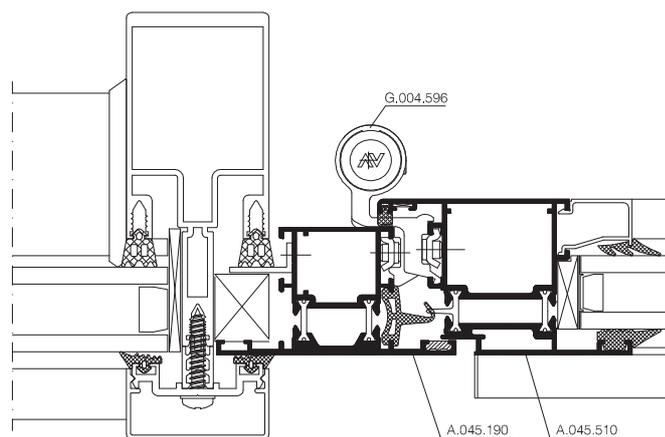
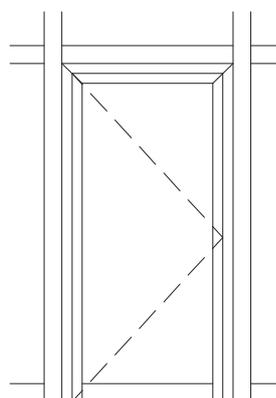
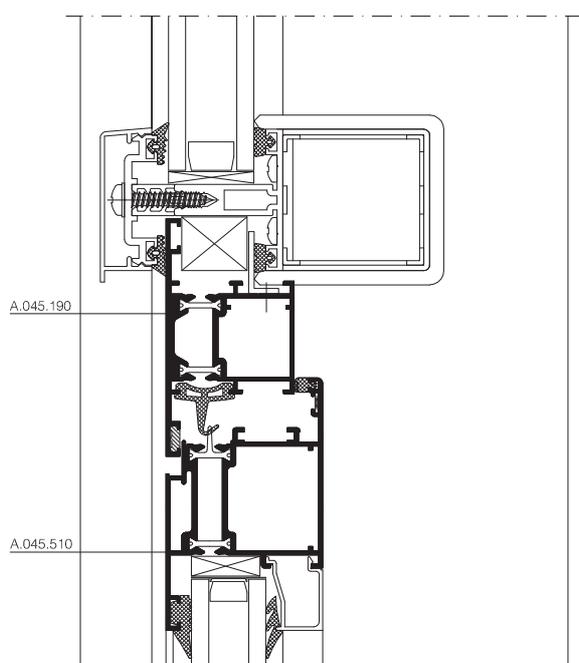
A.040 - Portas



### A.045 - Janelas



### A.045 - Portas



## Sistema A.080 - Fachada de Trama Horizontal

### Características

Vista exterior:

Vertical, vedante em EPDM  
Horizontal 50 mm

Barra isoladora em Poliamida TK 6.6

Capacidade de envidraçamento:

Duplo 30 mm  
Simples 10 / 16 mm

Junta de estanquidade do vidro assegurada por vedantes em EPDM

Peso máximo admissível por folha fixa: 500kg

Possibilidades de abertura:

Janela projectante  
Portas dos sistemas A040 e A045

### Resultados no banco de ensaios

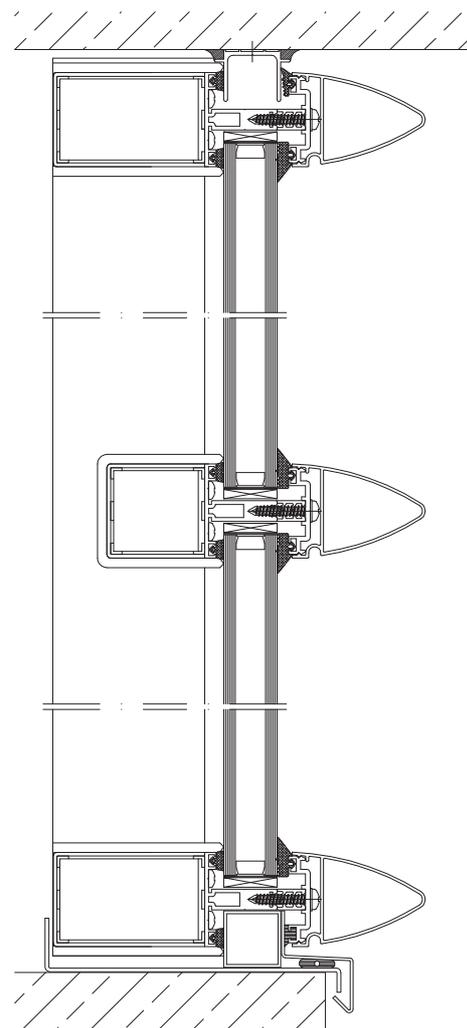
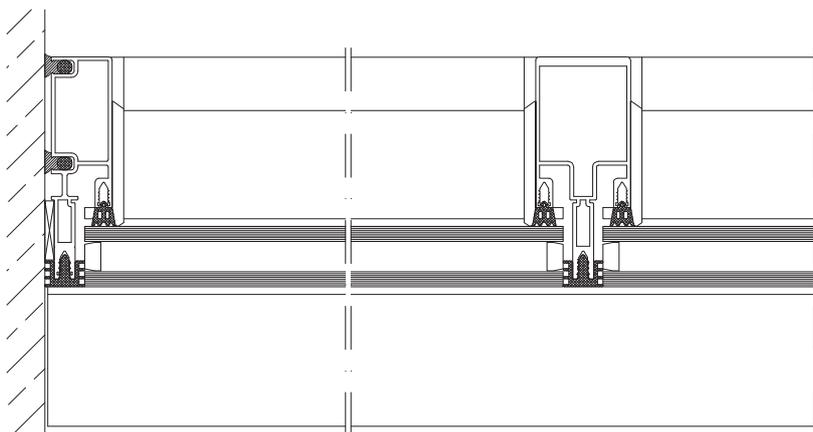
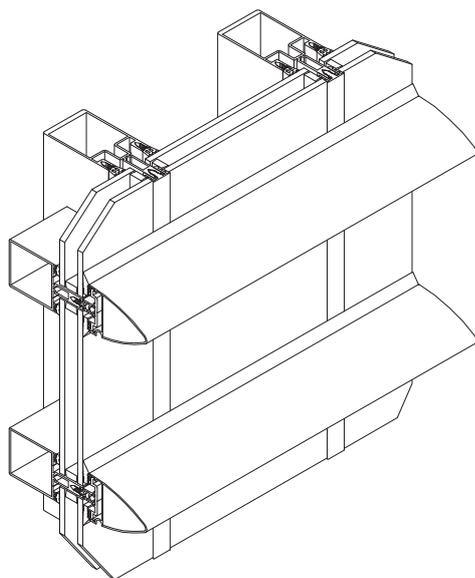
Permeabilidade ao ar - A 4

Estanquidade à água - R 750

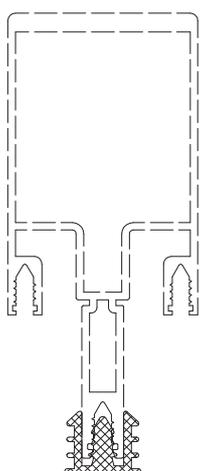
Índice de atenuação acústica  $RW = 38$  dB

Coef. de transmissão térmica da janela  $Uw = 3,0$  W/m<sup>2</sup>K

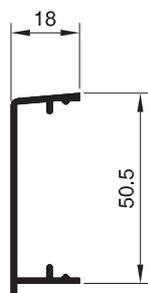
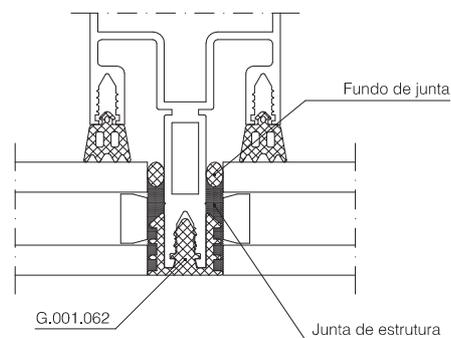
*Nota: Valores comprovados por ensaios realizados em laboratórios privados.  
Para o cálculo  $Rw$  e  $Uw$  o preenchimento considerado foi um vidro de baixa emissividade ( $e \leq 0,05$ ) composto por 4.4.2+16+6mm, com  $Rw = 40$  dB e  $Uv = 2,7$  W/m<sup>2</sup>K.  
Os valores apresentados estão condicionados pela dimensões e características do caixilho, sua localização e preenchimento utilizado.*



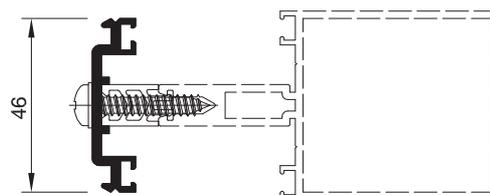
Capas



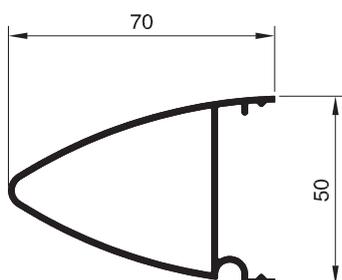
Vedante EPDM G.001.062



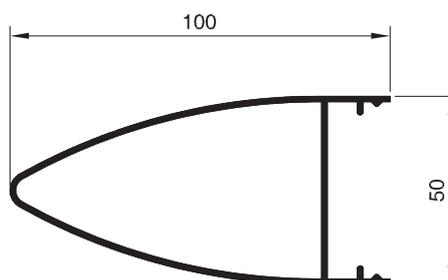
A.080.005



A.080.003



A.080.011



A.080.037

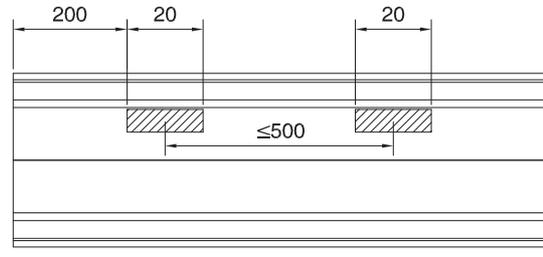
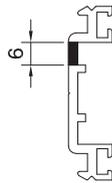
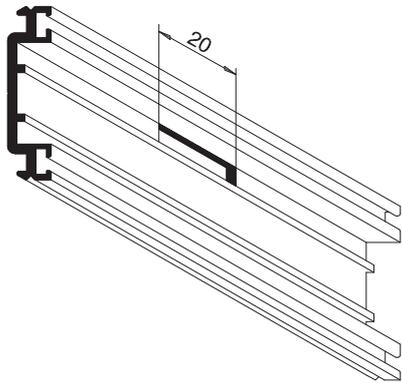


G.004.261 - Barra de poliamida

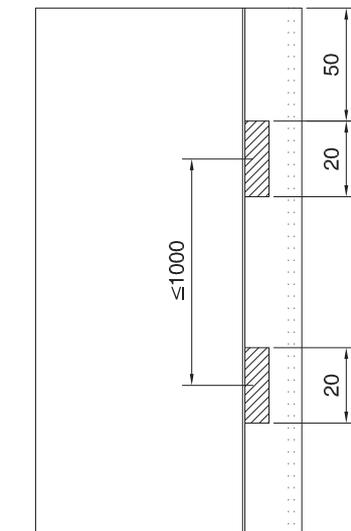
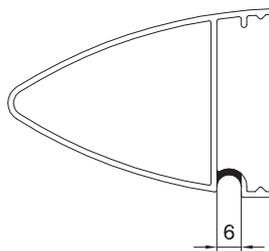
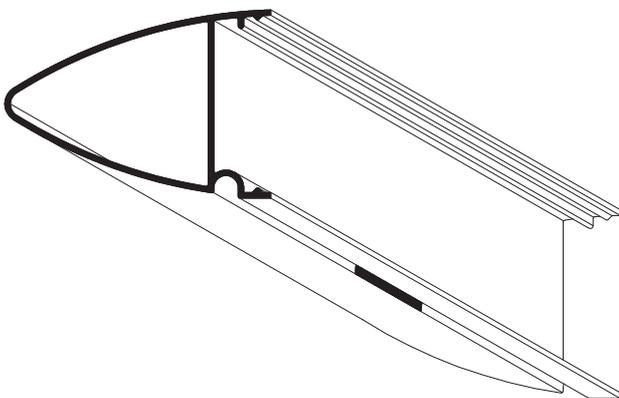
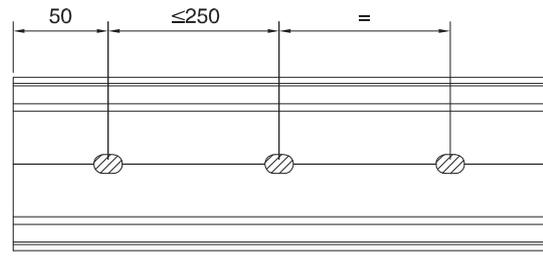
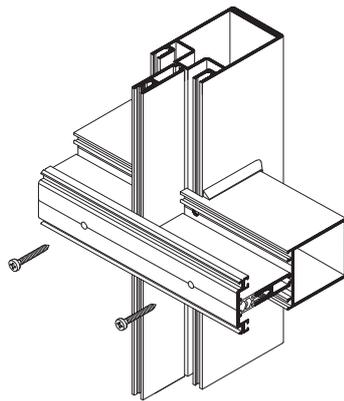
Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.003	17.66	-	3.84	0.19
A.080.005	18.86	9.30	5.43	0.43
A.080.011	24.46	14.60	8.56	12.64
A.080.037	30.99	21.50	13.64	36.02

escala 1:2

Capas - Drenagem / Ventilação / Fixação

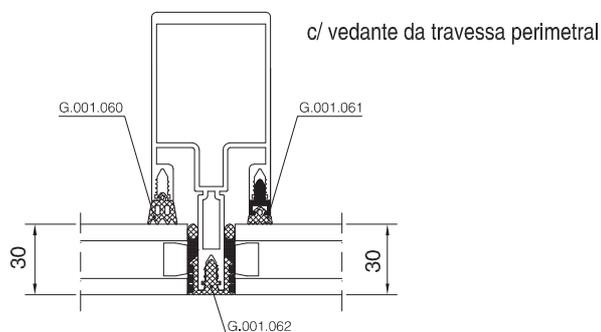
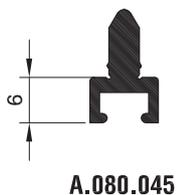


G.019.110

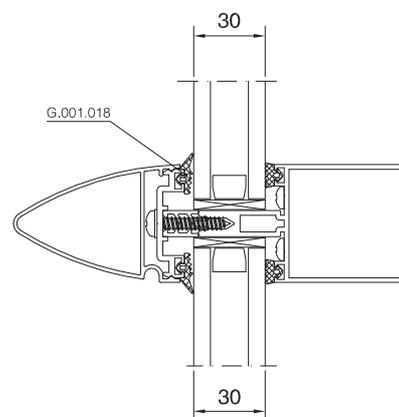


### Capacidade de envidraçamento

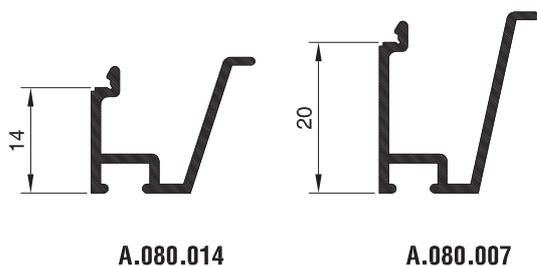
30 mm de espessura



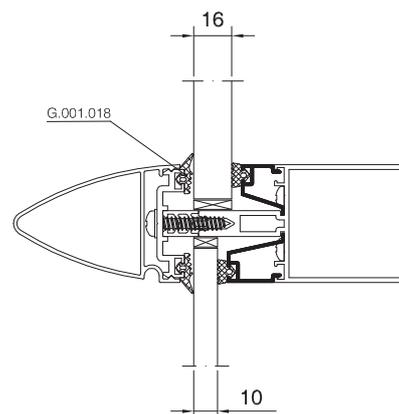
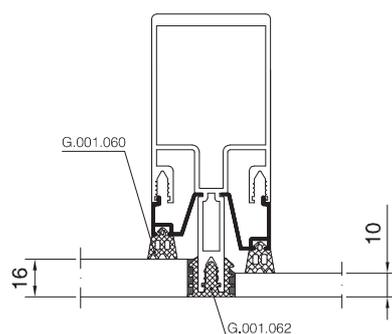
- G.001.018 - Vedante EPDM p/ vidro
- G.001.029 - Vedante EPDM p/ vidro
- G.001.061 - Vedante EPDM p/ travessa
- G.001.060 - Vedante EPDM p/ montante
- G.001.062 - Vedante EPDM p/ TH



