

**aluminorte** Desde 1986  
alumínio e acessórios

Soluções para  
alumínio desde  
1986

**SP-EURO45**  ®

Sistema  
**Aluminorte**  
Cátalogo completo

VERSÃO VI - Abril 2024

# SP-EURO45



## Rw= 36 dB

NA JANELA INTEGRADA COM VIDRO DE 10 MM



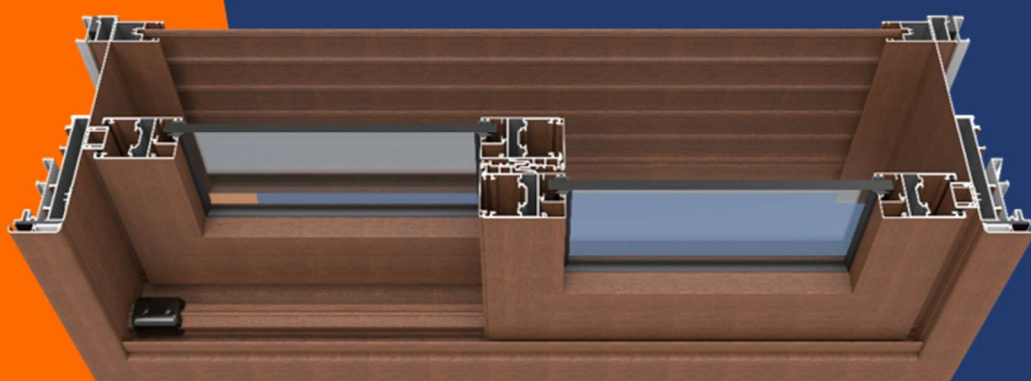
### EXCELENTE PERFORMANCE EM TERMOACÚSTICA



### SISTEMA DE ALTO PADRÃO IDEAL PARA GRANDES VÃOS



### OPÇÃO ELEVÁVEL



**aluminorte** Desde 1986  
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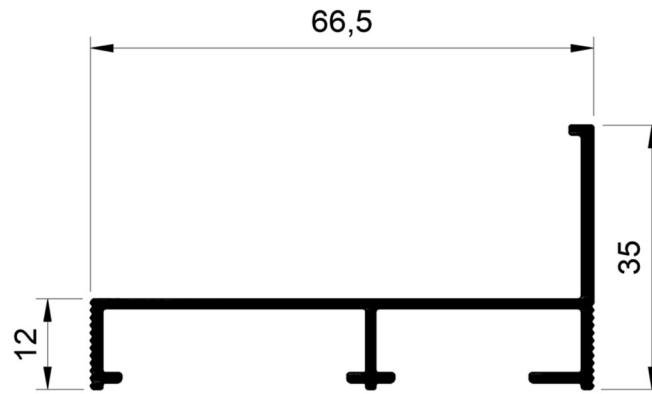
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CÓDIGO	PESO	PÁG	CÓDIGO	PESO	PÁG
45EC - 091	2,169 Kg/m	13	45EC - 248	1,099 Kg/m	19
45EC - 095	0,488 Kg/m	5	45EC - 249	0,785 Kg/m	19
45EC - 096	0,478 Kg/m	5	45EC - 250	1,545 Kg/m	20
45EC - 100	0,693 Kg/m	7	45EC - 251	0,140 Kg/m	18
45EC - 133	0,648 Kg/m	12	45EC - 252	0,511 Kg/m	18
45EC - 200	0,532 Kg/m	2	45EC - 253	2,247 Kg/m	21
45EC - 201	0,511 Kg/m	2	45EC - 254	1,076 Kg/m	17
45EC - 203	0,162 Kg/m	21	45EC - 255	0,657 Kg/m	17
45EC - 204	0,225 Kg/m	2	45EC - 258	0,574 Kg/m	16
45EC - 205	0,151 Kg/m	2	45EC - 263	1,151 Kg/m	3
45EC - 208	0,207 Kg/m	6	45EC - 267	1,010 Kg/m	15
45EC - 209	0,345 Kg/m	6	45EC - 268	0,846 Kg/m	15
45EC - 210	0,288 Kg/m	17	45EC - 269	1,117 Kg/m	16
45EC - 212	0,274 Kg/m	6	45EC - 270	1,737 Kg/m	9
45EC - 219	2,306 Kg/m	3	45EC - 271	2,235 Kg/m	9
45EC - 221	1,429 Kg/m	3	45EC - 272	2,235 Kg/m	11
45EC - 222	3,579 Kg/m	4	CPU - 401	1,220 Kg/m	24
45EC - 223	0,953 Kg/m	13	CPU - 402	1,508 Kg/m	23
45EC - 225	0,215 Kg/m	6	CPU - 403	1,279 Kg/m	23
45EC - 226	0,281 Kg/m	5	CPU - 404	1,242 Kg/m	24
45EC - 228	0,404 Kg/m	6	CPU - 405	0,963 Kg/m	24
45EC - 229	0,513 Kg/m	14	DS - 238	0,521 Kg/m	25
45EC - 231	1,386 Kg/m	7	ECBG - 213	0,278 Kg/m	25
45EC - 232	0,331 Kg/m	8	ECBG - 214	0,274 Kg/m	22
45EC - 233	0,833 Kg/m	11	ECBG - 215	0,261 Kg/m	22
45EC - 234	1,439 Kg/m	8	ECBG - 216	0,234 Kg/m	22
45EC - 235	1,942 Kg/m	10	ECBG - 217	0,227 Kg/m	22
45EC - 236	1,942 Kg/m	10	ECBG - 218	0,185 Kg/m	22
45EC - 237	0,524 Kg/m	12	MN - 015	0,881 Kg/m	25
45EC - 238	0,211 Kg/m	12	MN - 055	0,371 Kg/m	25
45EC - 239	1,000 Kg/m	14	PR - 003	0,171 Kg/m	5
45EC - 240	2,466 Kg/m	4	SPI - 104	0,687 Kg/m	25
45EC - 247	1,011 Kg/m	15	U - 491	0,093 Kg/m	17