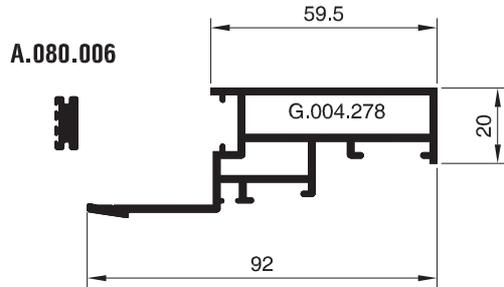
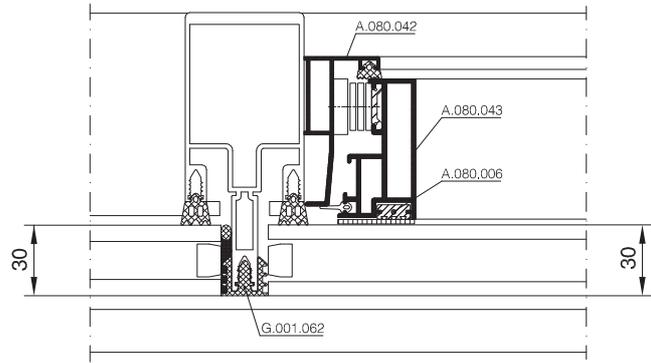
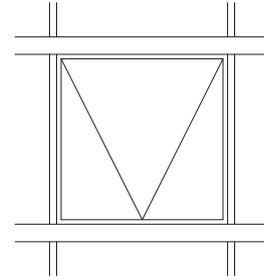
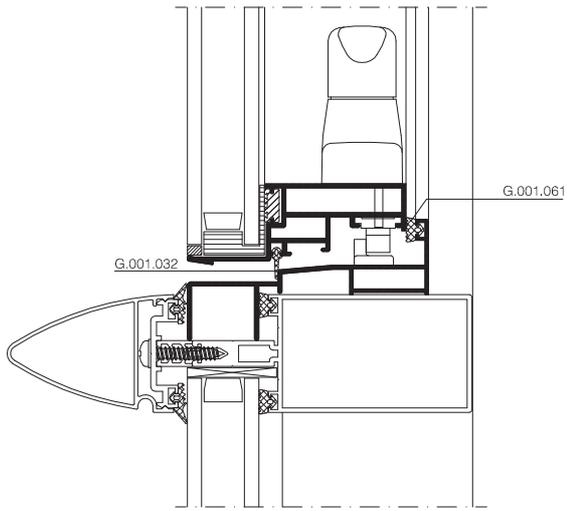
16 e 10 mm de espessura



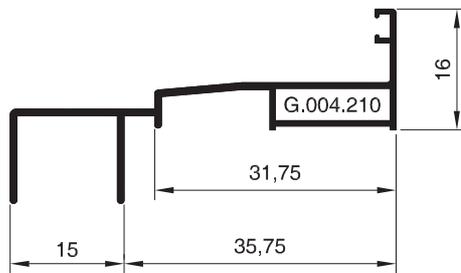
Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			I <sub>x</sub> cm <sup>4</sup>	I <sub>y</sub> cm <sup>4</sup>
A.080.007	13.89	2.20	0.51	0.30
A.080.014	11.56	1.40	0.17	0.33
A.080.045	5.78	0.60	0.09	0.03



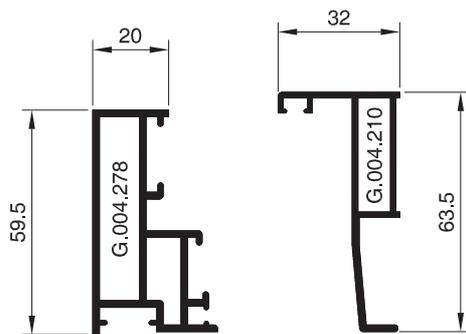
escala 1:2



**A.080.008**

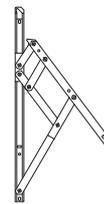
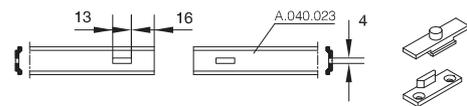
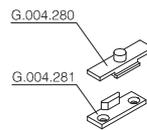
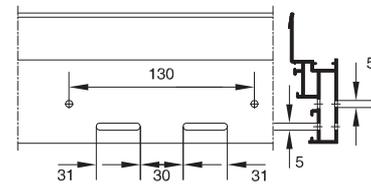
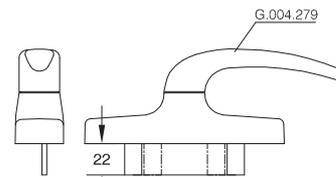


**A.080.041**



**A.080.043**

**A.080.042**



Compassos disponíveis p/ largura máxima 2000mm:

G.004.426 - 20 Kg - 350 > H < 550mm

G.004.379 - 24 Kg - 400 > H < 700mm

G.004.393 - 55 Kg - 787 > H < 1090mm

G.004.275 - 100 Kg - 1270 > H < 2000mm



G.001.032 - Vedante EPDM



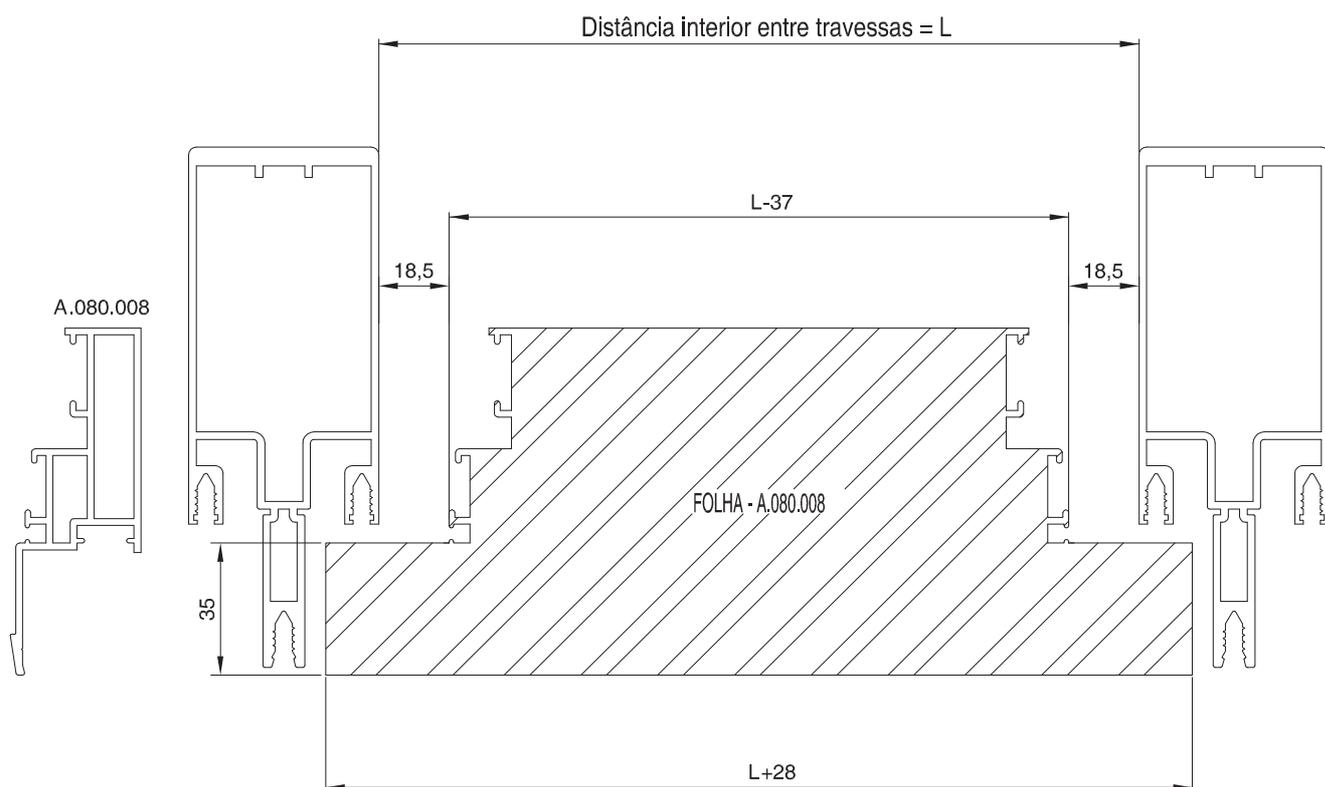
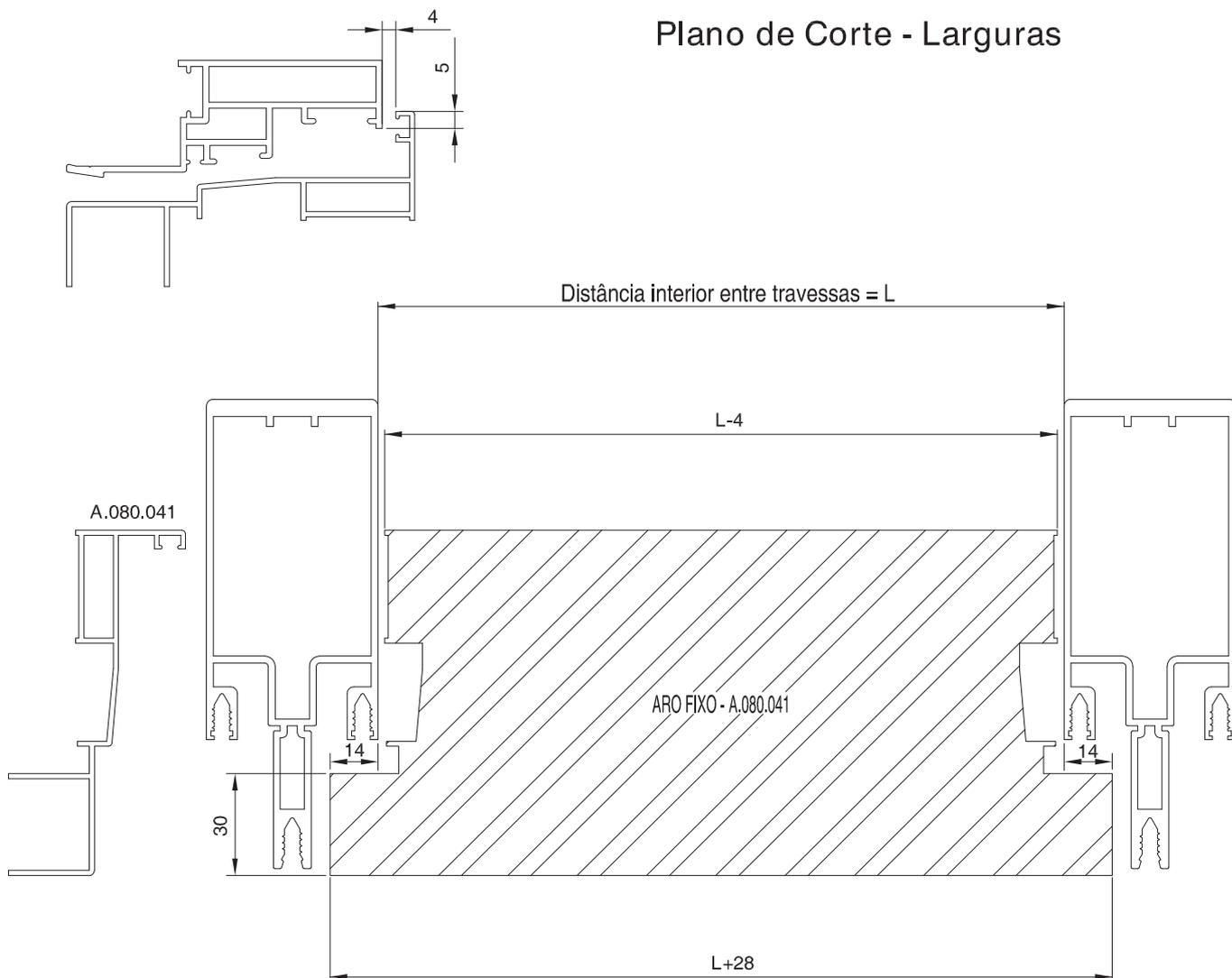
G.001.061 - Vedante EPDM