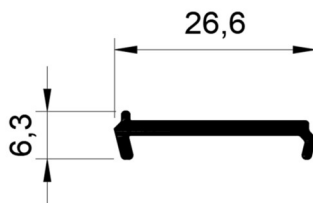
**45EC - 201**

Contramarco  
0,511 Kg/m



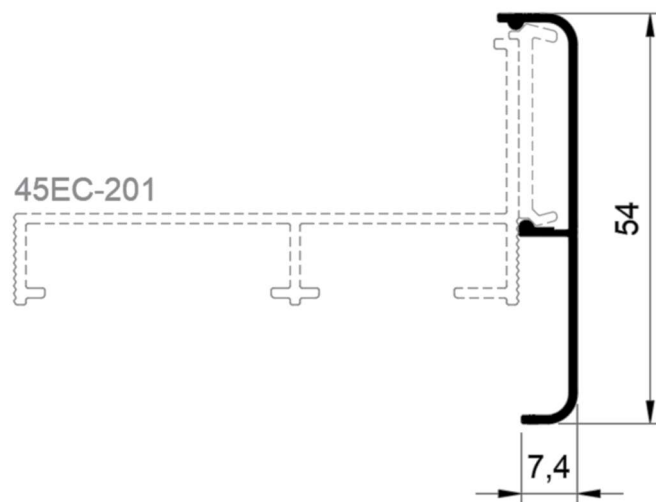
**45EC - 205**

Presilha do Arremate  
0,151 Kg/m



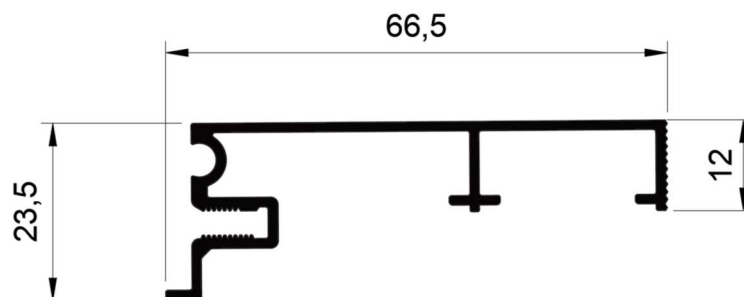
**45EC - 204**

Arremate  
0,225 Kg/m



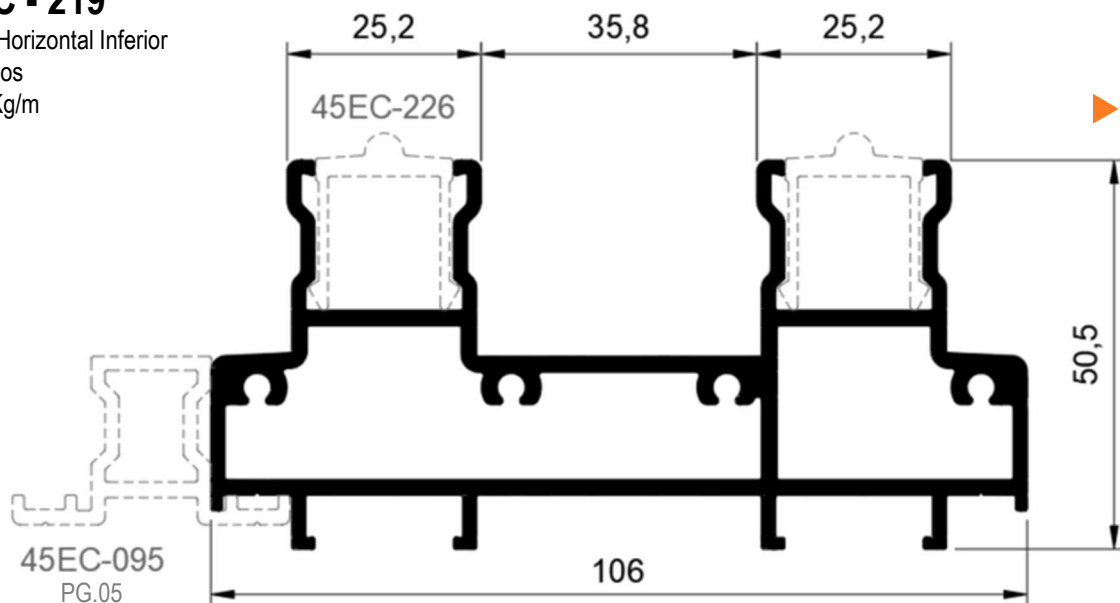
**45EC - 200**

Contramarco Bi-partido  
0,532 Kg/m



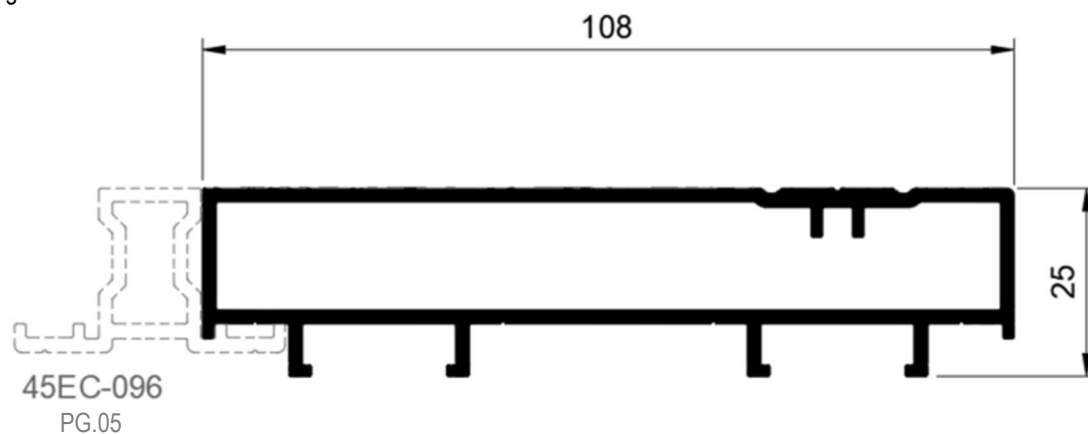
**45EC - 219**

Marco Horizontal Inferior  
02 planos  
2,306 Kg/m



**45EC - 221**

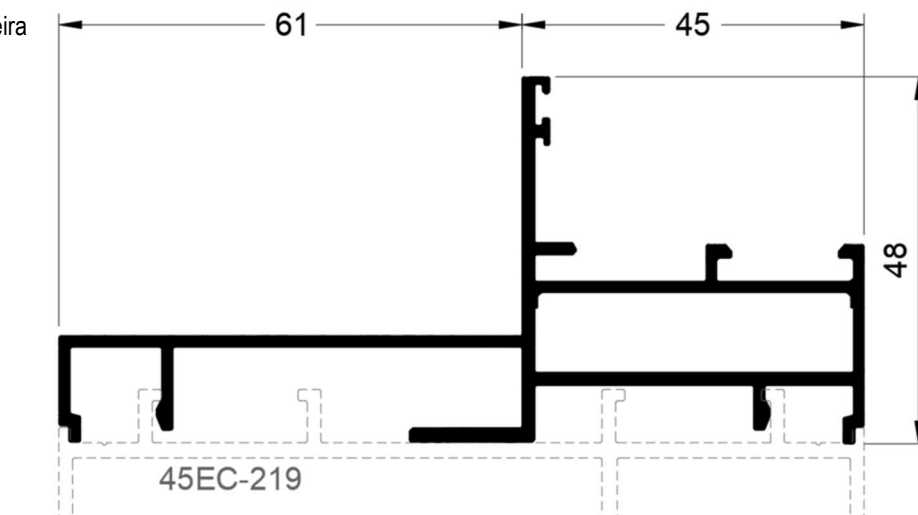
Marco Vertical 02 planos  
1,429 Kg/m



Jx= 3,665 cm <sup>4</sup>	Wx= 2,486 cm <sup>3</sup>
Jy= 62,206 cm <sup>4</sup>	Wy= 11,238 cm <sup>3</sup>

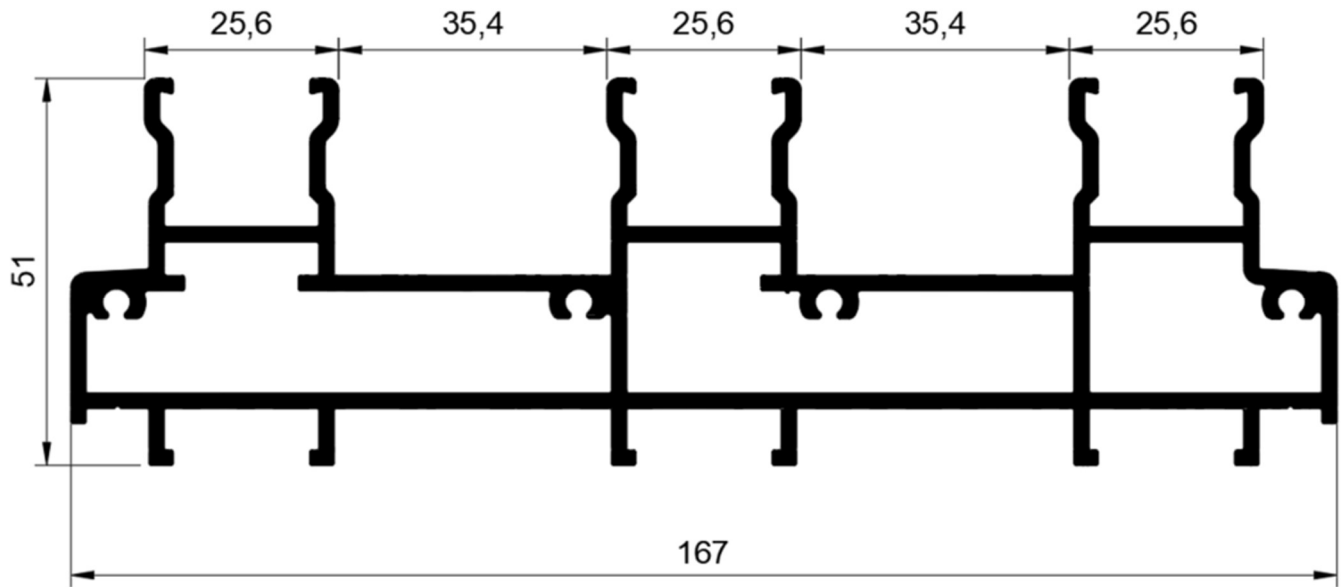
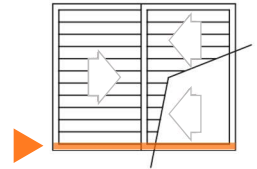
**45EC - 263**

Marco Intermediário  
para peitoril e bandeira  
1,151 Kg/m



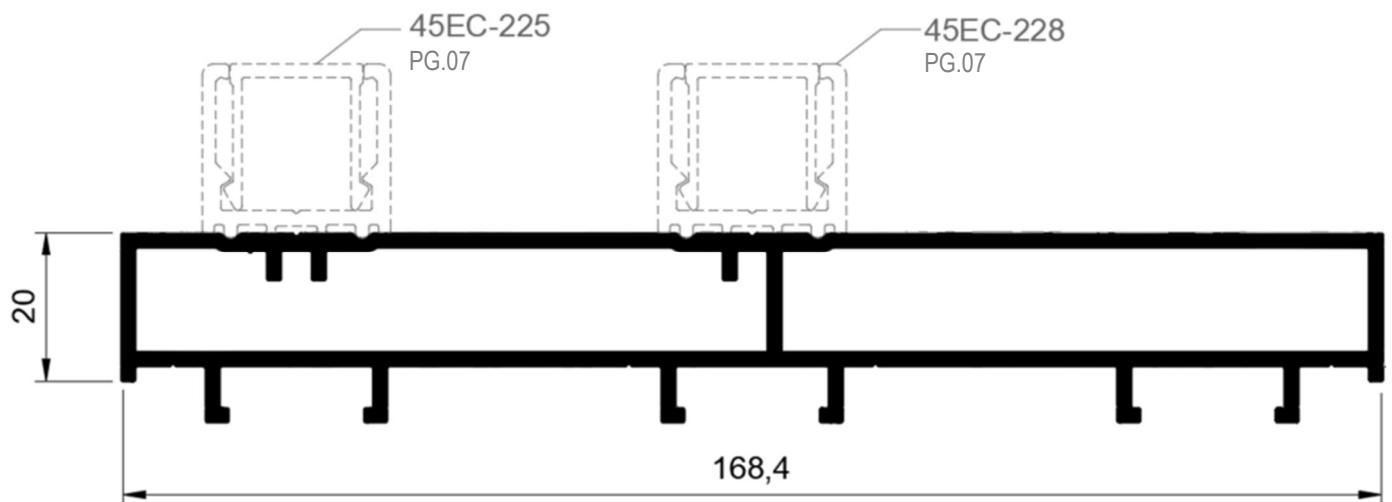
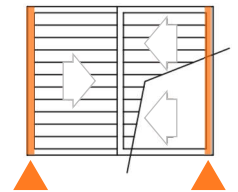
**45EC - 222**

Marco Horizontal Inferior 03 planos  
3,579 Kg/m



**45EC - 240**

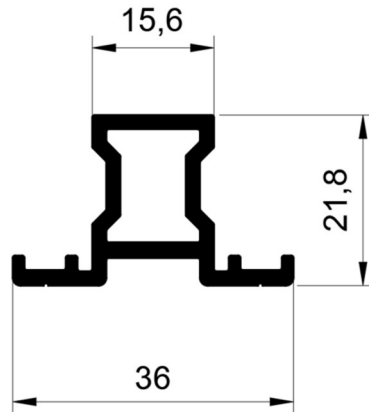
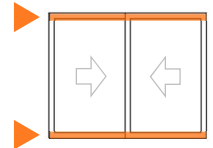
Marco Vertical Lateral 03 planos  
2,466 Kg/m



$Jx= 6,330 \text{ cm}^4$	$Wx= 4,183 \text{ cm}^3$
$Jy= 241,096 \text{ cm}^4$	$Wy= 28,031 \text{ cm}^3$

**45EC - 095**

Complemento dos Marcos Horizontais  
(Trilhos)  
0,488 Kg/m

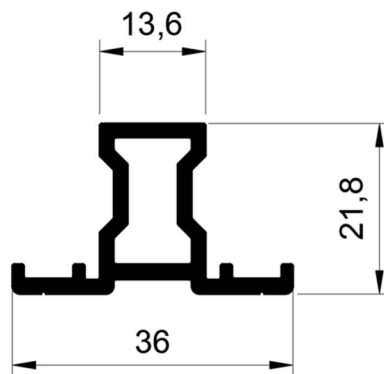
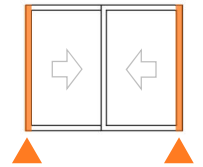


Configuração de planos "infinitos"  
a partir de 02 planos, exemplos:

- 45EC-219 x 45EC-222
- 45EC-240 x 45EC-240
- 45EC-221 x 45EC-240

**45EC - 096**

Complemento dos Marcos Verticais  
(Laterais)  
0,478 Kg/m

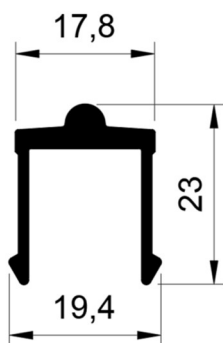
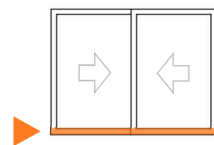


Configuração de planos "infinitos"  
a partir de 02 planos, exemplos:

- 45EC-221 x 45EC-221
- 45EC-240 x 45EC-240
- 45EC-221 x 45EC-240

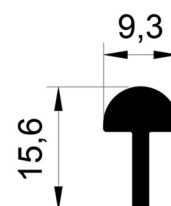
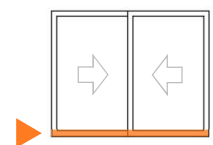
**45EC - 226**