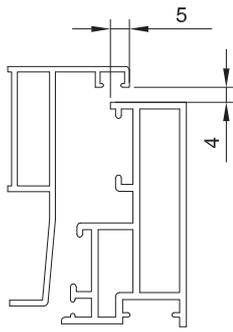


G.004.433 - Fixação p/ vidros

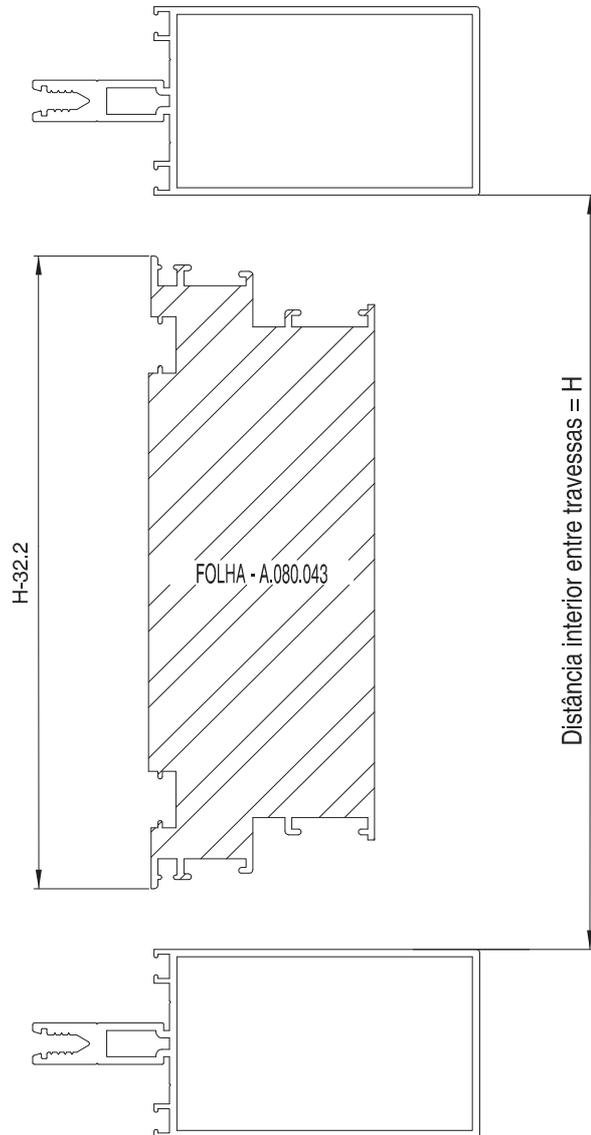
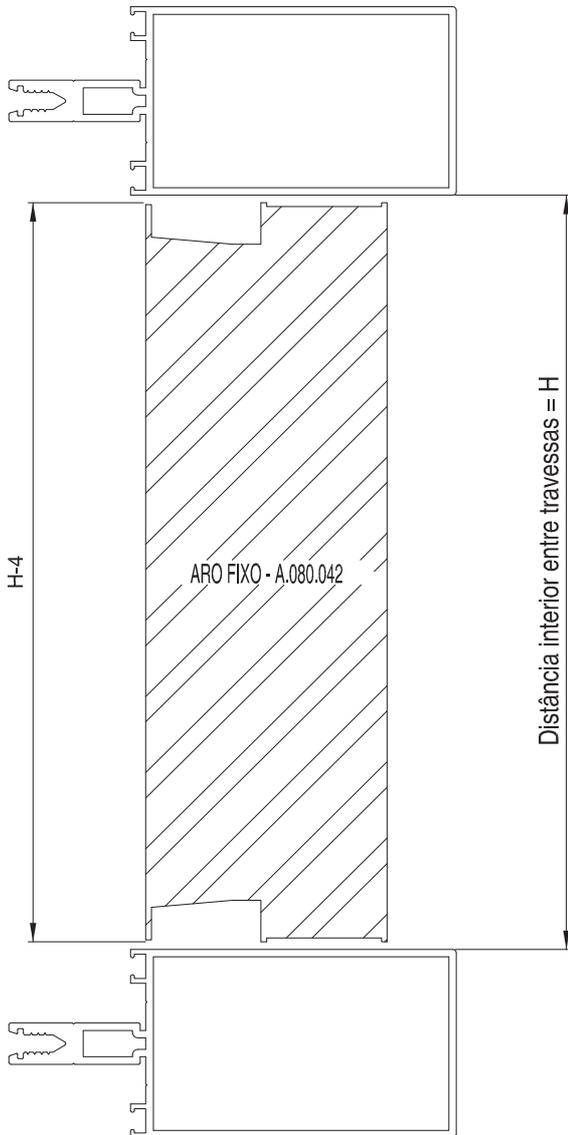
Referência	Áreas (dm <sup>2</sup> /m)		Momento inércia	
	Anod.	Polir	I <sub>x</sub> cm <sup>4</sup>	I <sub>y</sub> cm <sup>4</sup>
A.080.006	5.47	-	0.11	0.02
A.080.008	32.94	9.50	3.35	27.88
A.080.041	39.33	14.00	2.21	48.22
A.080.042	22.67	10.70	10.36	1.24
A.080.043	26.13	8.00	14.48	3.00

Plano de Corte - Larguras

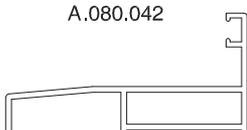




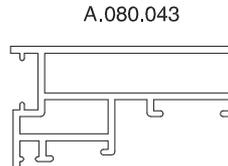
Plano de Corte - Alturas



A.080.042

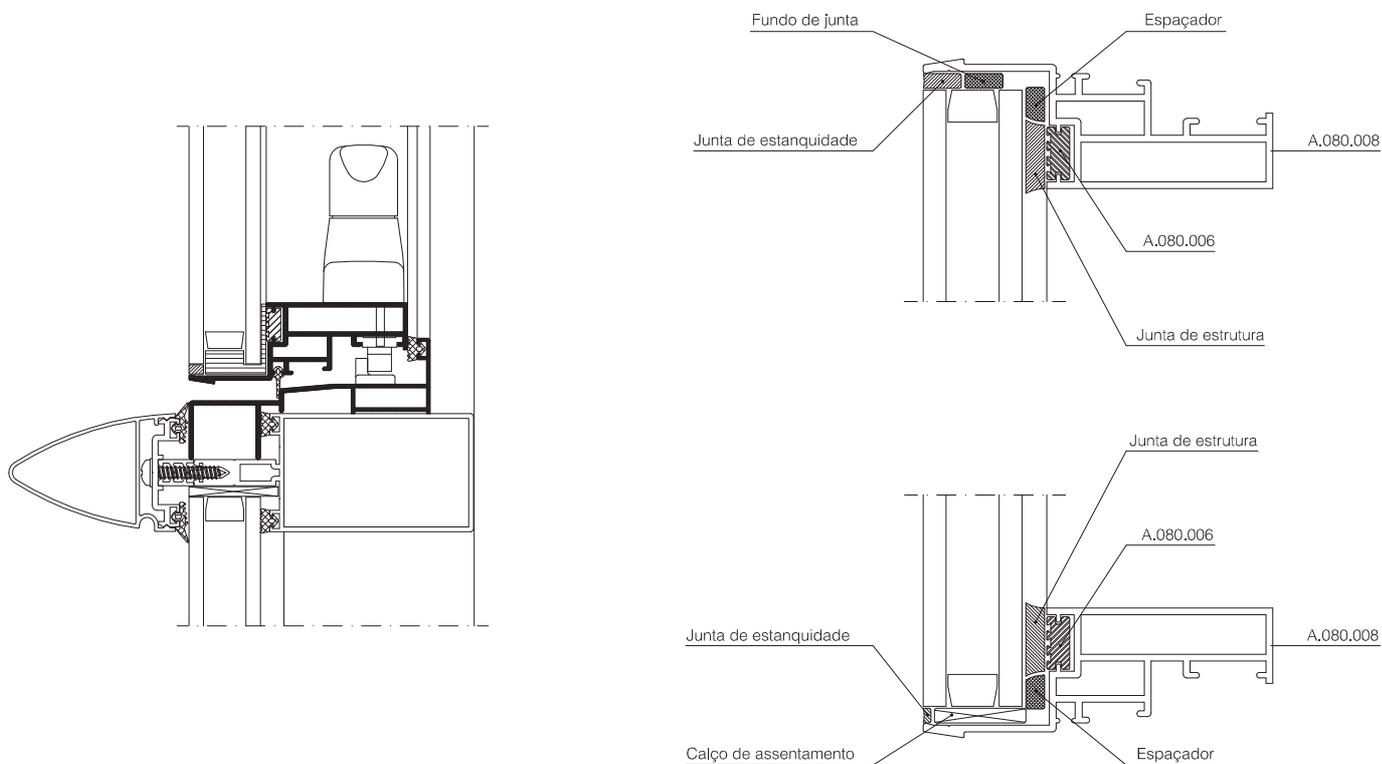


A.080.043

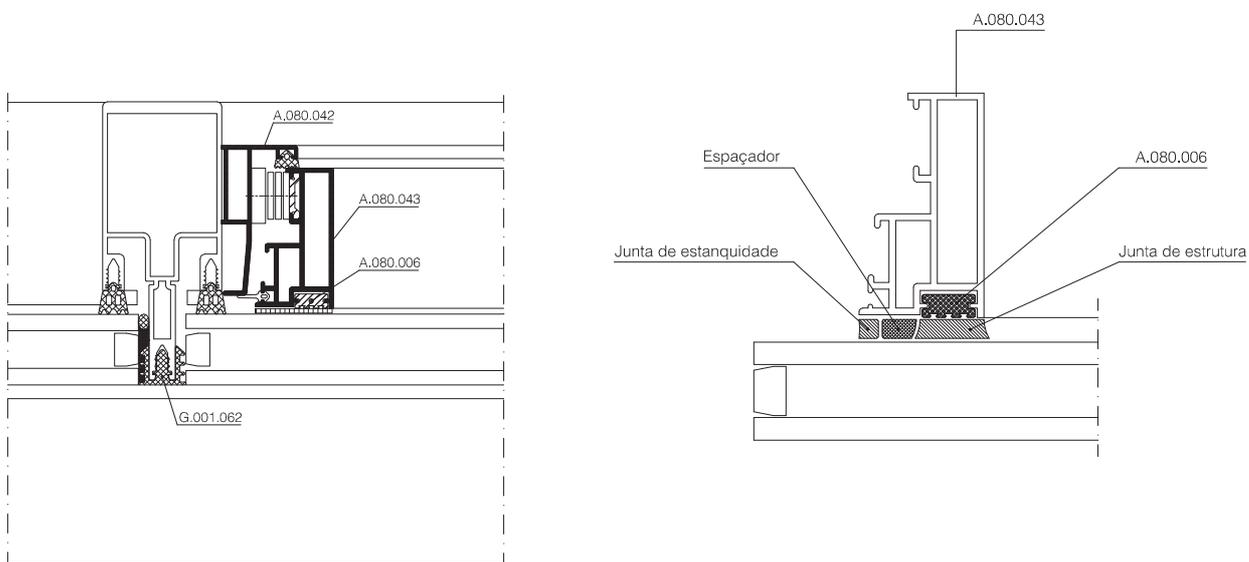


## Princípio de colagem

### Larguras



### Alturas



## Sistema A.080 - Fachada VEP (Vidro Exterior Preso)

### Características

Vista exterior:

Junta entre módulos, vedante em EPDM,  
Moldura dos vidros 15 mm

Barra isoladora em Poliamida TK 6.6

Capacidade de envidraçamento:

Duplo 26 mm

Simplex 8 mm

Junta de estanquidade do vidro assegurada por vedantes em EPDM

Junta de estanquidade entre módulos assegurada pela sobreposição de dois vedantes em EPDM

Peso máximo admissível por folha fixa: 500kg

Possibilidades de abertura:

Janela projectante

Portas dos sistemas A040 e A045

### Resultados no banco de ensaios

Permeabilidade ao ar - A 4

Estanquidade à água - R 7

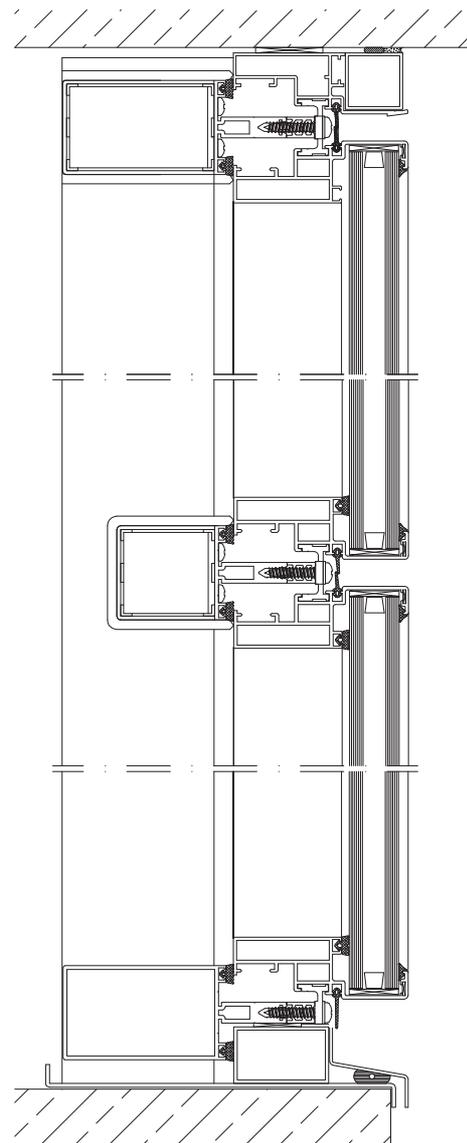
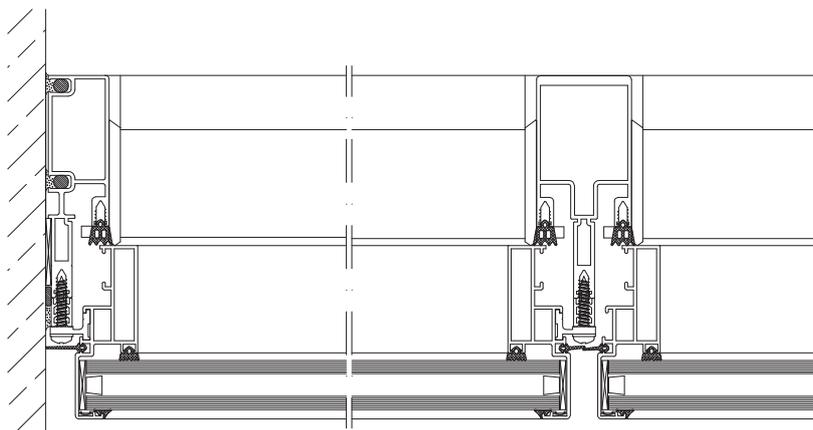
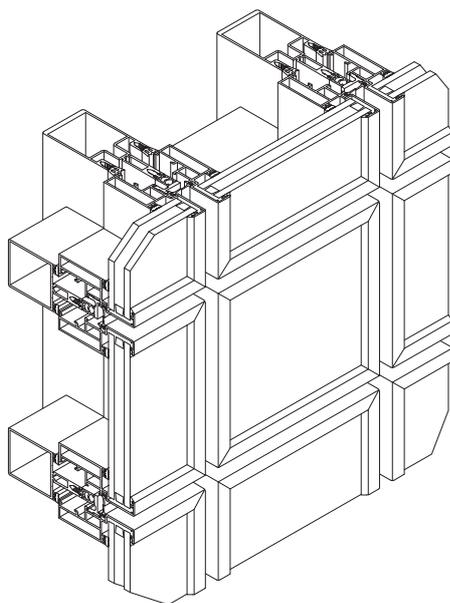
Índice de atenuação acústica  $R_w = 38$  dB

Coef. de transmissão térmica da janela  $U_w = 3,0$  W/m<sup>2</sup>K

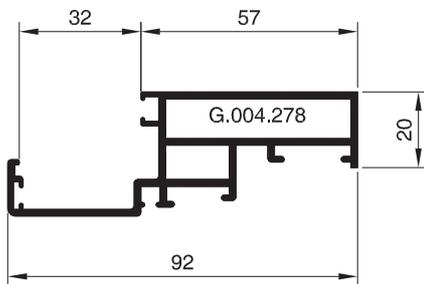
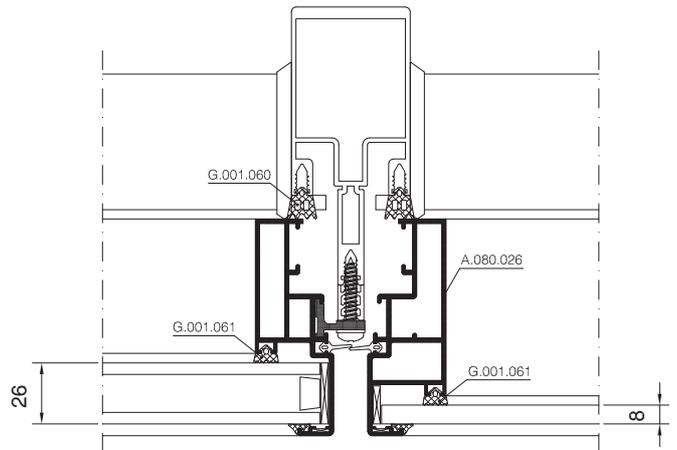
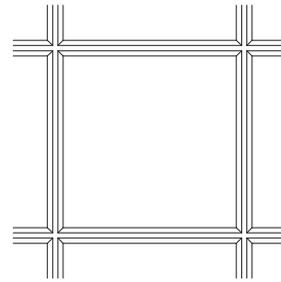
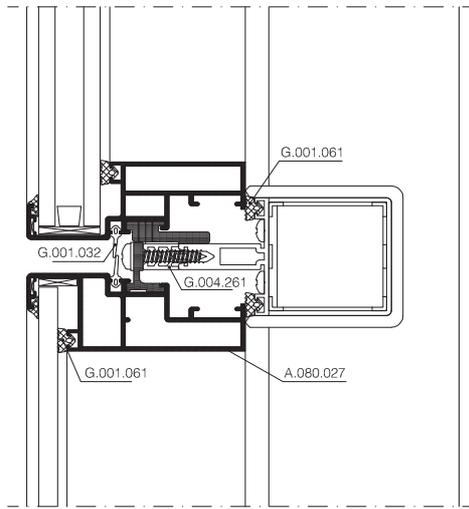
*Nota: Valores comprovados por ensaios realizados em laboratórios privados.*

*Para o cálculo  $R_w$  e  $U_w$  o preenchimento considerado foi um vidro de baixa emissividade ( $e \leq 0,05$ ) composto por 4.4.2+12+6mm, com  $R_w = 40$  dB e  $U_v = 2,7$  W/m<sup>2</sup>K.*

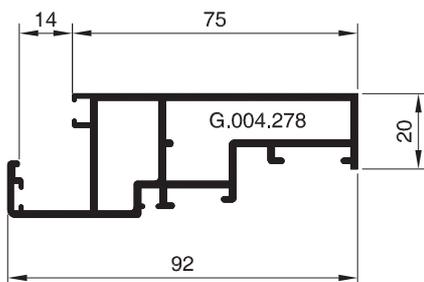
*Os valores apresentados estão condicionados pela dimensões e características do caixilho, sua localização e preenchimento utilizado.*



Módulo fixo



A.080.026



A.080.027

G.004.277 - Peça de fixação

G.004.352 - Suporte p/ painel fixo

G.004.261 - Barra de poliamida

G.001.008 - Vedante p/ vidro

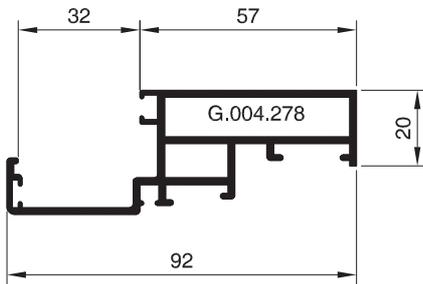
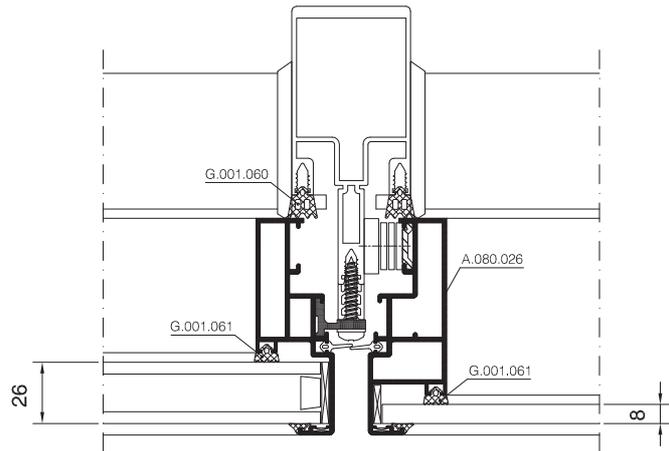
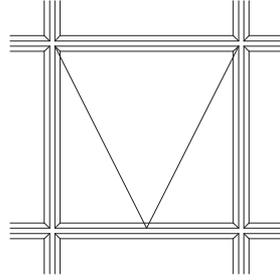
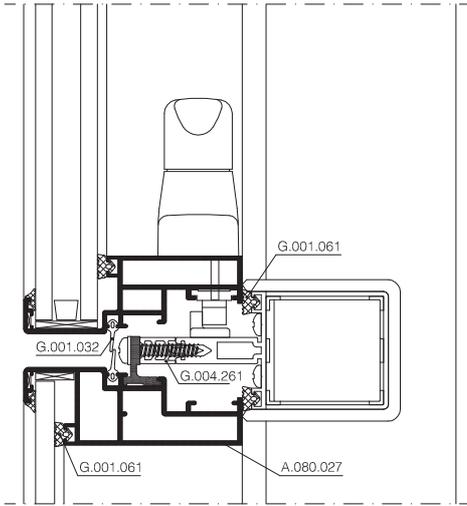
G.001.032 - Vedante EPDM

G.001.061 - Vedante EPDM

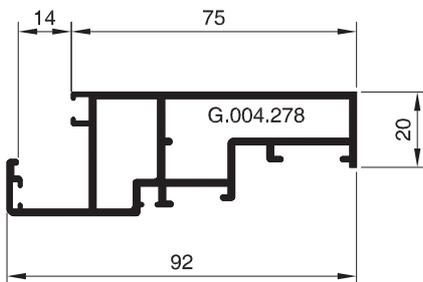
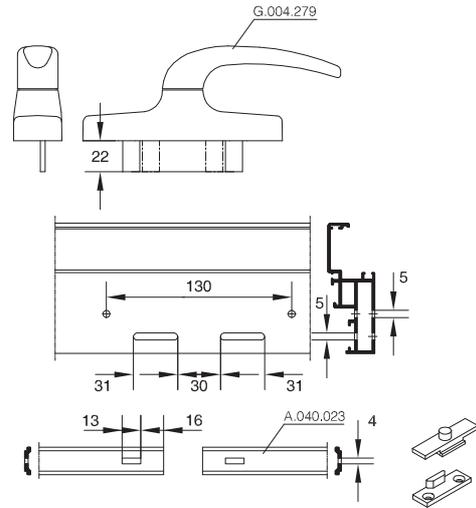
escala 1:2

Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.026	36.37	11.00	3.29	32.61
A.080.027	36.50	14.50	5.09	37.45

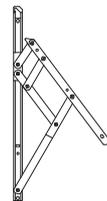
### Janela projectante



**A.080.026**



**A.080.027**



Compassos disponíveis p/ largura máxima 2000mm:

- G.004.426 - 20 Kg - 350 > H < 550mm
- G.004.379 - 24 Kg - 400 > H < 700mm
- G.004.393 - 55 Kg - 787 > H < 1090mm
- G.004.275 - 100 Kg - 1270 > H < 2000mm

 G.001.008 - Vedante p/ vidro

 G.001.032 - Vedante EPDM

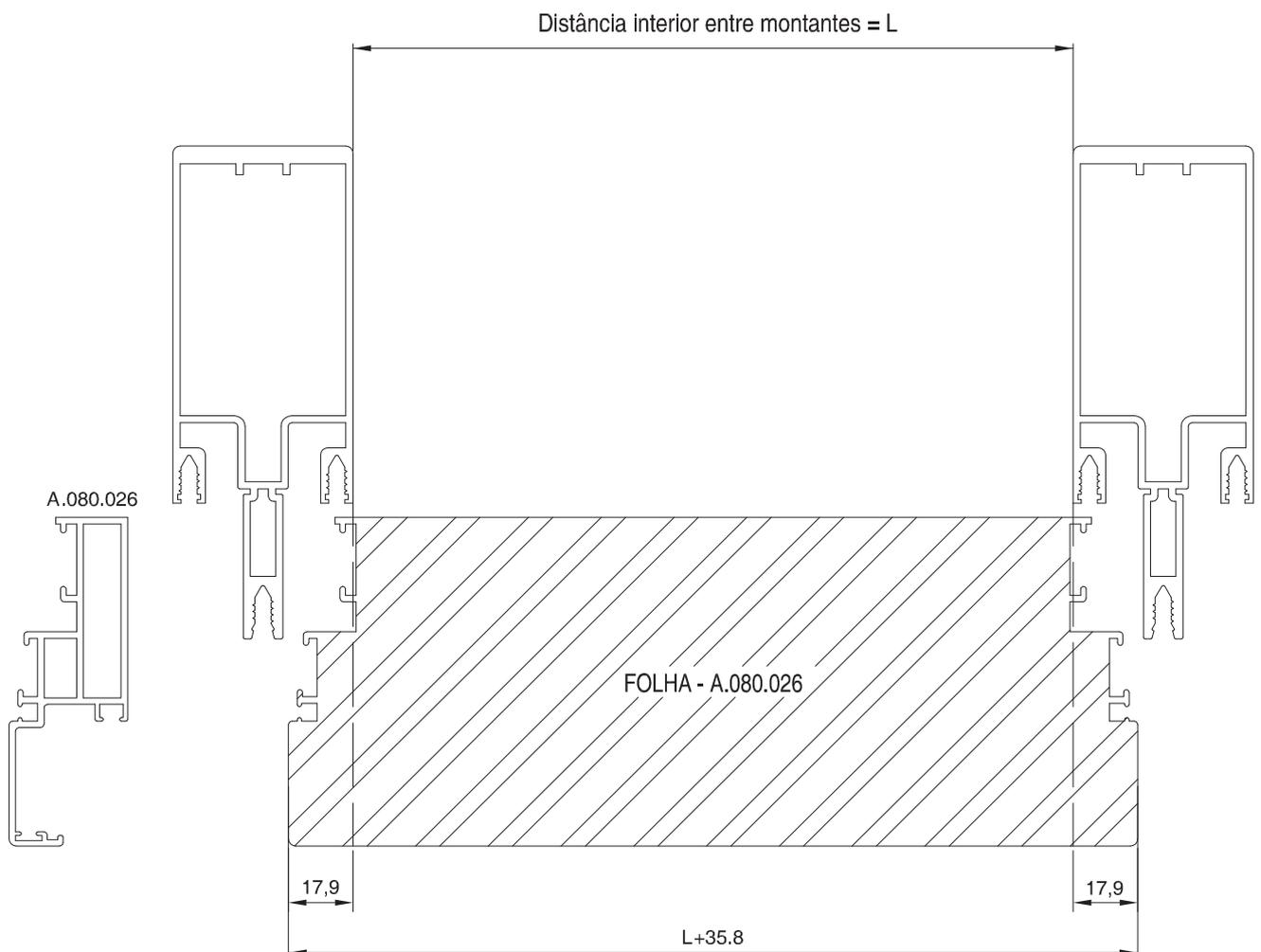
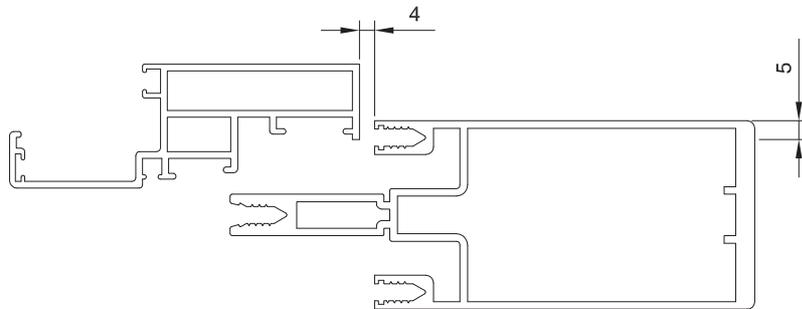
 G.001.061 - Vedante EPDM

Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.026	36.37	11.00	3.29	32.61
A.080.027	36.50	14.50	5.09	37.45

escala 1:2

Módulo fixo e janela projectante

Plano de Corte - Larguras e Alturas



## Sistema A.080 - Fachada VEC (Vidro Exterior Colado)

### Características

Vista exterior:

Junta entre módulos, vedante em EPDM,  
Barra isoladora em Poliamida TK 6.6

Capacidade de envidraçamento:

Duplo 28 / 30 mm

Simplex 6 / 8 mm

Junta de estanquidade do vidro assegurada por colagem

Junta de estanquidade entre módulos assegurada pela sobreposição de dois vedantes em EPDM

Peso máximo admissível por folha fixa: 500kg

Possibilidades de abertura:

Janela projectante

Portas dos sistemas A040 e A045

### Resultados no banco de ensaios

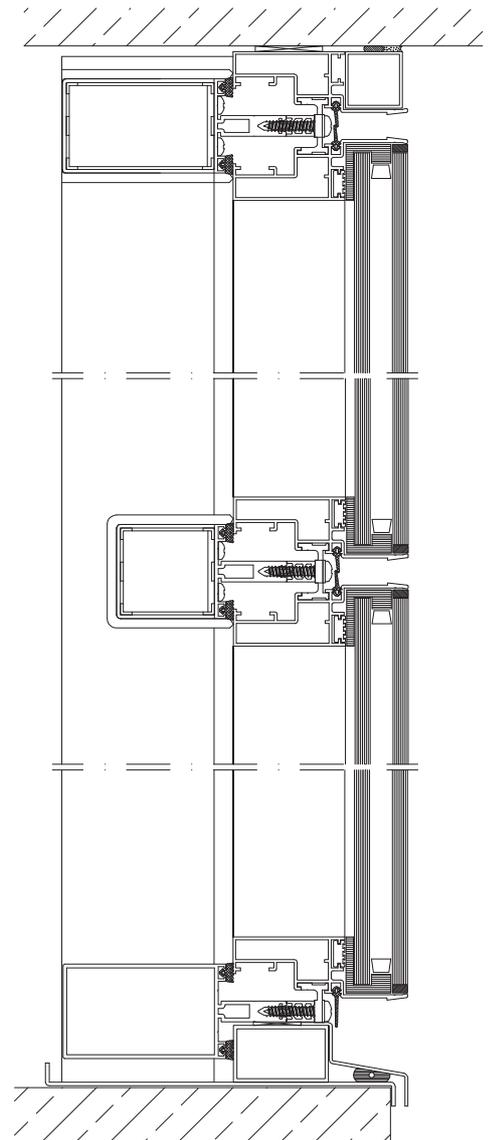
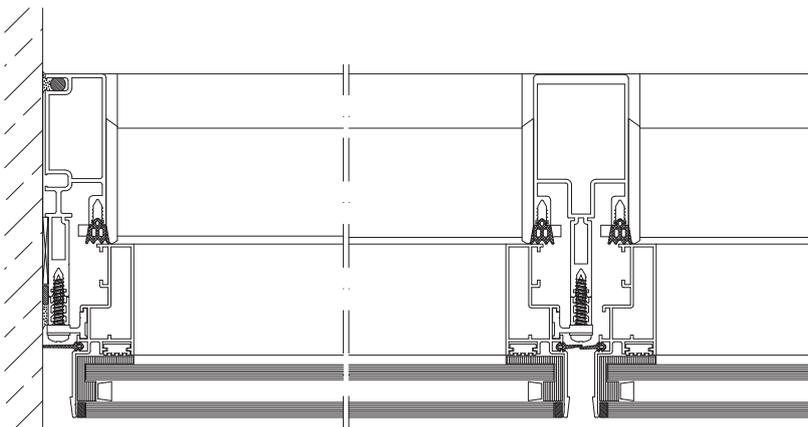
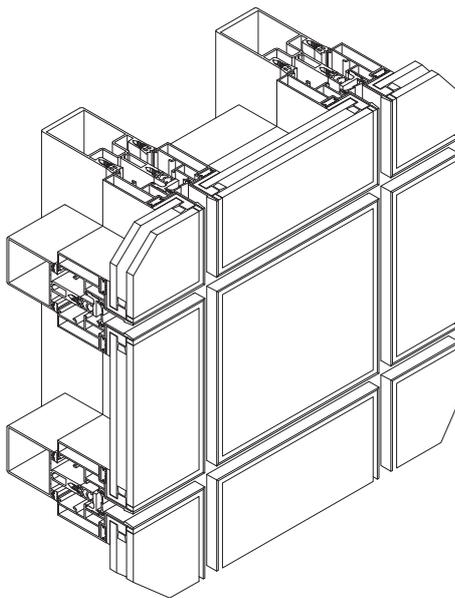
Permeabilidade ao ar - A 4