Capa do Trilho  
0,281 Kg/m



**PR-003**

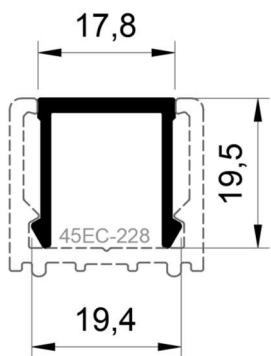
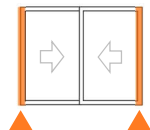
Trilho "Macarrão"  
0,171 Kg/m





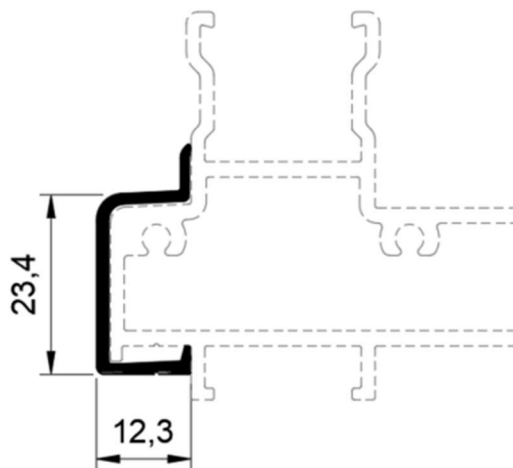
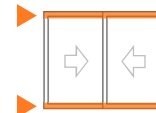
**45EC - 225**

Tampa do Mata Junta  
0,215 Kg/m



**45EC - 208**

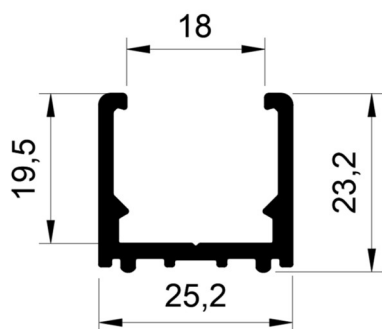
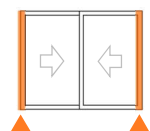
Arremate do Marco  
0,206 Kg/m



OBS: Usar perfil quando o trilho for partido ao meio

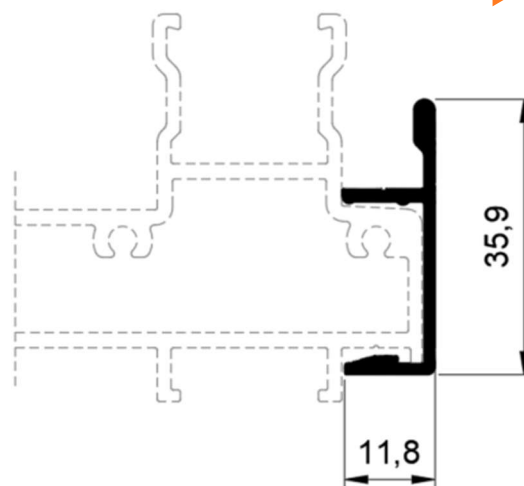
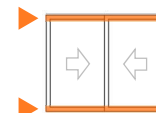
**45EC - 228**

Mata Junta Lateral  
0,404 Kg/m



**45EC - 212**

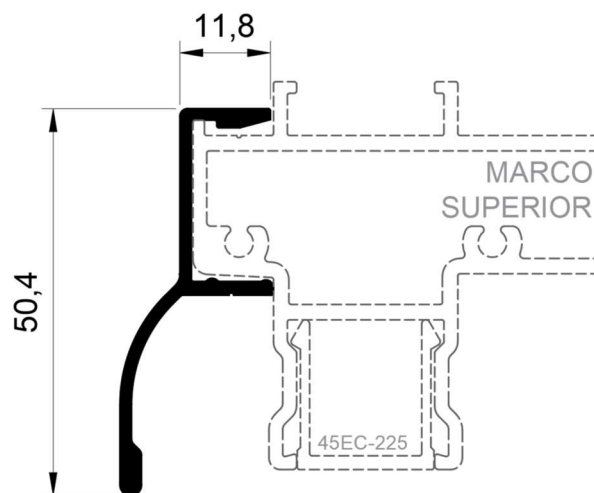
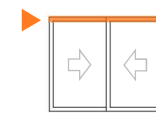
Arremate do Marco  
0,274 Kg/m



OBS: Usar perfil quando o trilho for partido ao meio

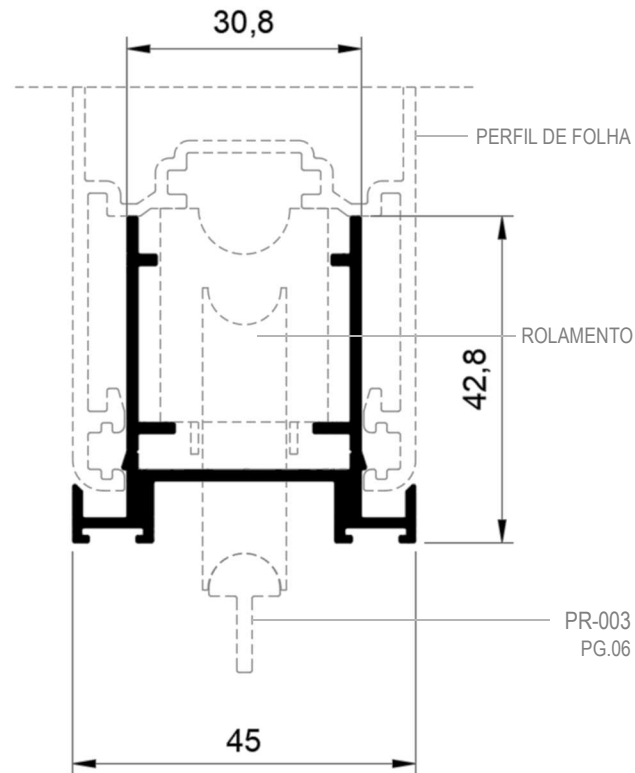
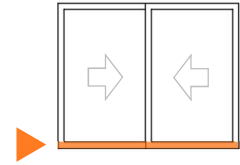
**45EC - 209**

Pingadeira  
0,345 Kg/m



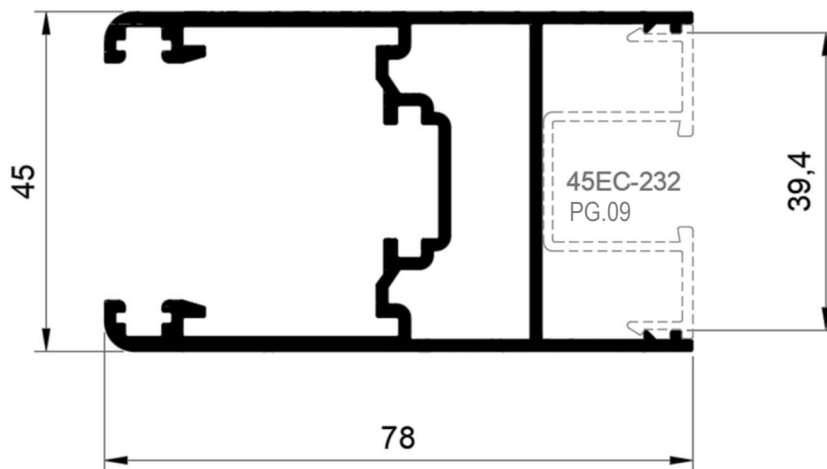
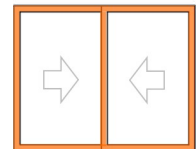
**45EC - 100**

Adaptador de Trilhos  
0,693 Kg/m



**45EC - 231**

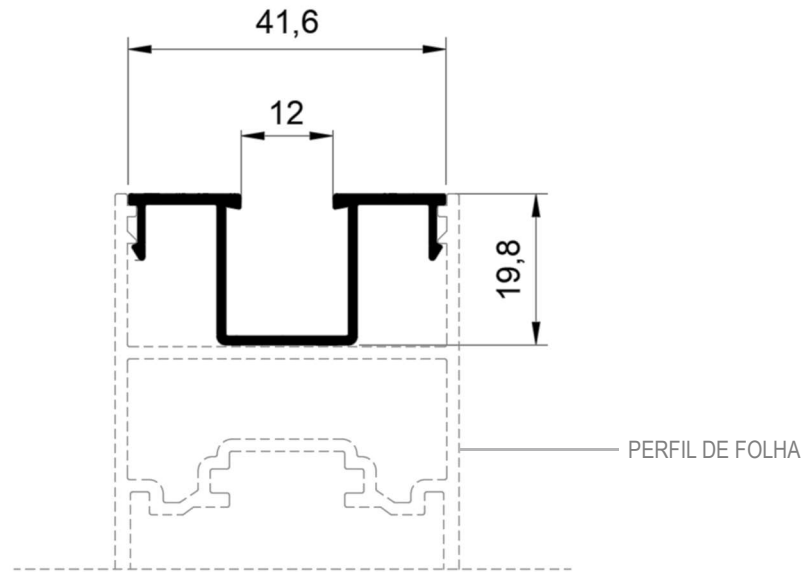
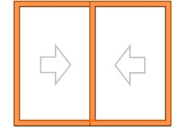
Folha Perimetral  
1,383 Kg/m



Jx= 17,380 cm <sup>4</sup>	Wx= 7,724 cm <sup>3</sup>
Jy= 22,351 cm <sup>4</sup>	Wy= 5,569 cm <sup>3</sup>

**45EC - 232**

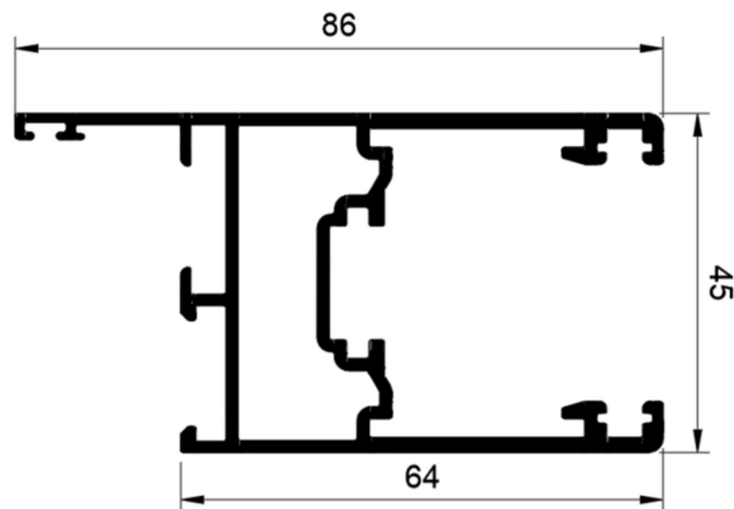
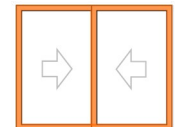
Porta Vidro  
0,331 Kg/m