Estanquidade à água - R 7

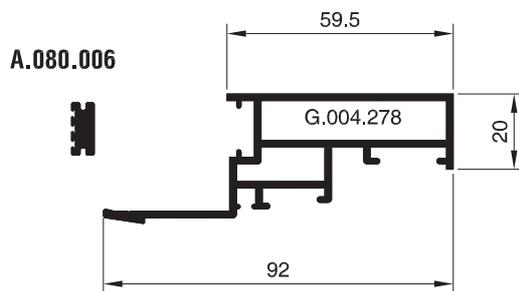
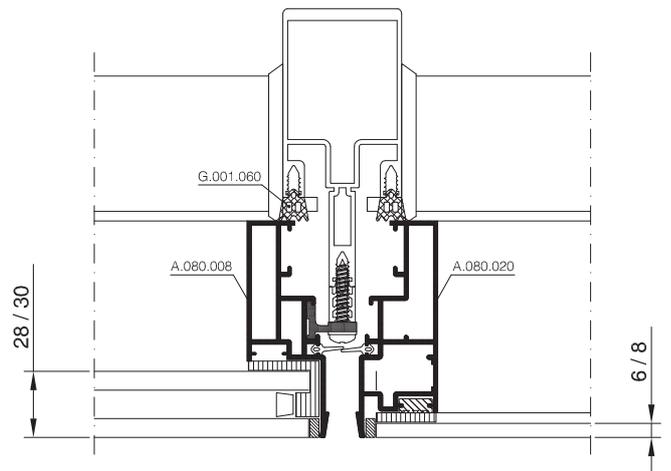
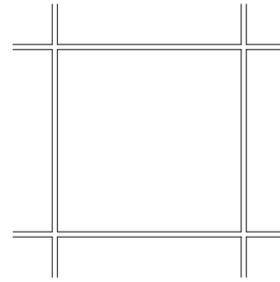
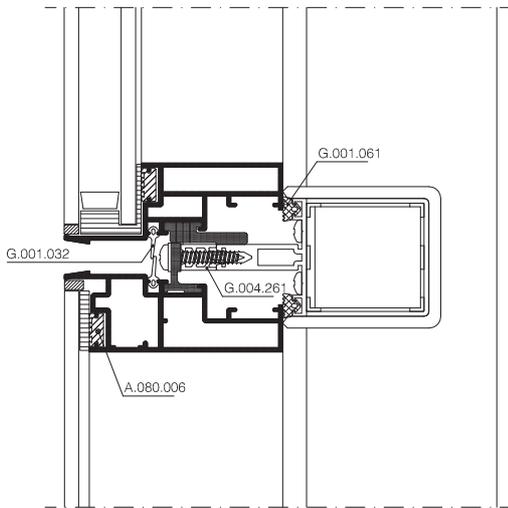
Índice de atenuação acústica  $RW = 38$  dB

Coef. de transmissão térmica da janela  $Uw = 2,9$  W/m<sup>2</sup>K

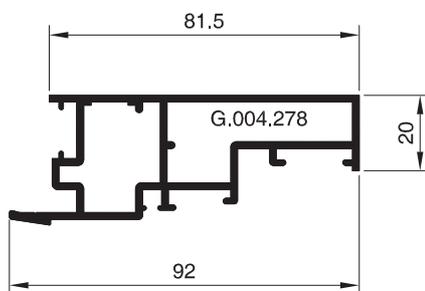
*Nota: Valores comprovados por ensaios realizados em laboratórios privados.  
Para o cálculo  $Rw$  e  $Uw$  o preenchimento considerado foi um vidro de baixa emissividade ( $e \leq 0,05$ ) composto por 4.4.2+14+6mm, com  $Rw = 40$  dB e  $Uv = 2,7$  W/m<sup>2</sup>K.  
Os valores apresentados estão condicionados pela dimensões e características do caixilho, sua localização e preenchimento utilizado.*



Módulo fixo



A.080.008



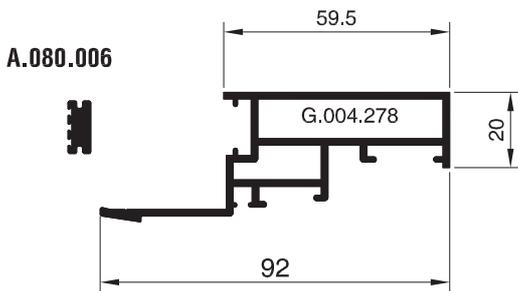
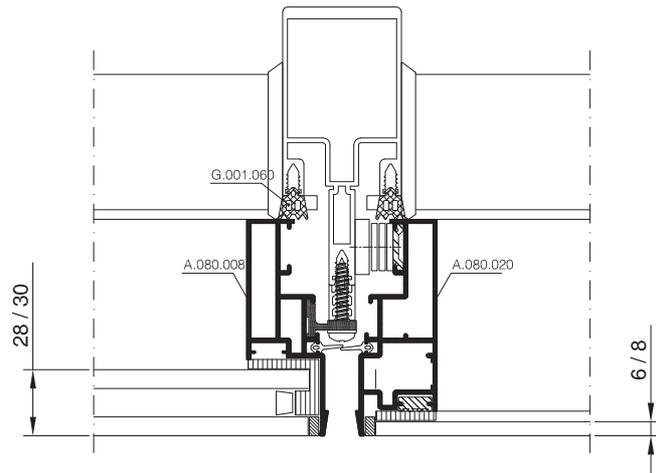
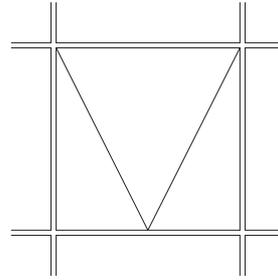
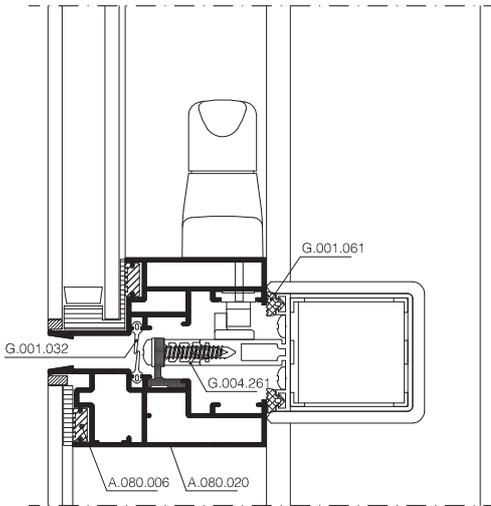
A.080.020

- G.004.277 - Peça de fixação
- G.004.352 - Suporte p/ painel fixo
- G.004.433 - Fixação p/ vidros
- G.004.261 - Barra de poliamida
- G.001.032 - Vedante EPDM
- G.001.061 - Vedante EPDM

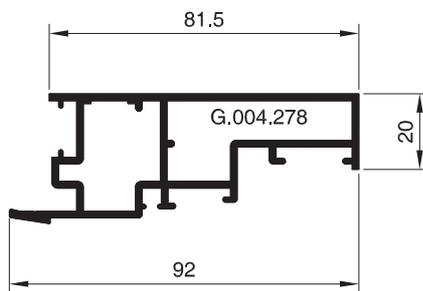
escala 1:2

Referência	Areas Anod.	(dm2/m) Polir	Momento inércia lx cm4	ly cm4
A.080.006	5.47	-	0.11	0.02
A.080.008	32.94	9.50	3.35	27.88
A.080.020	34.17	13.65	5.89	37.95

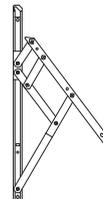
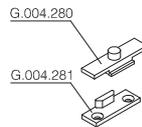
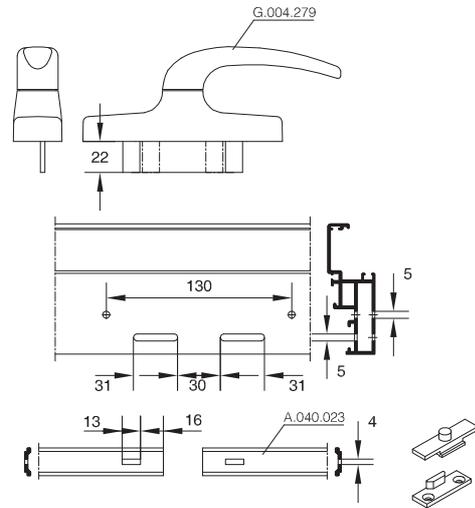
### Janela projectante



**A.080.008**



**A.080.020**



Compassos disponíveis p/ largura máxima 2000mm:

- G.004.426 - 20 Kg - 350 > H < 550mm
- G.004.379 - 24 Kg - 400 > H < 700mm
- G.004.393 - 55 Kg - 787 > H < 1090mm
- G.004.275 - 100 Kg - 1270 > H < 2000mm



G.001.032 - Vedante EPDM



G.001.061 - Vedante EPDM



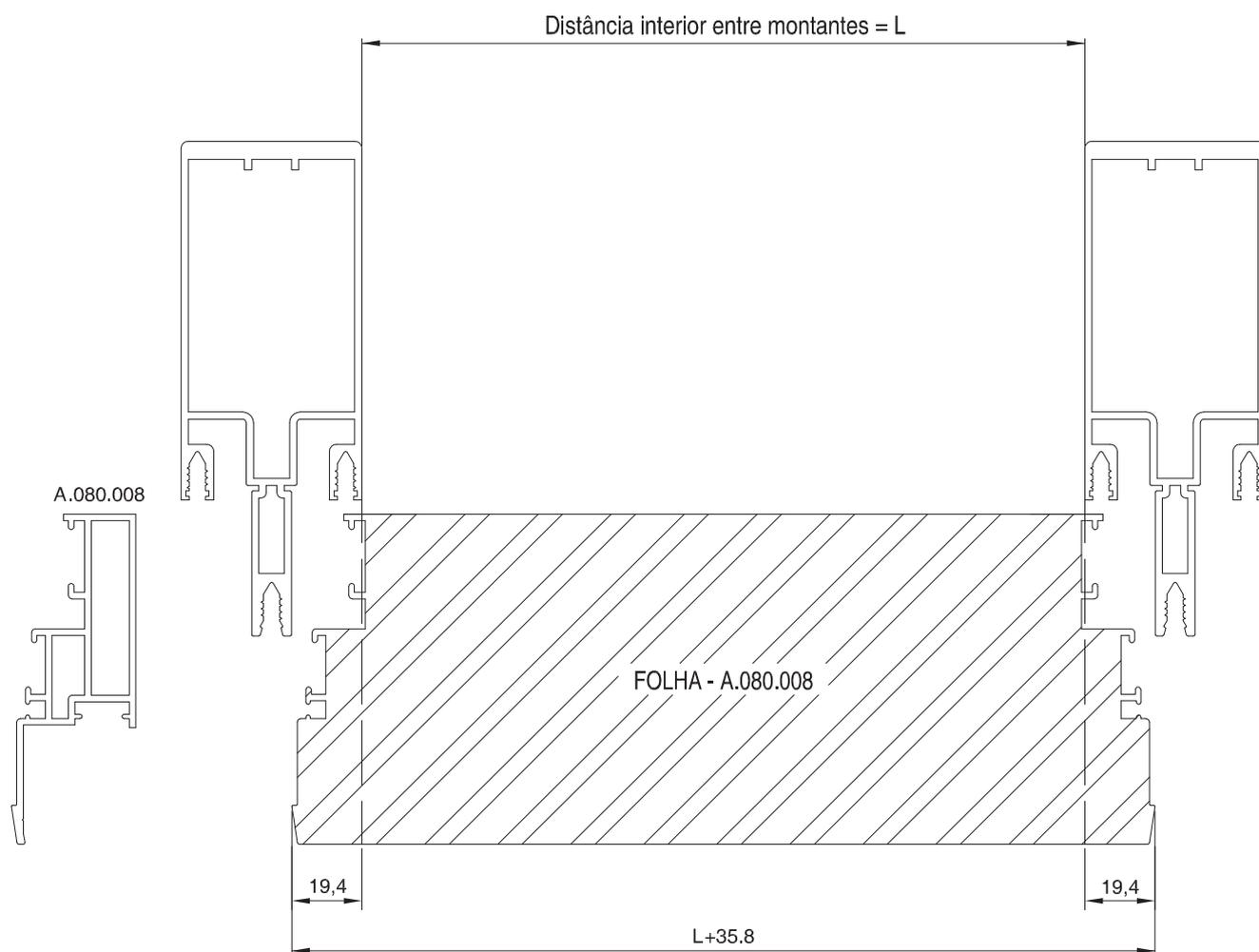
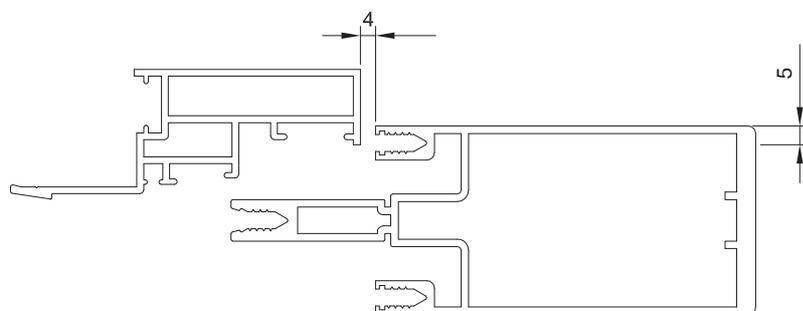
G.004.433 - Fixação p/ vidros

Referência	Areas Anod. (dm <sup>2</sup> /m)	Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.006	5.47	-	0.11	0.02
A.080.008	32.94	9.50	3.35	27.88
A.080.020	34.17	13.65	5.89	37.95

escala 1:2

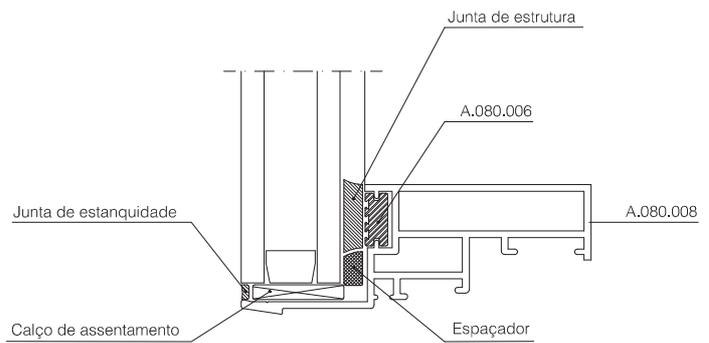
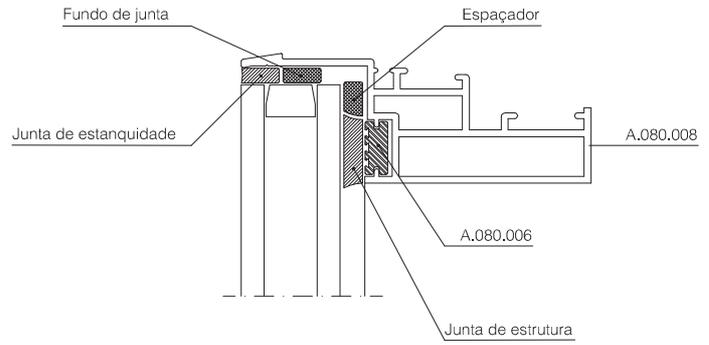
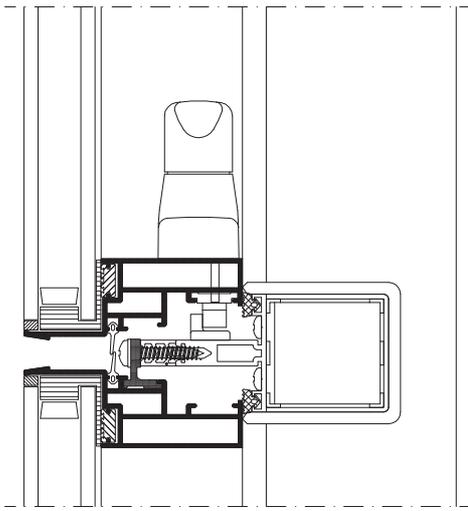
Módulo fixo e janela projectante