OBS: Usar com vidros de 4 a 8 milímetros

**45EC - 234**

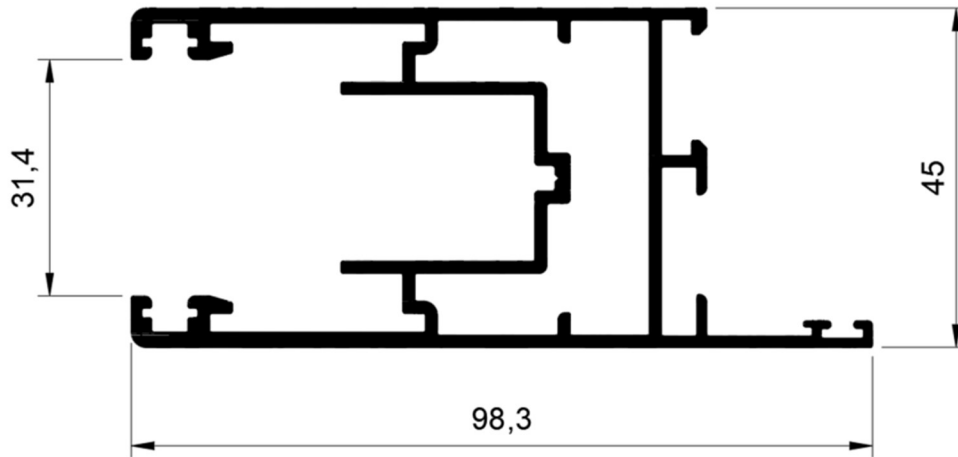
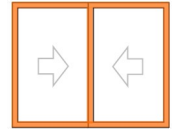
Folha Perimetral  
1,439 Kg/m



Jx= 17,262 cm <sup>4</sup>	Wx= 7,162 cm <sup>3</sup>
Jy= 24,806 cm <sup>4</sup>	Wy= 5,200 cm <sup>3</sup>

**45EC - 270**

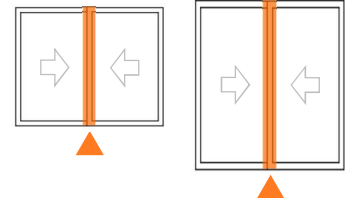
Folha Perimetral  
1,737 Kg/m



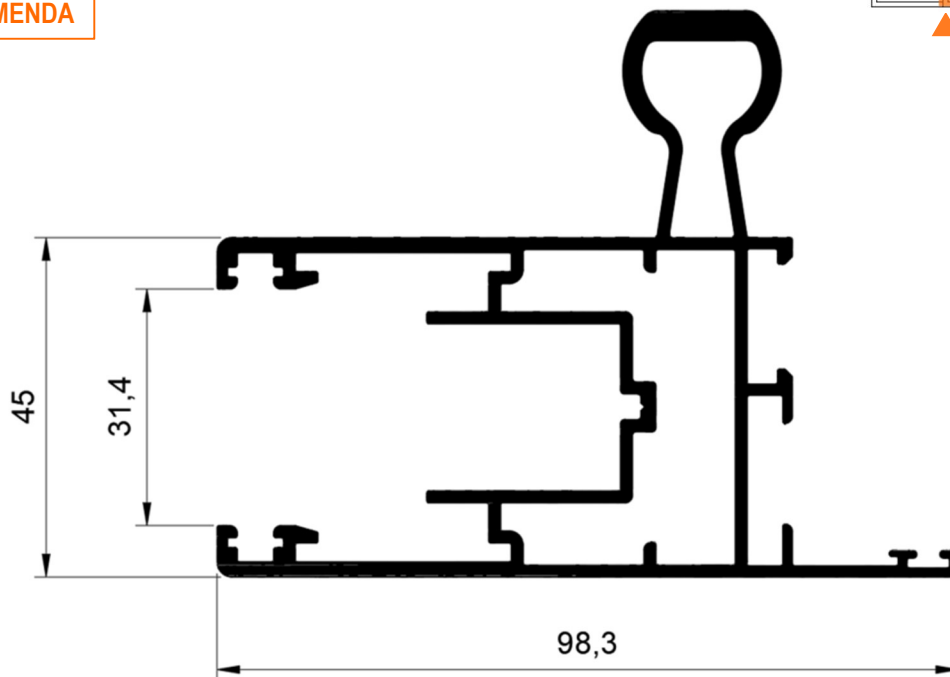
Jx= 20,347 cm <sup>4</sup>	Wx= 8,513 cm <sup>3</sup>
Jy= 38,998 cm <sup>4</sup>	Wy= 7,221 cm <sup>3</sup>

**45EC - 271**

Folha com Câmara Europeia com Reforço  
2,235 Kg/m



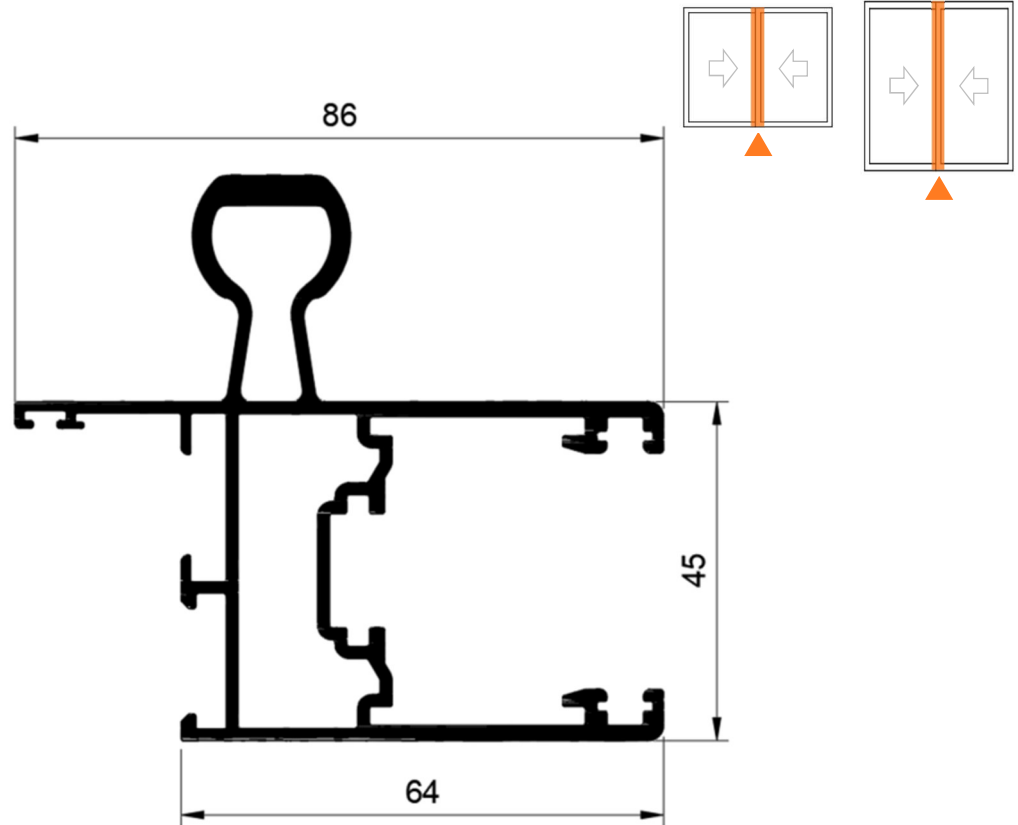
**SOB ENCOMENDA**



Jx= 48,542 cm <sup>4</sup>	Wx= 10,984 cm <sup>3</sup>
Jy= 45,406 cm <sup>4</sup>	Wy= 9,173 cm <sup>3</sup>

**45EC - 235**

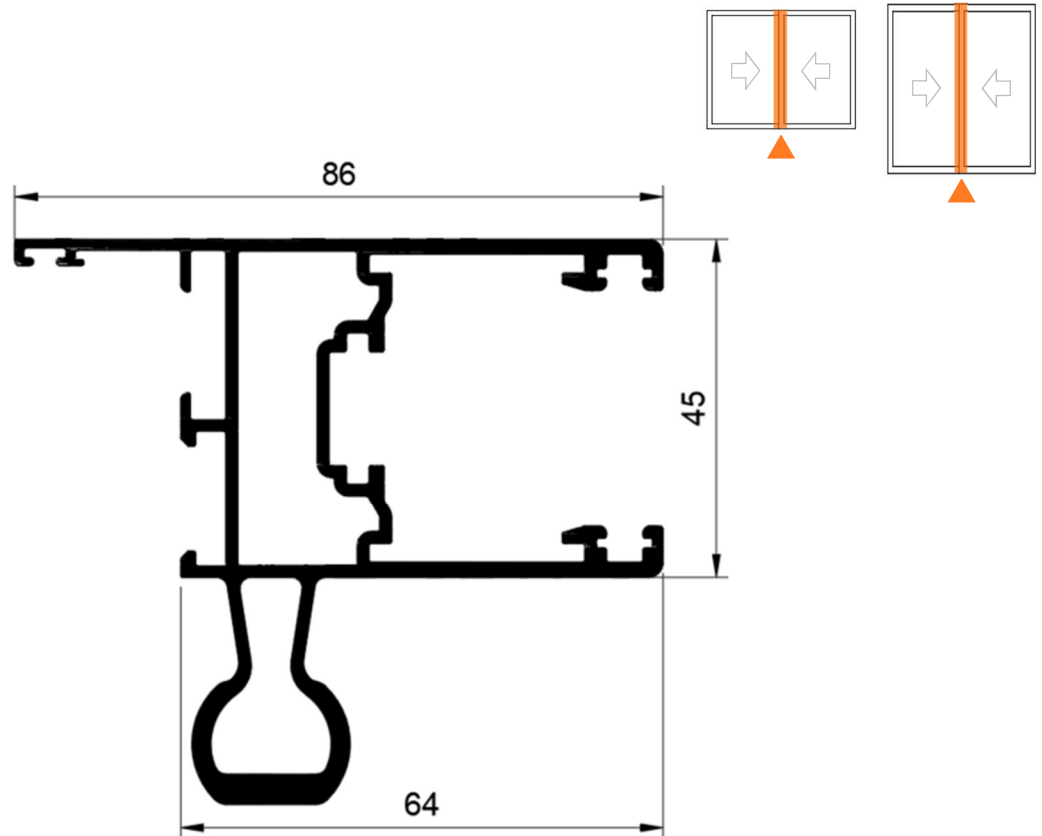
Folha com reforço  
1,942 Kg/m



$J_x = 40,871 \text{ cm}^4$	$W_x = 10,091 \text{ cm}^3$
$J_y = 28,090 \text{ cm}^4$	$W_y = 6,369 \text{ cm}^3$

**45EC - 236**

Folha com reforço  
1,942 Kg/m

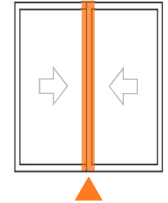
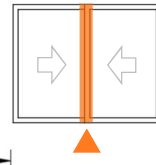
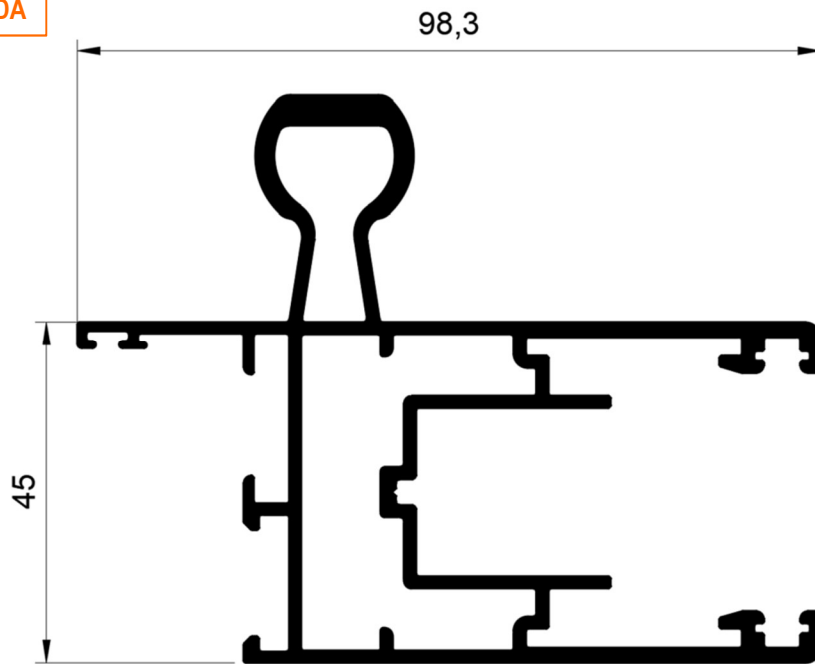


$J_x = 44,580 \text{ cm}^4$	$W_x = 13,602 \text{ cm}^3$
$J_y = 28,090 \text{ cm}^4$	$W_y = 6,396 \text{ cm}^3$

**45EC - 272**

Folha com Câmara Europeia com Reforço  
2,235 Kg/m

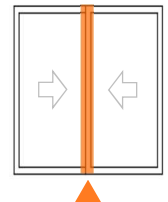
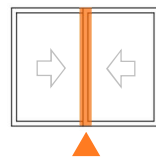
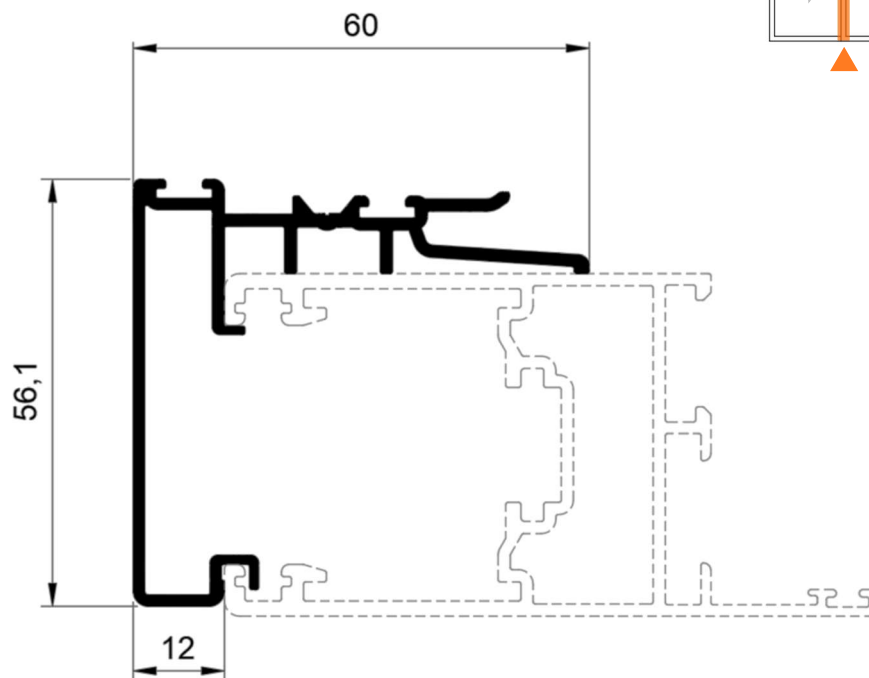
**SOB ENCOMENDA**



Jx= 45,287 cm <sup>4</sup>	Wx= 10,759 cm <sup>3</sup>
Jy= 45,406 cm <sup>4</sup>	Wy= 9,173 cm <sup>3</sup>

**45EC - 233**

Mão de Amigo  
0,833 Kg/m

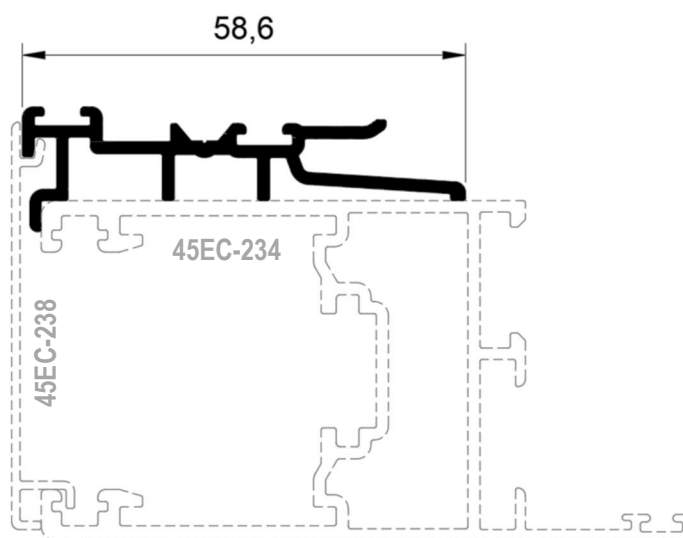
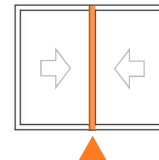


Jx= 9,613 cm <sup>4</sup>	Wx= 2,503 cm <sup>3</sup>
Jy= 9,308 cm <sup>4</sup>	Wy= 2,248 cm <sup>3</sup>

### 45EC - 237

Mão de Amigo  
0,524 Kg/m

OBS: Usar somente nos perfis  
45EC-231, 45EC-234, 45EC-235 e 45EC-236

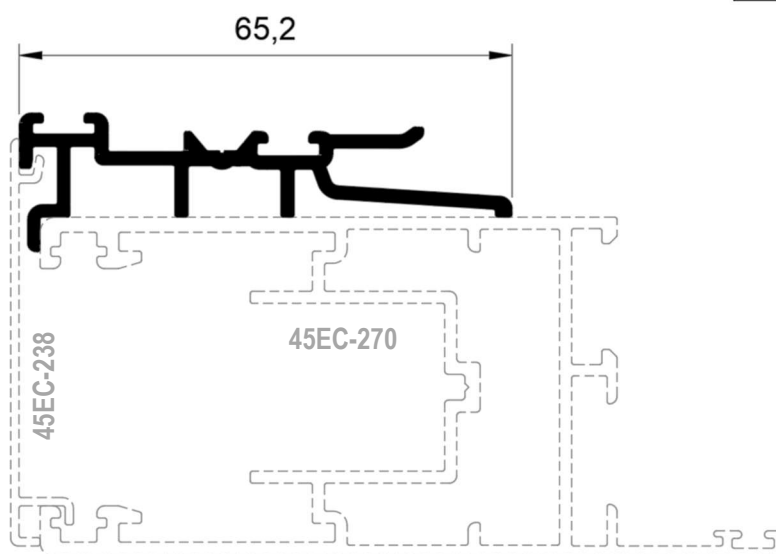
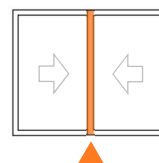


$J_x = 0,221 \text{ cm}^4$	$W_x = 0,233 \text{ cm}^3$
$J_y = 5,494 \text{ cm}^4$	$W_y = 1,650 \text{ cm}^3$

### 45EC - 133

Mão de Amigo  
0,648 Kg/m

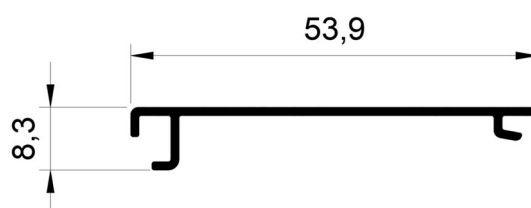
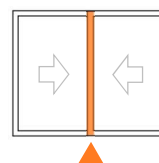
OBS: Usar somente nos perfis  
45EC-270, 45EC-271 e 45EC-272



$J_x = 0,339 \text{ cm}^4$	$W_x = 0,308 \text{ cm}^3$
$J_y = 8,420 \text{ cm}^4$	$W_y = 2,275 \text{ cm}^3$

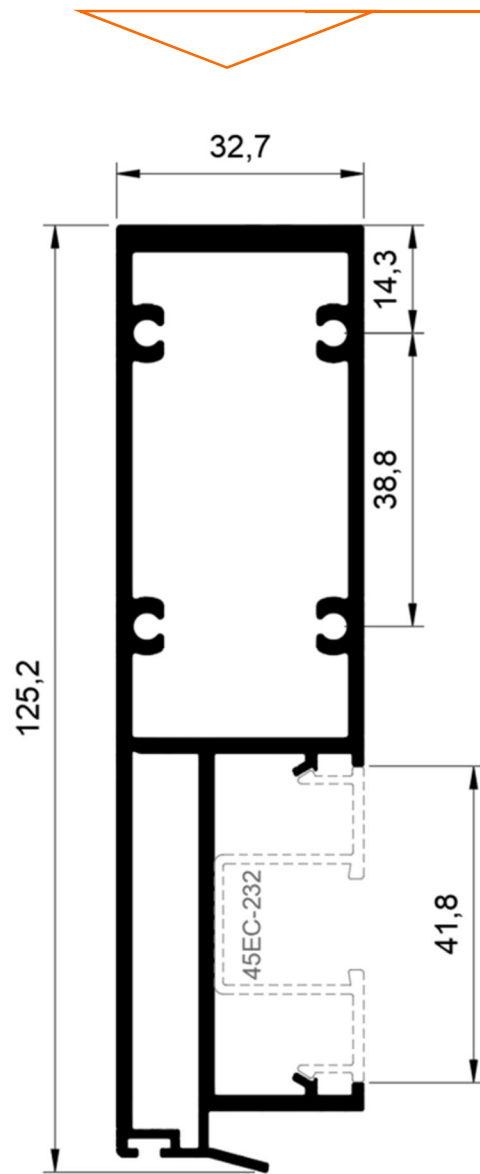
### 45EC - 238

Complemento da Mão de Amigo  
0,211 Kg/m

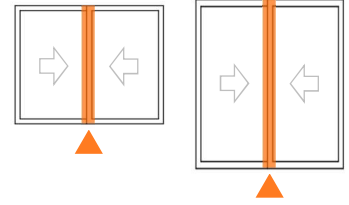


**45EC - 091**

Montante Central com Reforço SLIM  
2,169 Kg/m



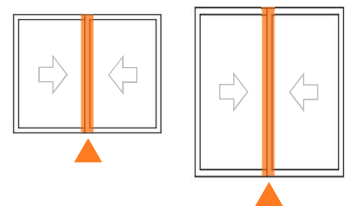
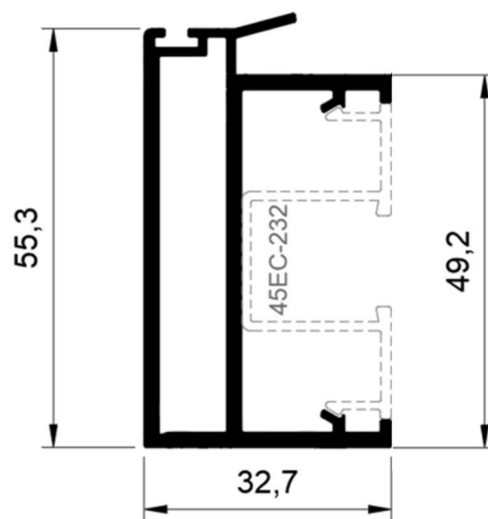
Perfis com vista frontal de **32 mm**