Plano de Corte - Larguras e Alturas

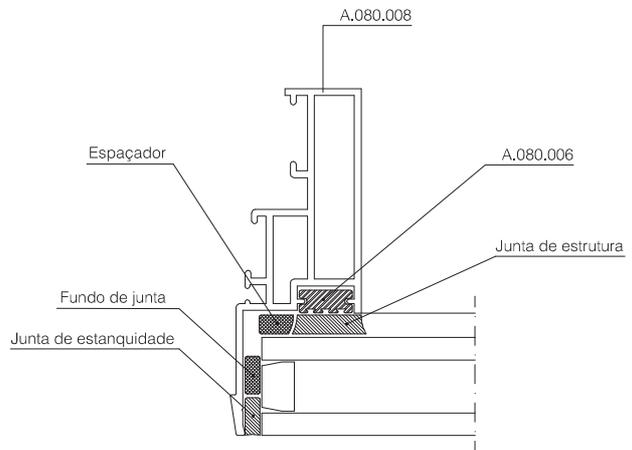
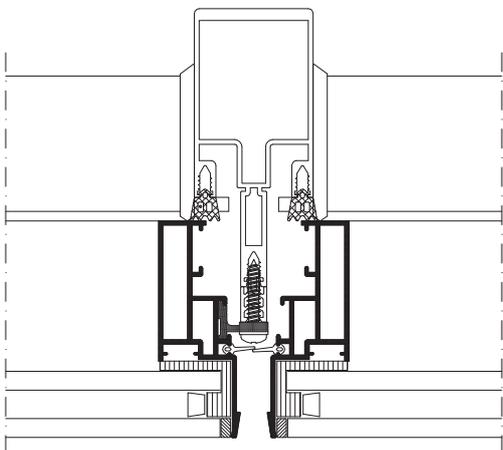


## Princípio de colagem

### Larguras



### Alturas



## Sistema A.080 - Cláraboia

### Características

Vista exterior:

Vertical 50 mm

Horizontal 50 mm

Barra isoladora em Poliamida TK 6.6

Capacidade de envidraçamento:

Duplo 30 mm

Simplex 16 mm

Junta de estanquidade do vidro assegurada por vedantes em EPDM

Possibilidades de abertura:

Janela projectante

### Resultados no banco de ensaios

Permeabilidade ao ar - A 4

Estanquidade à água - R 750

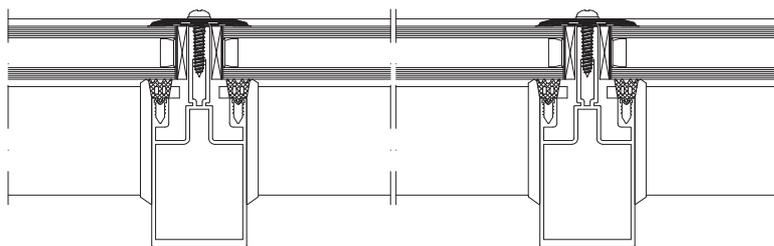
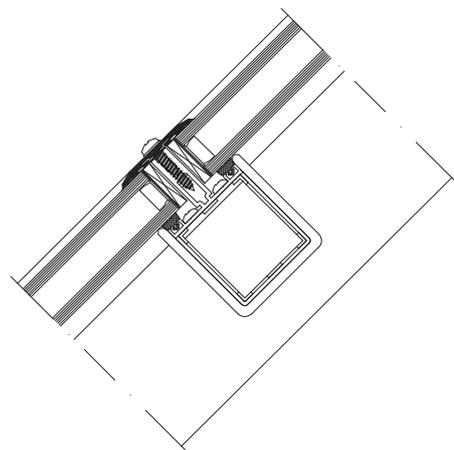
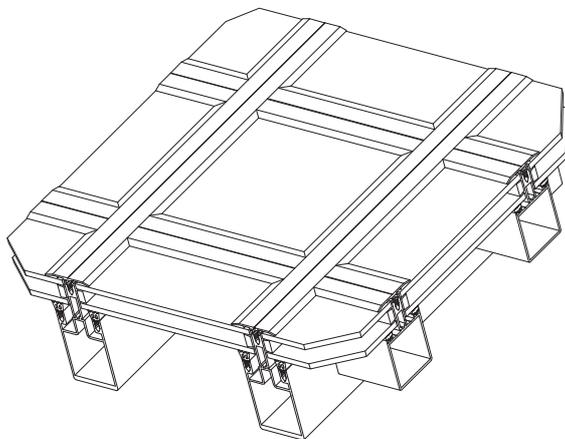
Índice de atenuação acústica  $RW = 38$  dB

Coef. de transmissão térmica da janela  $Uw = 3,1$  W/m<sup>2</sup>K

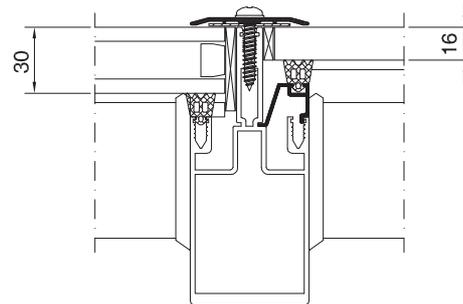
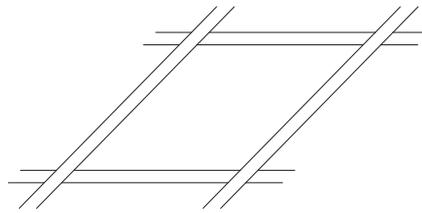
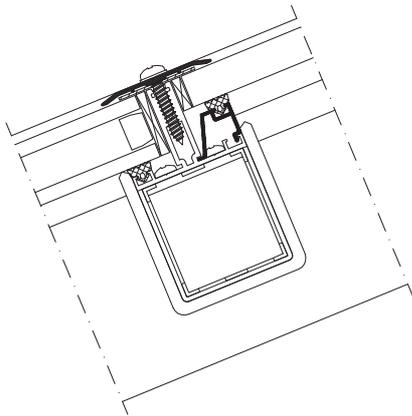
*Nota: Valores comprovados por ensaios realizados em laboratórios privados.*

*Para o cálculo  $Rw$  e  $Uw$  o preenchimento considerado foi um vidro de baixa emissividade ( $e \leq 0,05$ ) composto por 4.4.2+16+6mm, com  $Rw = 40$  dB e  $Uv = 2,7$  W/m<sup>2</sup>K.*

*Os valores apresentados estão condicionados pela dimensões e características do caixilho, sua localização e preenchimento utilizado.*

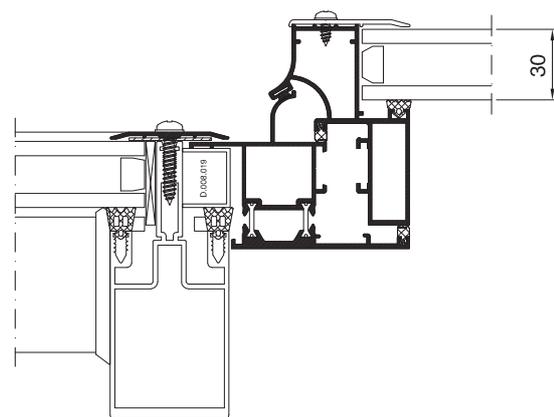
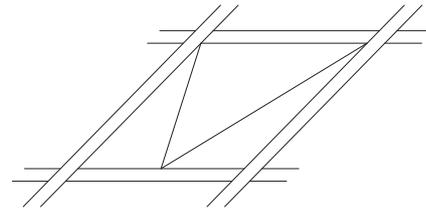
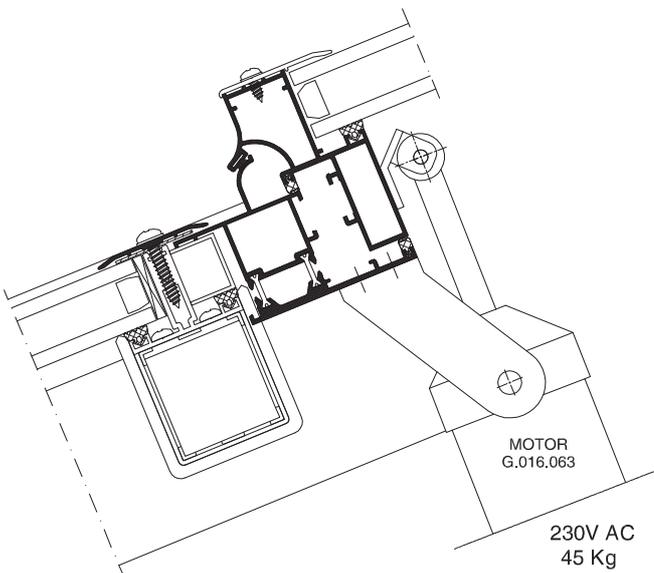


Módulo fixo



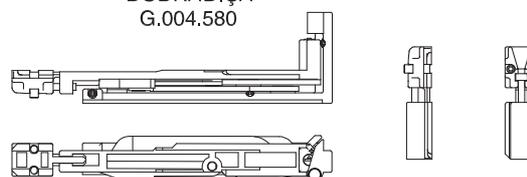
-  G.001.061 - Vedante EPDM p/ travessa
-  G.001.060 - Vedante EPDM p/ montante

Janela projectante

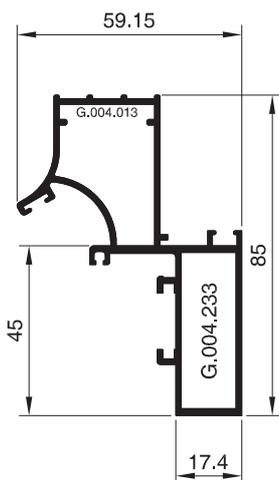


-  G.001.061 - Vedante p/ vidro
-  G.001.039 - Vedante batente em EPDM
-  G.002.002 - Pelúcia Cut Fin 6,9x8,75

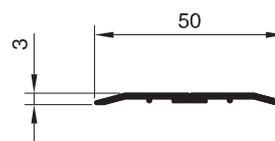
DOBRADIÇA  
G.004.580



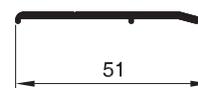
Peso máxlmo: 80 Kg  
Largura máxlma: 1500mm  
Altura máxlma: 1500mm



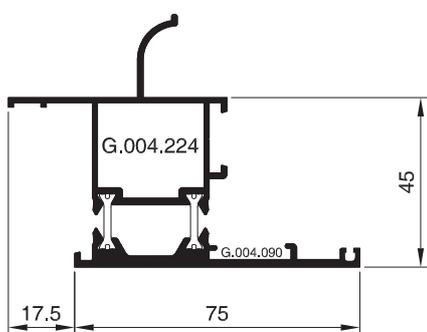
A.080.047



A.080.012



A.080.051



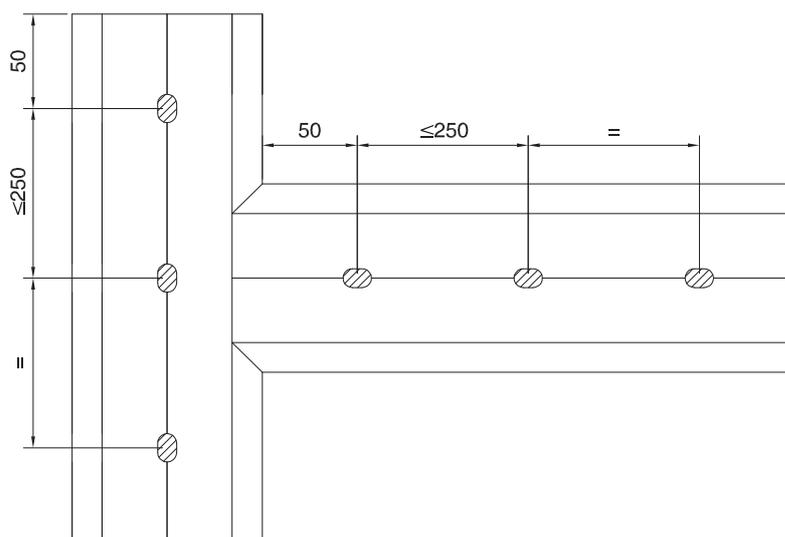
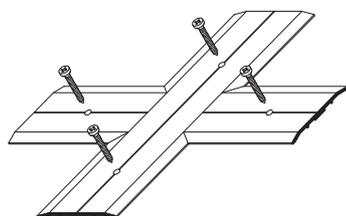
A.080.050