$Jx= 126,557 \text{ cm}^4$	$Wx= 18,456 \text{ cm}^3$
$Jy= 11,801 \text{ cm}^4$	$Wy= 6,341 \text{ cm}^3$

**45EC - 223**

Montante Central SLIM  
0,953 Kg/m



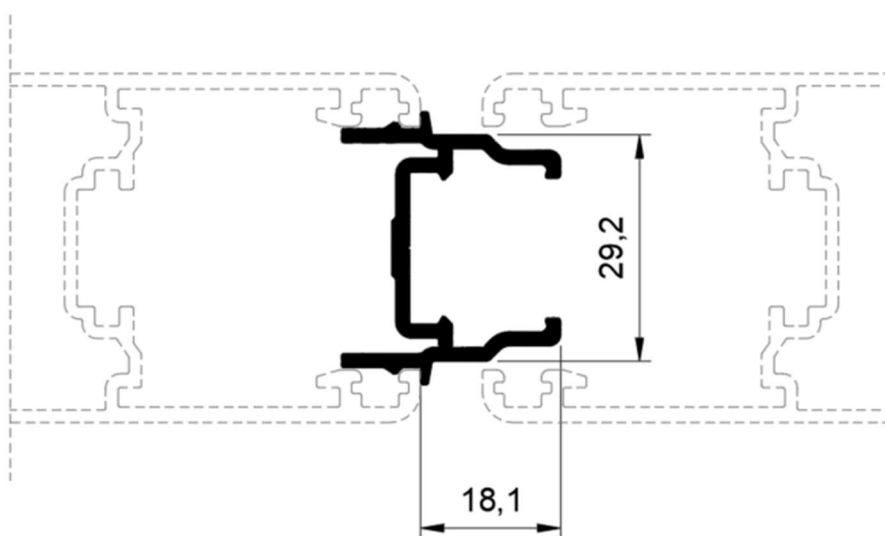
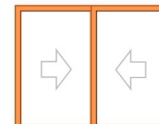
$Jx= 13,459 \text{ cm}^4$	$Wx= 4,427 \text{ cm}^3$
$Jy= 3,006 \text{ cm}^4$	$Wy= 1,398 \text{ cm}^3$



### 45EC - 229

Mata Junta Central  
0,513 Kg/m

OBS: Aplicável aos perfis  
45EC-231, 45EC-234, 45EC-235, 45EC-236, 45EC-270, 45EC-271 e 45EC-272

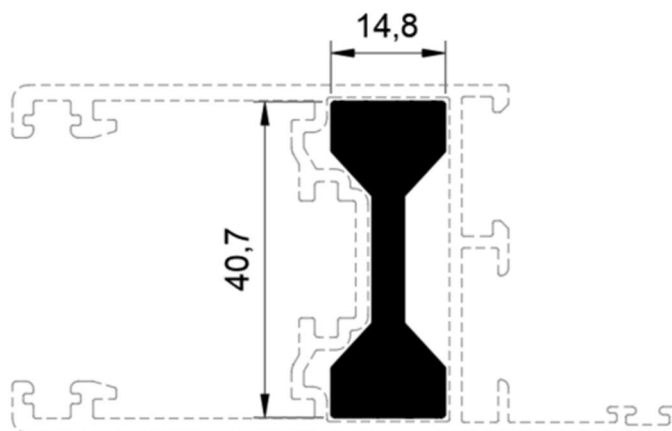
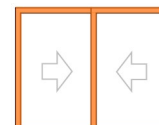


$J_x = 2,647 \text{ cm}^4$	$W_x = 1,504 \text{ cm}^3$
$J_y = 0,961 \text{ cm}^4$	$W_y = 0,616 \text{ cm}^3$

### 45EC - 239

Reforço da Folha  
1,000 Kg/m

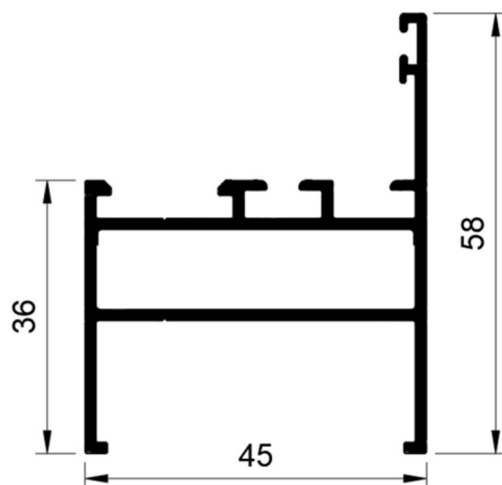
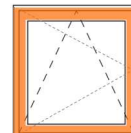
OBS: Aplicável aos perfis  
45EC-231, 45EC-234, 45EC-235 e 45EC-236



$J_x = 7,345 \text{ cm}^4$	$W_x = 3,600 \text{ cm}^3$
$J_y = 0,465 \text{ cm}^4$	$W_y = 0,629 \text{ cm}^3$

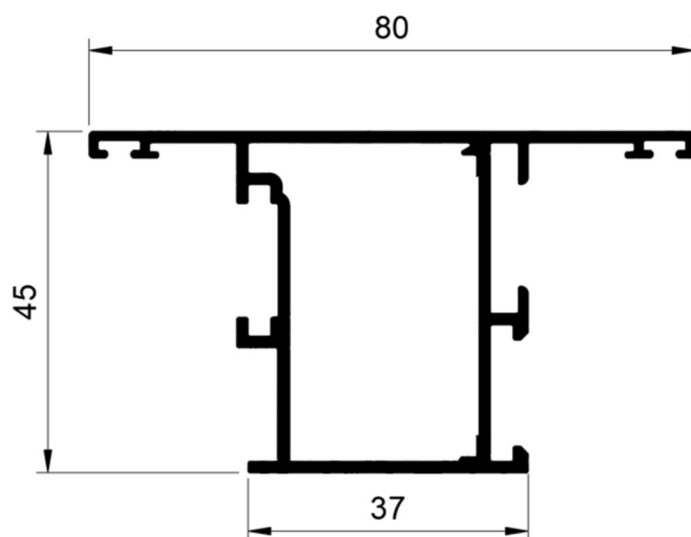
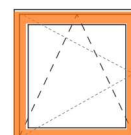
**45EC - 268**

Marco  
0,846 Kg/m



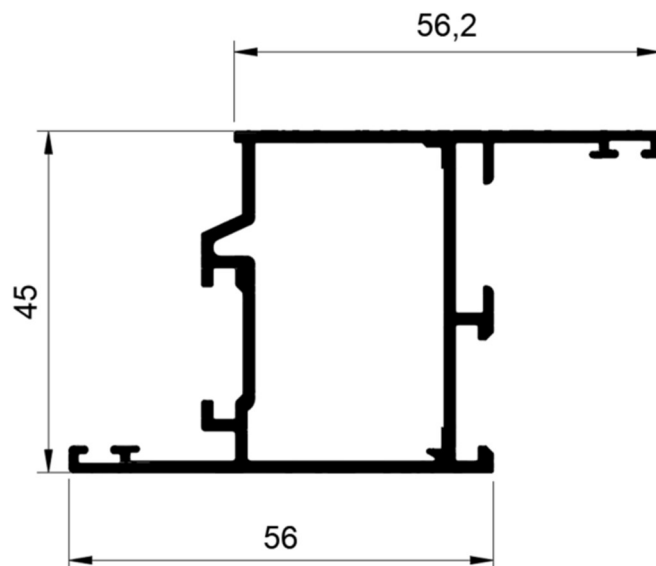
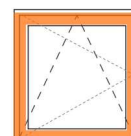
**45EC - 247**

Folha Maxim-ar  
1,011 Kg/m



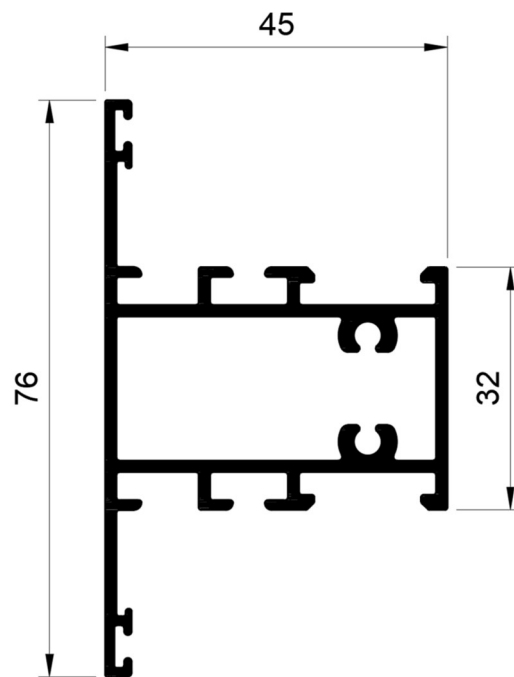
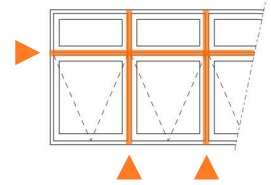
**45EC - 267**

Folha Oscilobatente  
1,010 Kg/m



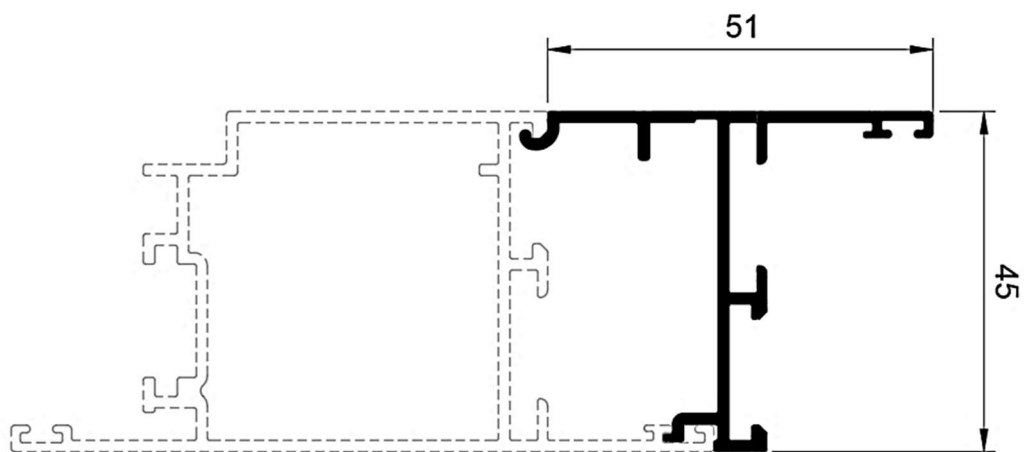
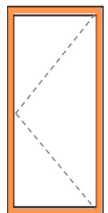
**45EC - 269**

Coluna / Travessa Maxim-ar e Oscilobatente  
1,117 Kg/m



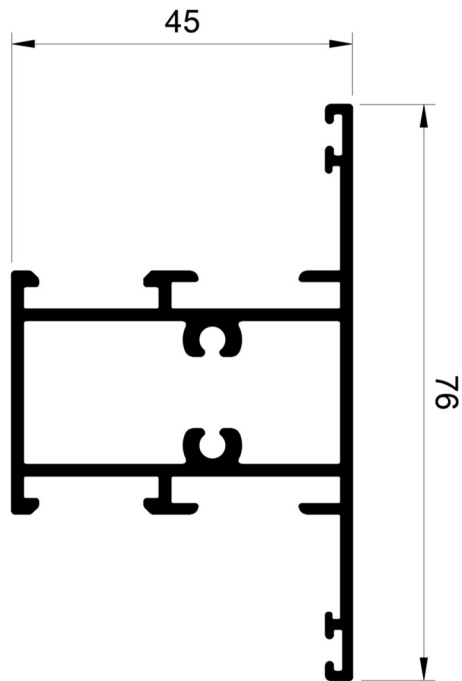
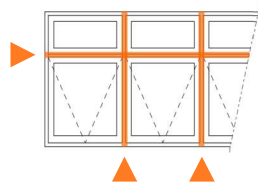
**45EC - 258**

Inversor de Baguete  
0,574 Kg/m



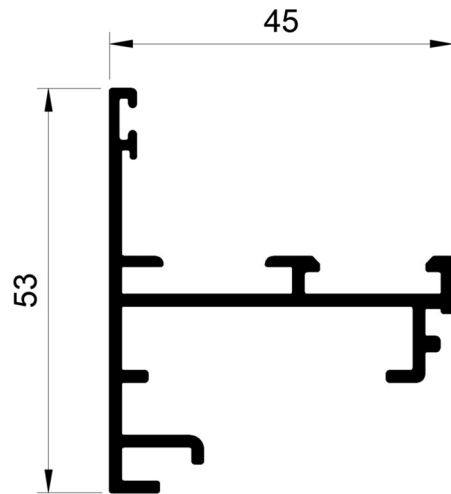
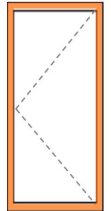
**45EC - 254**

Travessa e Folhas Maxim-ar  
1,076 Kg/m



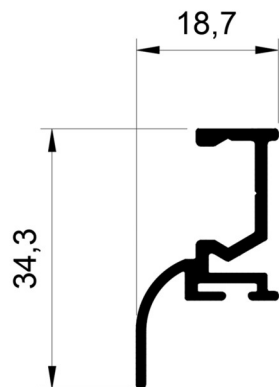
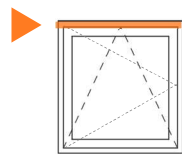
**45EC - 255**

Inversor Maxim-ar  
0,657 Kg/m



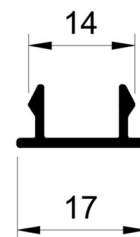
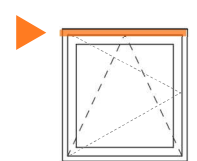
**45EC - 210**

Pingadeira Maxim-ar  
0,288 Kg/m



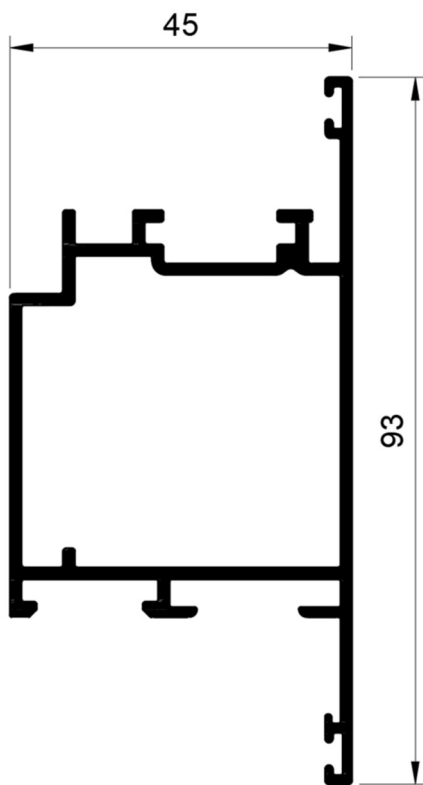
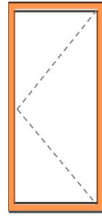
**U - 491**

Tampa da Pingadeira Maxim-ar  
0,093 Kg/m



**45EC - 251**

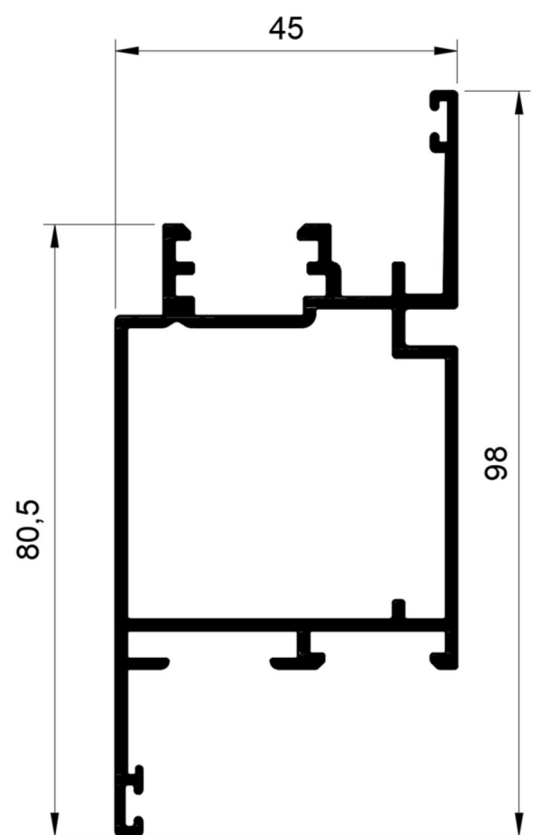
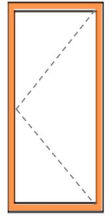
Folha da Porta de giro  
1,140 Kg/m



$J_x = 12,424 \text{ cm}^4$	$W_x = 4,620 \text{ cm}^3$
$J_y = 22,902 \text{ cm}^4$	$W_y = 4,802 \text{ cm}^3$

**45EC - 252**

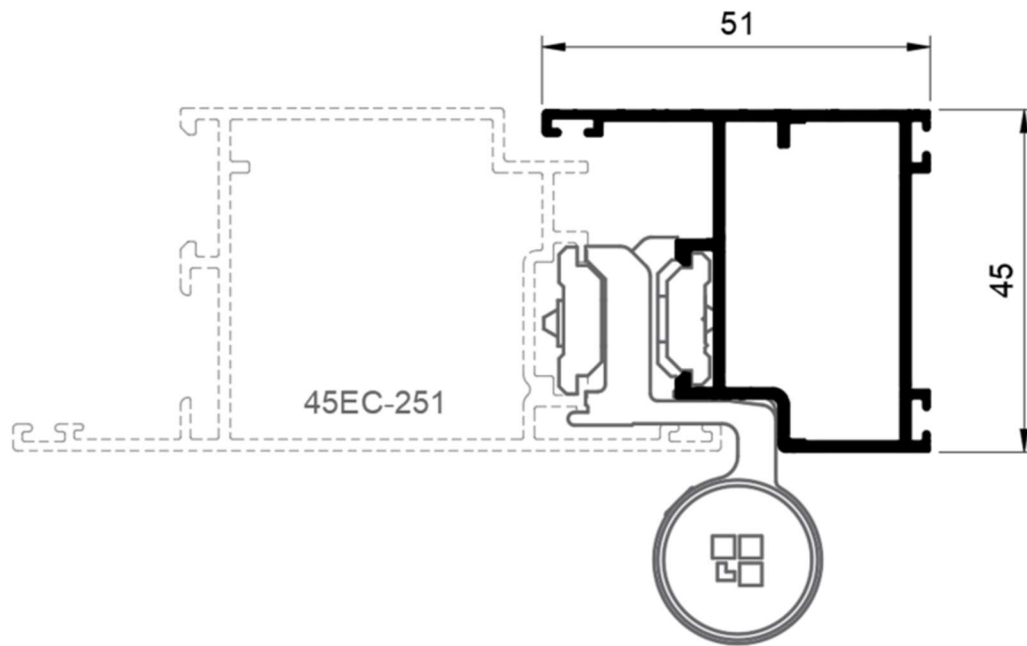
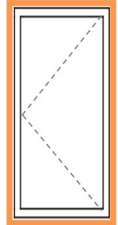
Folha da Porta de giro  
0,511 Kg/m



$J_x = 14,181 \text{ cm}^4$	$W_x = 6,149 \text{ cm}^3$
$J_y = 27,386 \text{ cm}^4$	$W_y = 5,402 \text{ cm}^3$