A.080.014

### Capas - Fixação

G.019.110

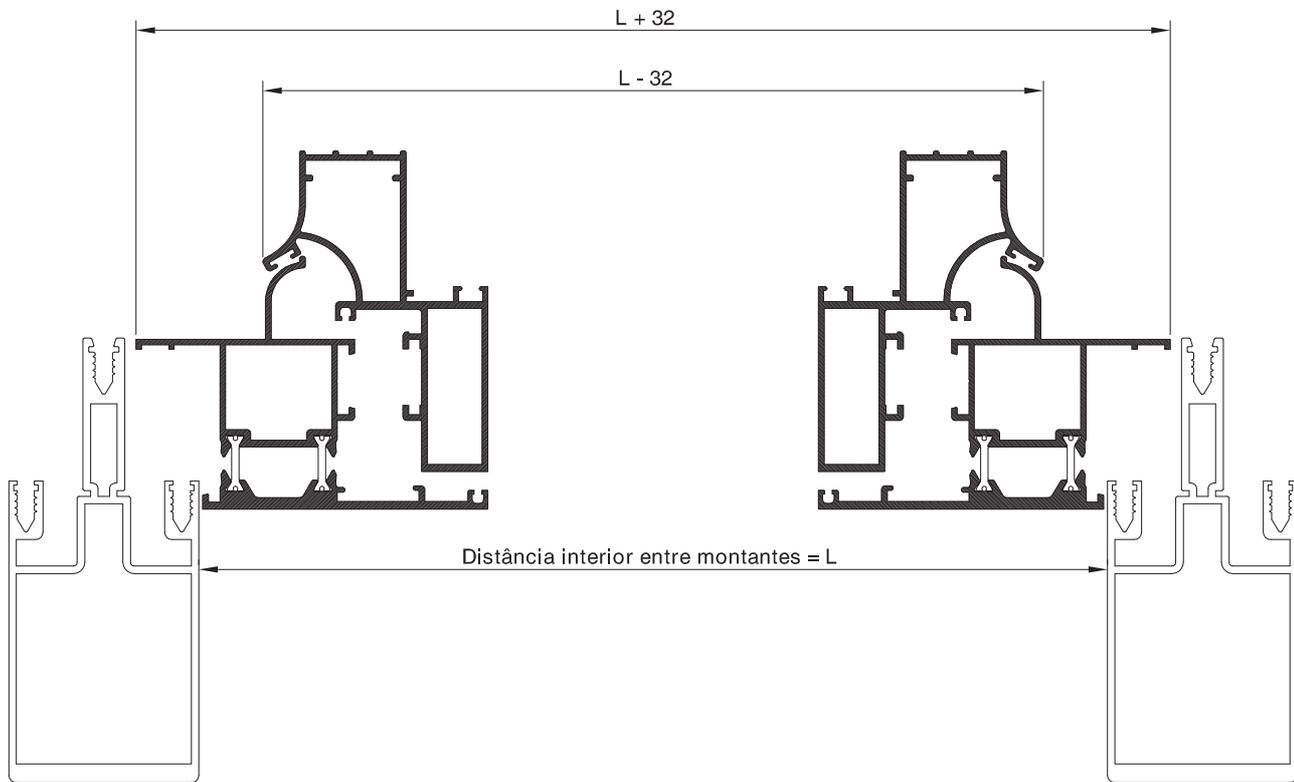


escala 1:2

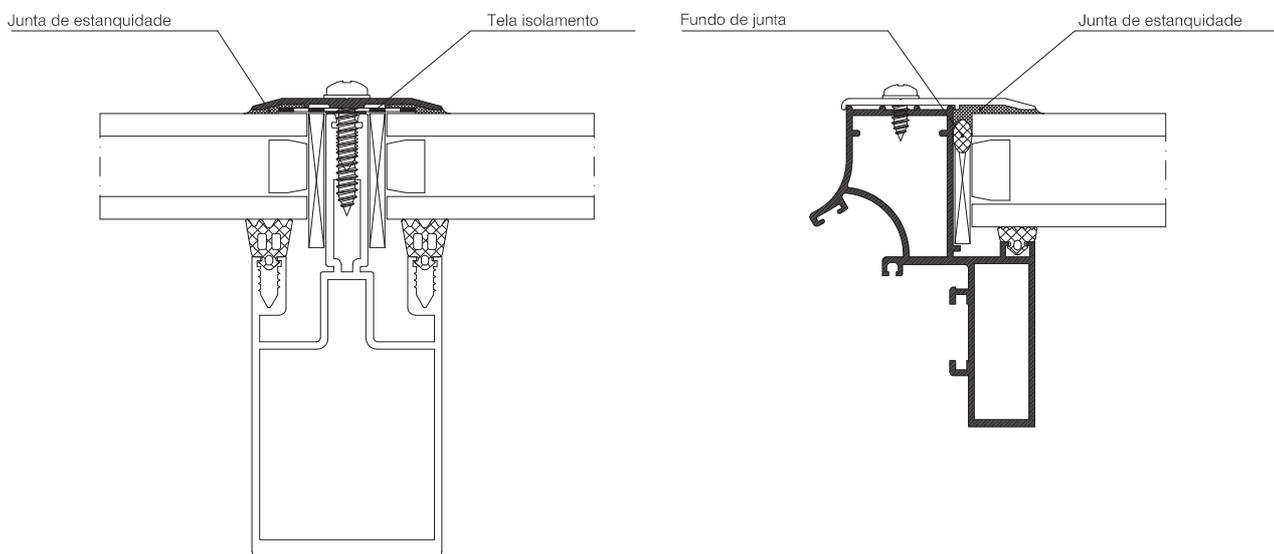
Referência	Áreas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			I <sub>x</sub> cm <sup>4</sup>	I <sub>y</sub> cm <sup>4</sup>
A.080.012	10.70	5.00	0.00	1.52
A.080.014	11.56	1.40	0.17	0.33
A.080.047	38.10	10.00	36.05	6.07
A.080.050	49.78	16.50	13.01	27.95
A.080.051	10.81	5.00	0.00	1.93

Janela projectante

Plano de Corte - Larguras e Alturas



Módulo fixo e janela projectante - Junta exterior do vidro



## Sistema A.080 - Helios

### Características

Vista exterior:

- Vertical 50 mm
- Horizontal 50 mm
- Perfis sombreamento com 170 / 200 mm

Barra isoladora em Poliamida TK 6.6

Capacidade de envidraçamento:

- Duplo 26 / 30 mm
- Simples 6 / 10 / 12 / 16 mm

Junta de estanquidade do vidro assegurada por vedantes em EPDM

Peso máximo admissível por folha fixa: 500kg

Possibilidades de abertura:

- Portas e janelas dos sistemas A040 e A045

### Resultados no banco de ensaios

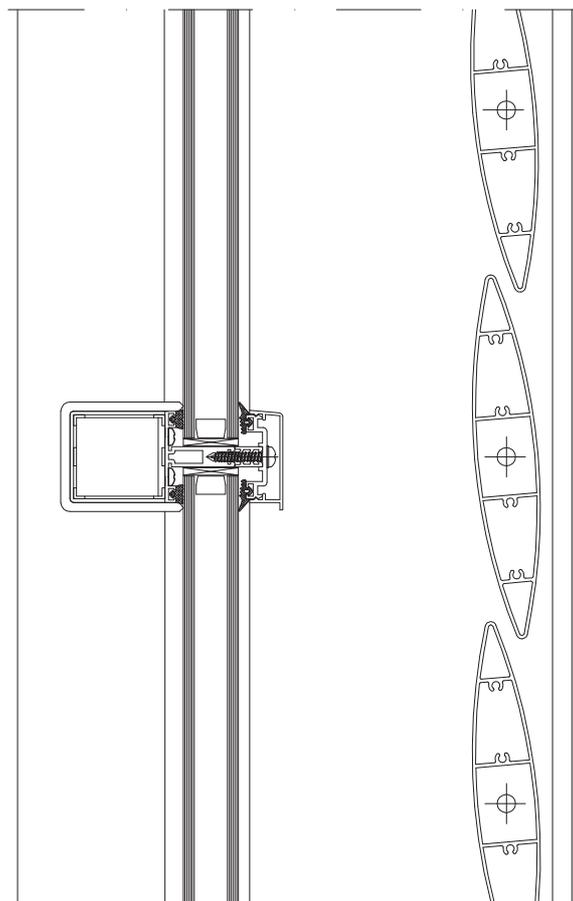
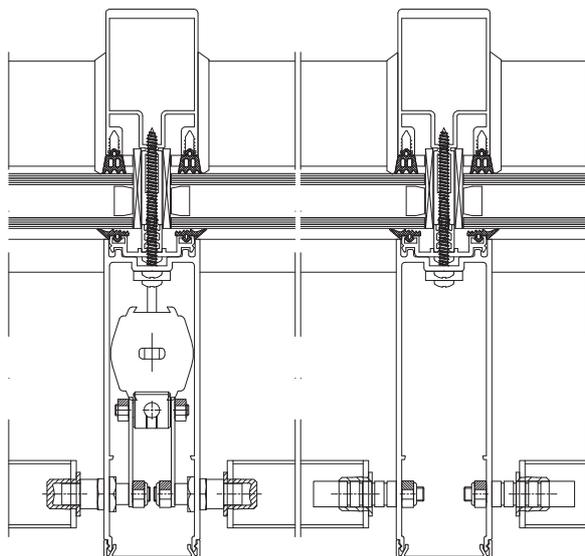
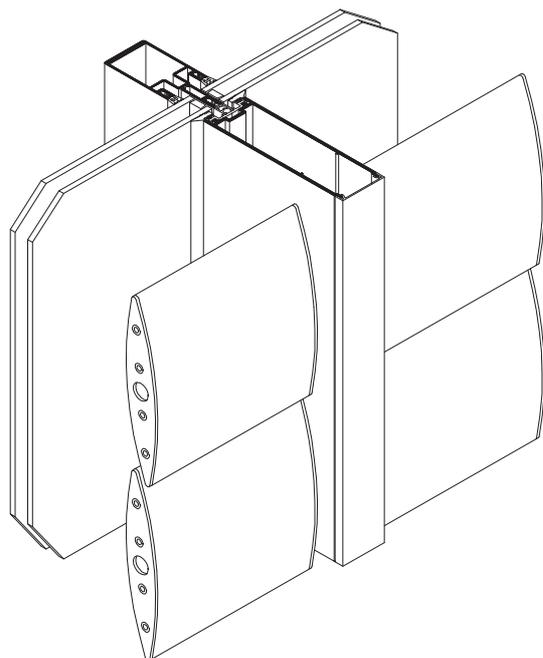
Permeabilidade ao ar - A 4

Estanquidade à água - R 750

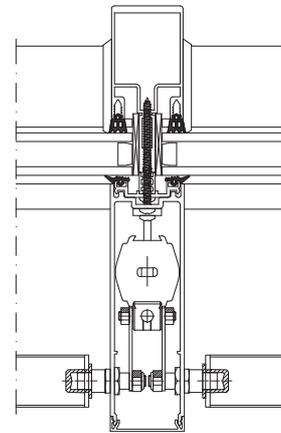
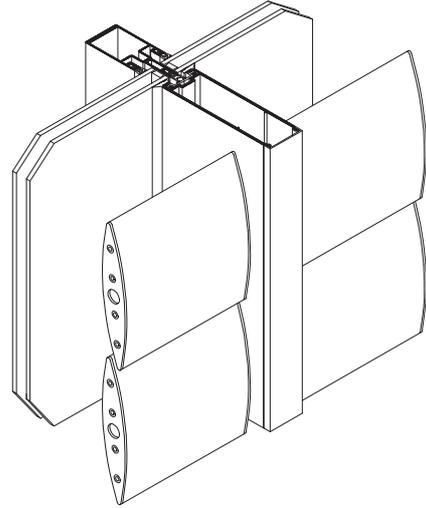
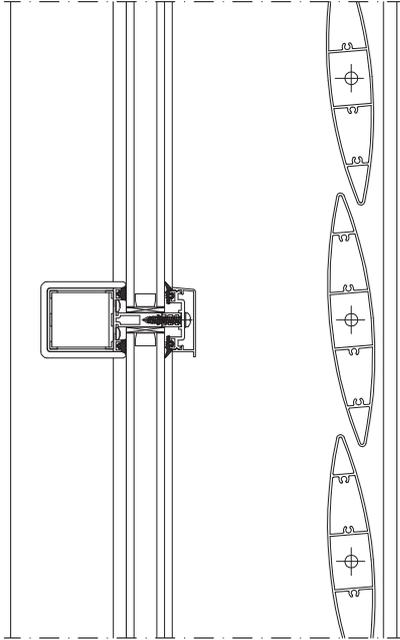
Índice de atenuação acústica RW = 38 dB

Coef. de transmissão térmica da janela Uw = 3,1 W/m<sup>2</sup>K

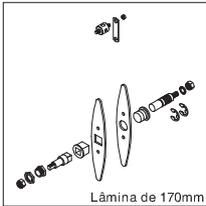
*Nota: Valores comprovados por ensaios realizados em laboratórios privados.  
Para o cálculo Rw e Uw o preenchimento considerado foi um vidro de baixa emissividade ( $\epsilon \leq 0,05$ ) composto por 4.4.2+12+6mm, com Rw = 40 dB e Uv = 2,7 W/m<sup>2</sup>K.  
Os valores apresentados estão condicionados pela dimensões e características do caixilho, sua localização e preenchimento utilizado.*



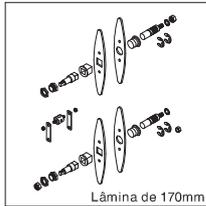
### Sistema móvel



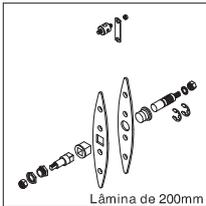
**G.021.170**  
Sistema Móvel Simples



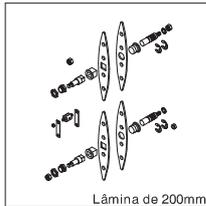
**G.021.171**  
Sistema Móvel Duplo



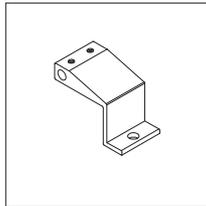
**G.021.200**  
Sistema Móvel Simples



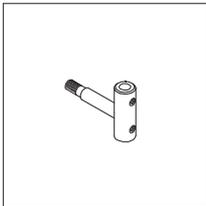
**G.021.201**  
Sistema Móvel Duplo



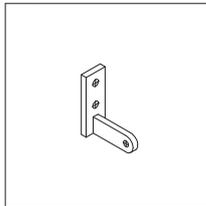
**G.016.040** - Ligação Sistema Manual e Eléctrico



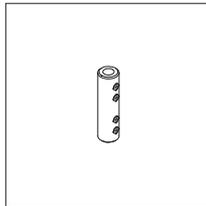
**G.021.007**  
Ligação Motor



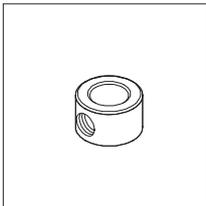
**G.021.010**  
Fixação Motor



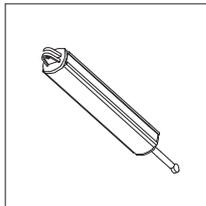
**G.021.011**  
União Varões



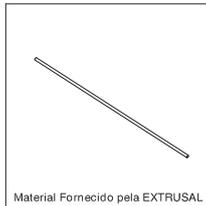
**G.016.059**  
Anilha Afniação Motores



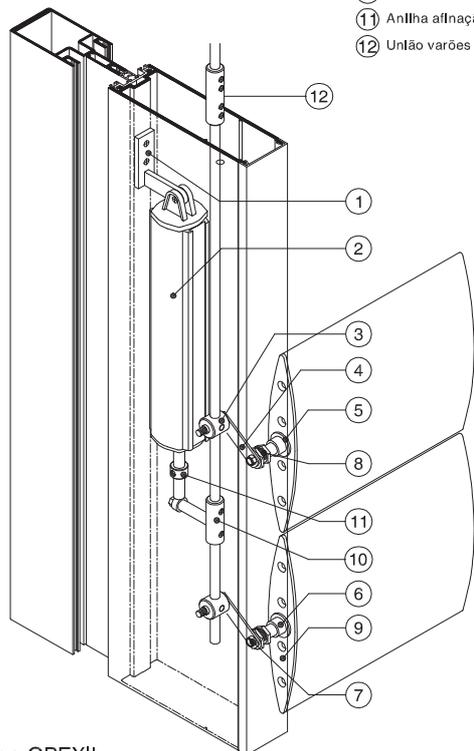
**G.016.060**  
Motor T20 180 Beta



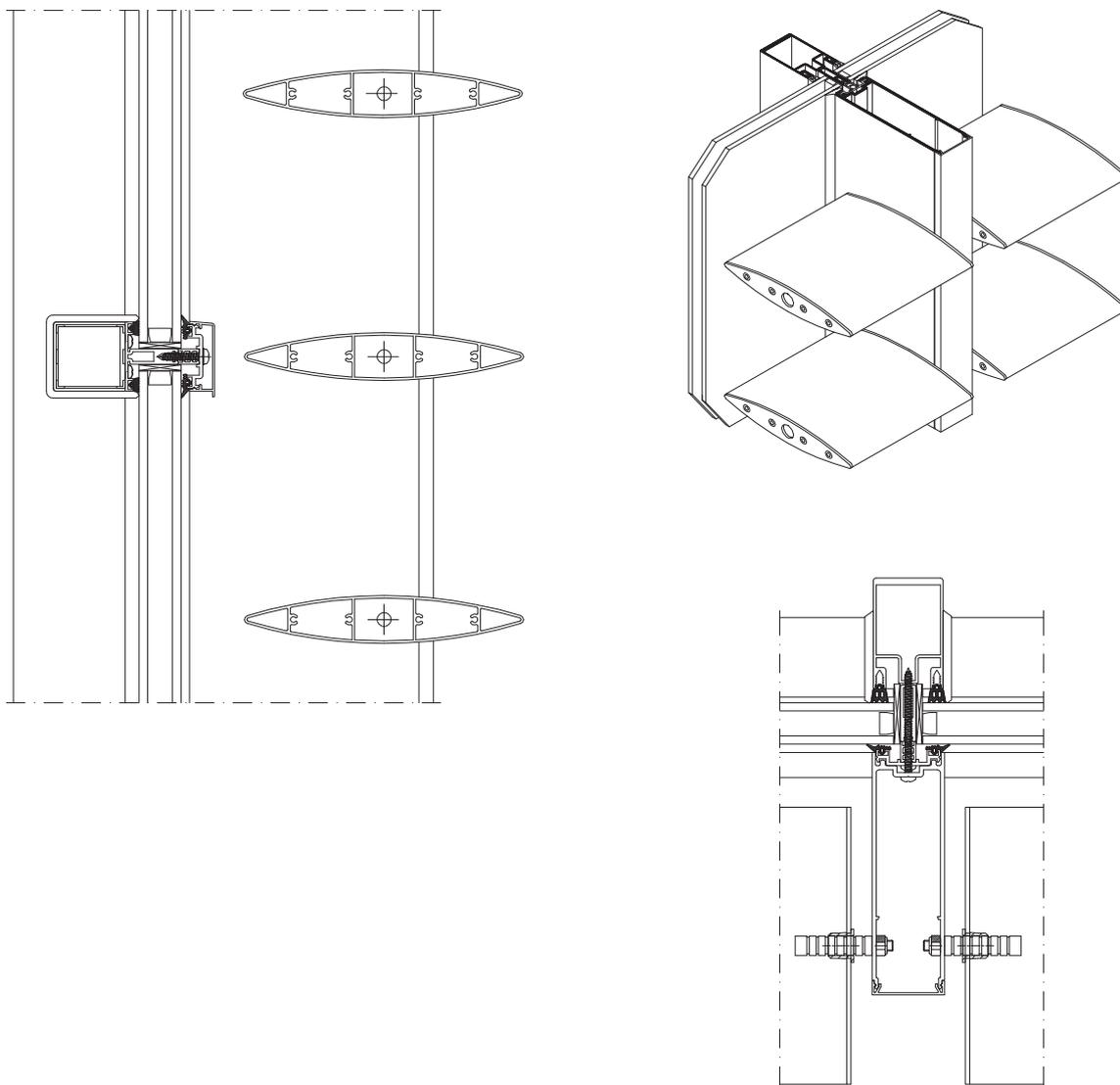
**D.001.023**  
Varão Alumínio-Barra 6 Mts



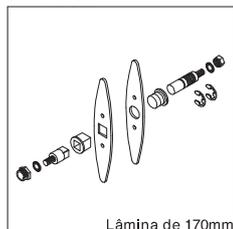
- ① Fixação do motor refª G.021.010
- ② Motor refª G.016.060
- ③ Mecanismo central refª G.021.006
- ④ Transmissão refª G.021.008
- ⑤ Casquilho refª G.021.001
- ⑥ Veio refª G.021.003
- ⑦ Porca M8 refª G.021.014
- ⑧ Bucim refª G.021.009
- ⑨ Topo para lâmina refª G.021.012
- ⑩ Ligação ao motor refª G.021.007
- ⑪ Anilha afinação motor refª G.016.059
- ⑫ União varões refª G.021.011



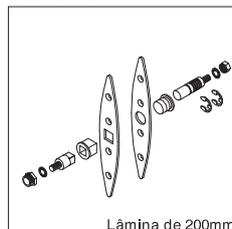
### Solução Helios - Lâminas fixas

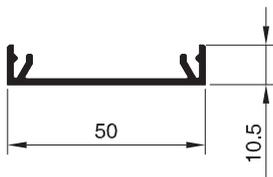
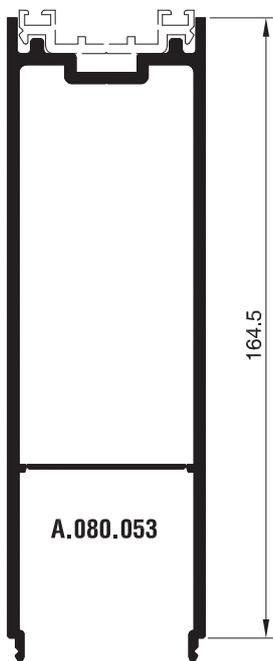
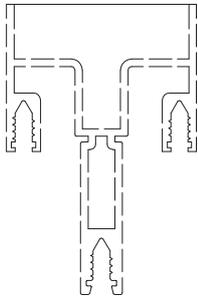


G.021.172  
Sistema Fixo

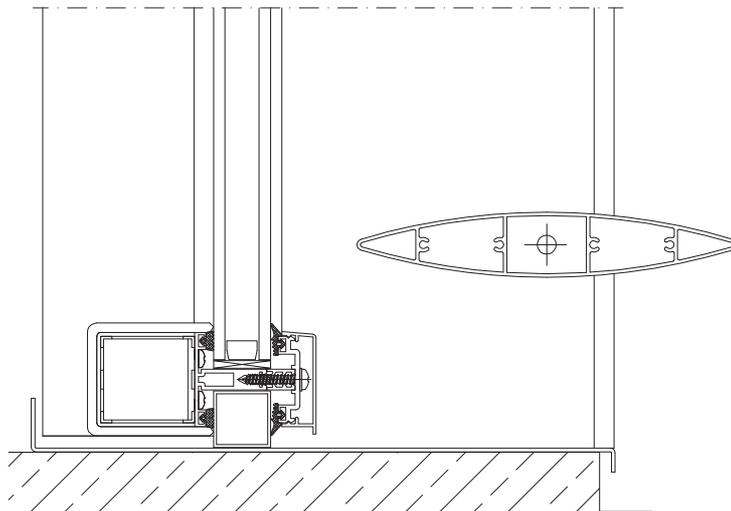


G.021.202  
Sistema Fixo





### Solução construtiva

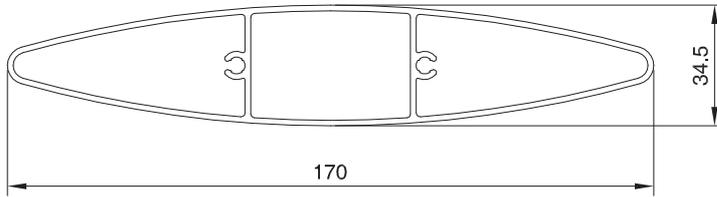


Fixação inferior

Estrutura totalmente apoiada  
p/ sistemas fixo e movél

Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia	
			Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
A.080.053	59.22	32.90	336.01	65.11
A.080.054	16.91	7.30	0.10	4.61

### Solução Helios - 170



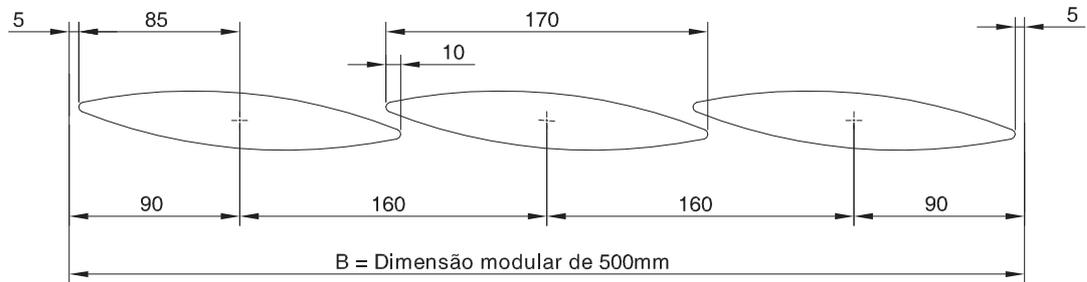
**F.016.001**

Vão máximo - 2600mm  
Dependendo da localização

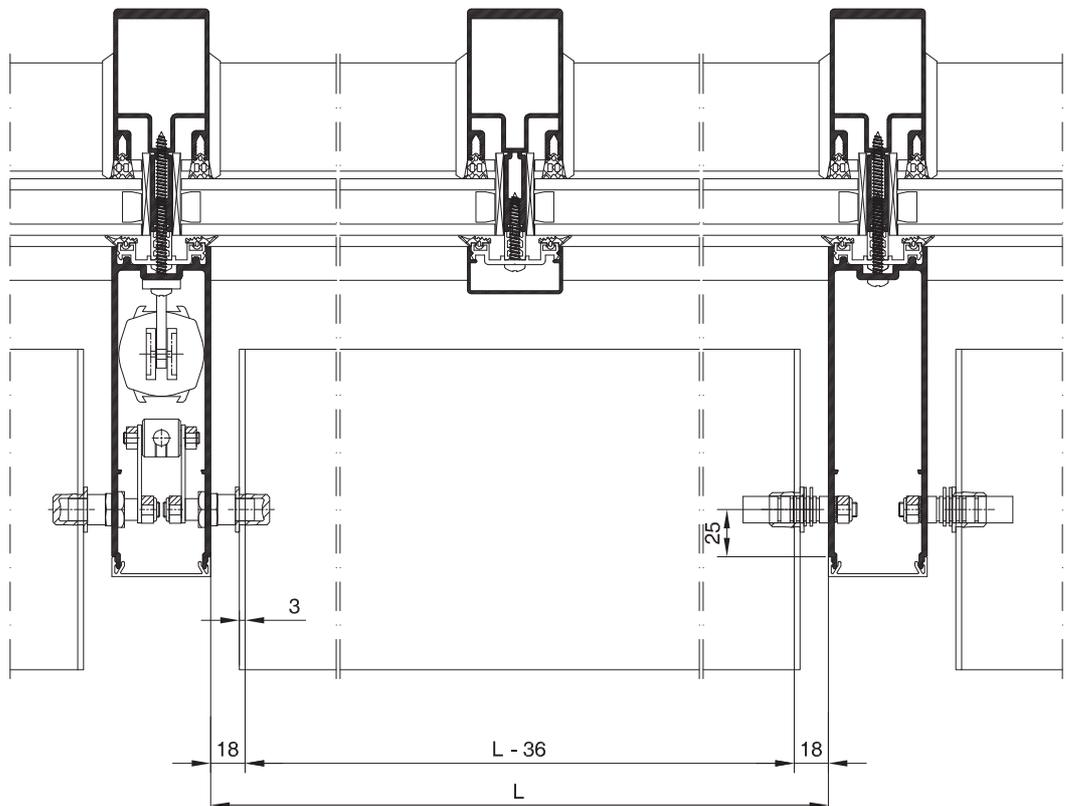
Quando fechadas, as lâminas, devem ter pelo menos 5mm de folga nos dois extremos por forma a não tocarem nas paredes ou na estrutura envolvente.

A dimensão do vão deve ser igual ou superior à dimensão mínima "B".

A distância entre centros dos eixos é de 160mm sendo neste caso a sobreposição das lâminas de 10mm.

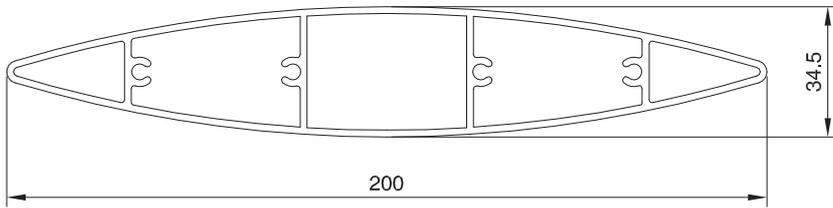


$$\text{Número de lâminas} = \frac{B - 20\text{mm}}{160\text{mm}}$$



Referência	Areas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
F.016.001	35,54	35,54	7,71	138,51

Solução Helios - 200



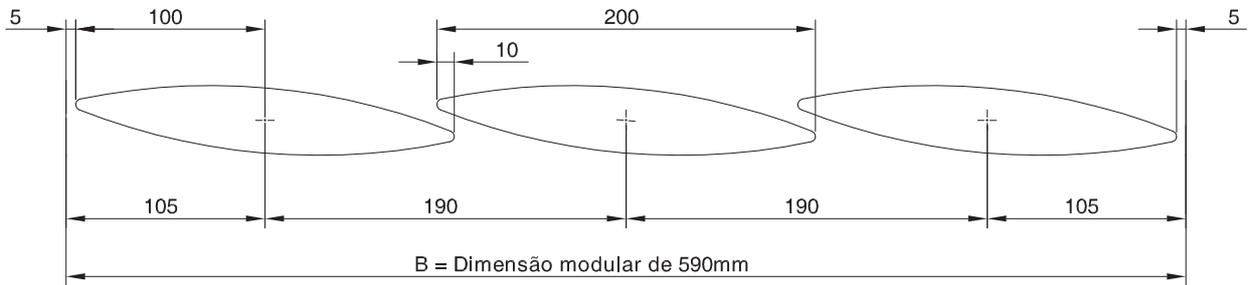
**F.016.002**

Vão máximo - 3600mm  
Dependendo da localização

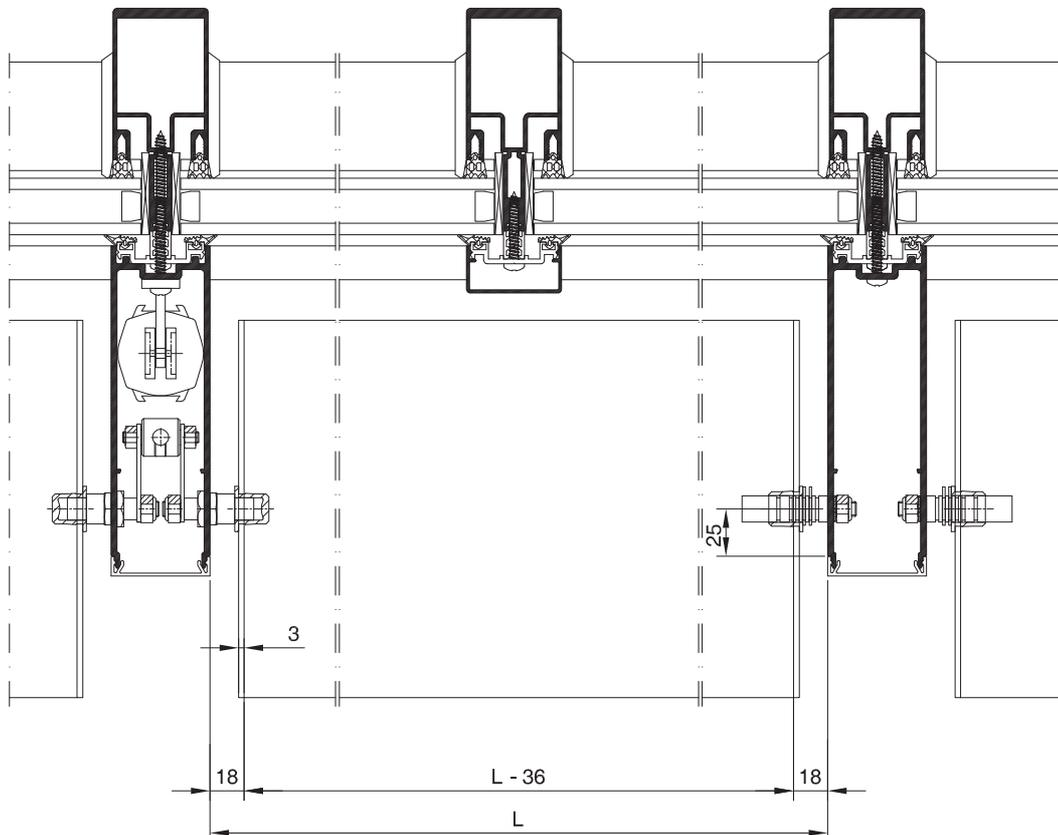
Quando fechadas, as lâminas, devem ter pelo menos 5mm de folga nos dois extremos por forma a não tocarem nas paredes ou na estrutura envolvente.

A dimensão do vão deve ser igual ou superior à dimensão mínima "B".

A distância entre centros dos eixos é de 190mm sendo neste caso a sobreposição das lâminas de 10mm.



$$\text{Número de lâminas} = \frac{B - 20\text{mm}}{190\text{mm}}$$



Referência	Áreas Anod.	(dm <sup>2</sup> /m) Polir	Momento inércia Ix cm <sup>4</sup>	Iy cm <sup>4</sup>
F.016.002	41.24	41.24	11.85	301.65

# Sistema A.080

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extrusal