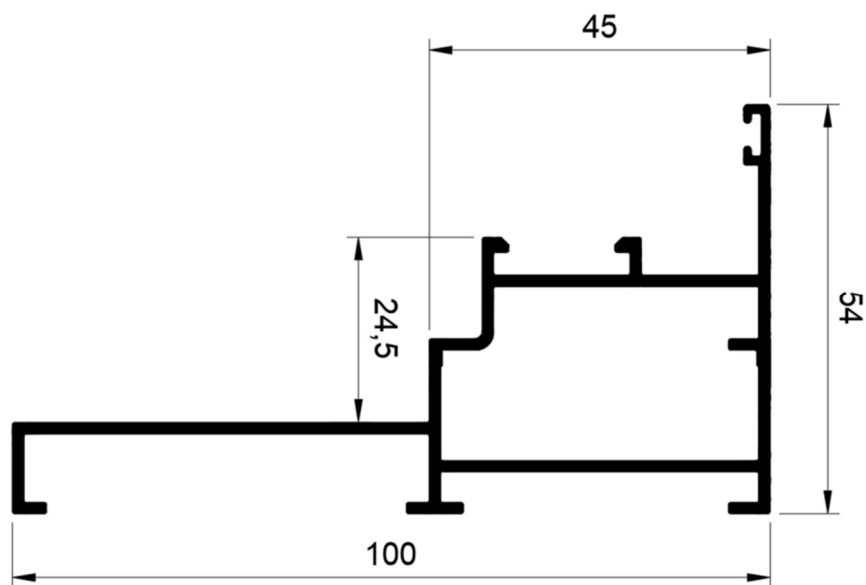
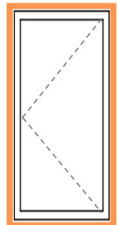
**45EC - 249**

Marco Perimetral Porta de Giro  
0,785 Kg/m



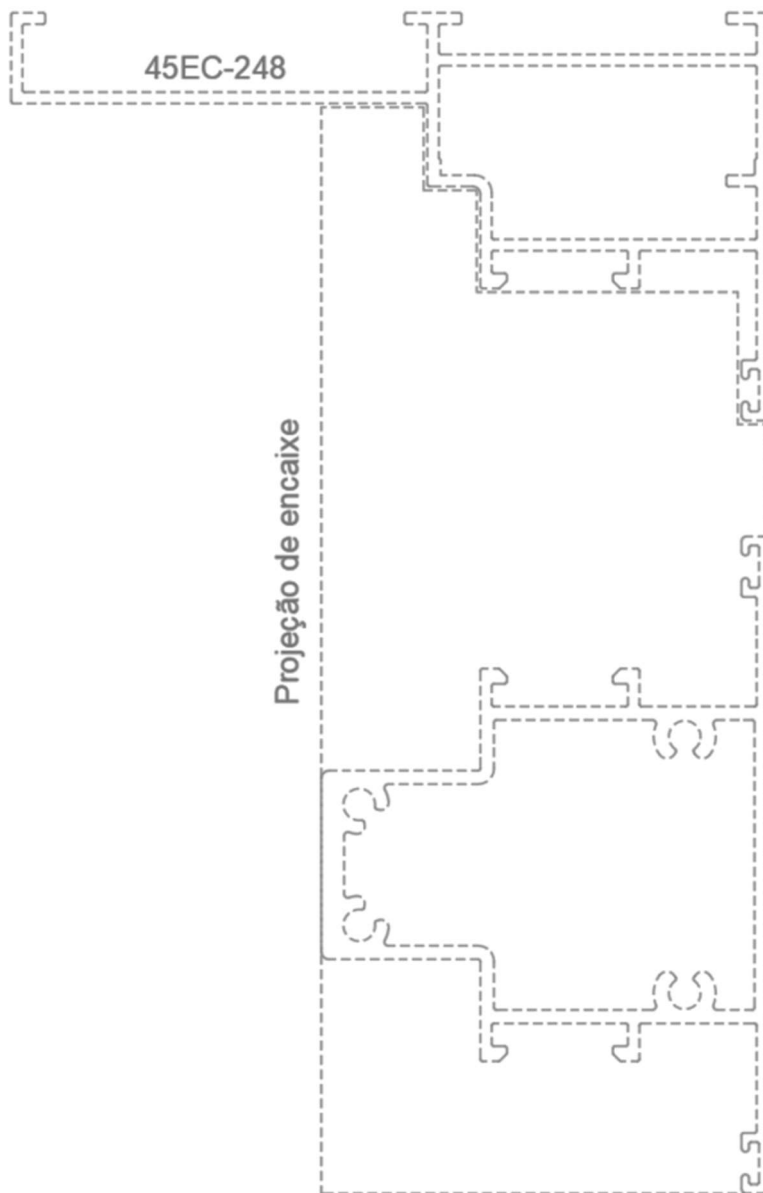
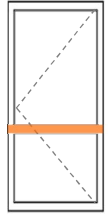
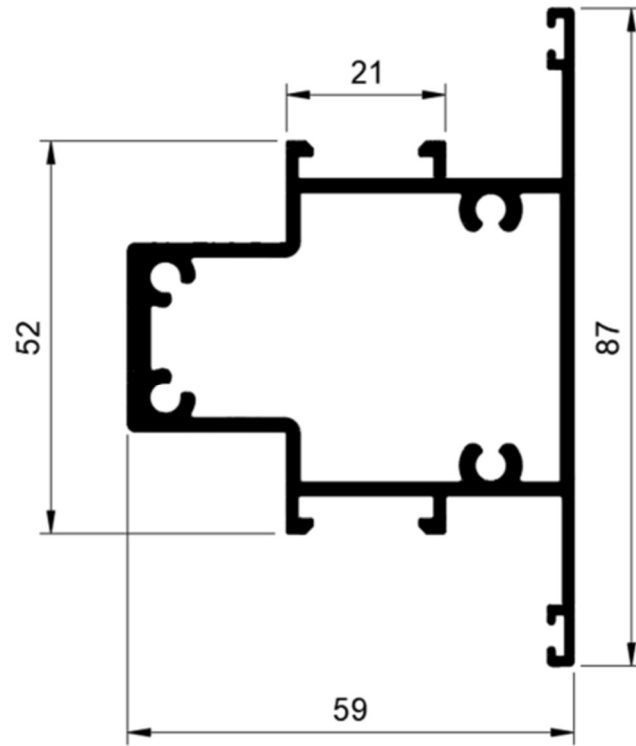
**45EC - 248**

Marco Perimetral Porta de Giro  
1,099 Kg/m



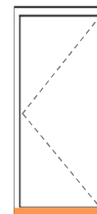
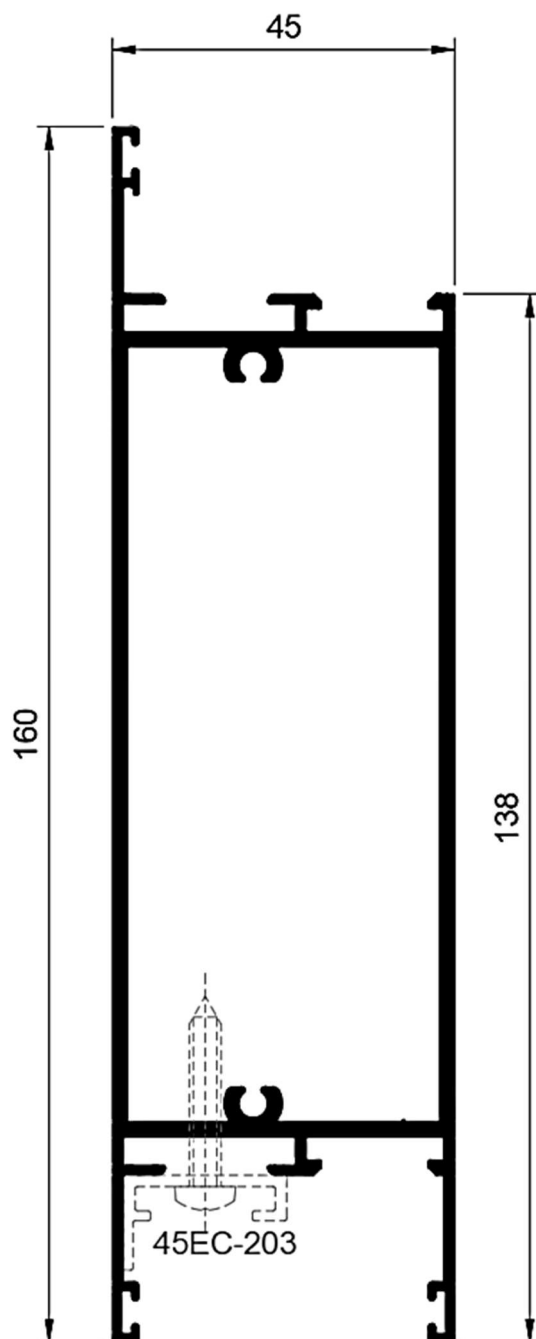
**45EC - 250**

Travessa para Porta de Giro  
1,545 Kg/m



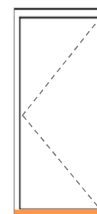
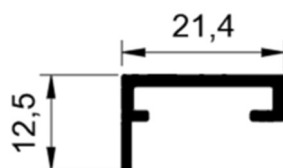
**45EC - 253**

Largura Inferior da Porta de Giro  
2,247 Kg/m



**45EC - 203**

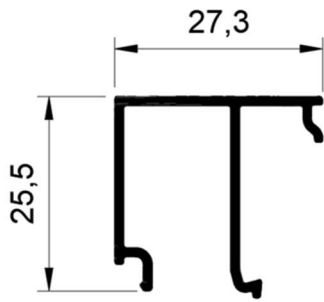
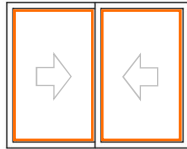
Complemento Largura Inferior da Porta de Giro  
0,162 Kg/m





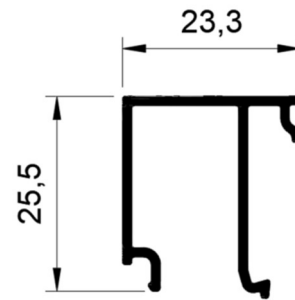
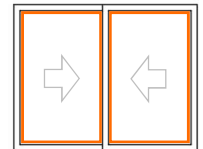
**ECBG - 213**

Baguete  
0,278 Kg/m



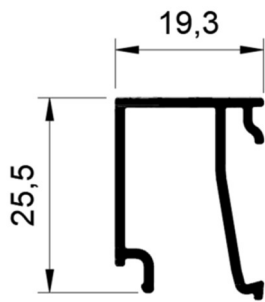
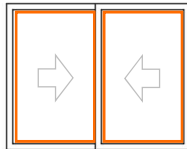
**ECBG - 214**

Baguete  
0,274 Kg/m



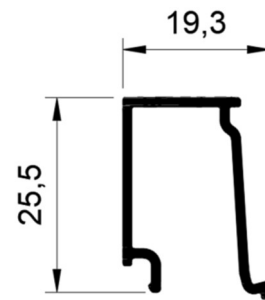
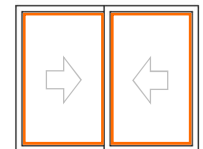
**ECBG - 215**

Baguete  
0,261 Kg/m



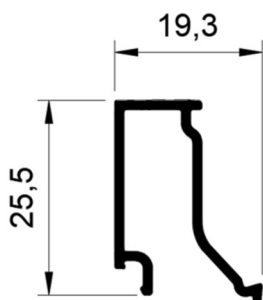
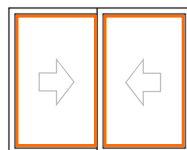
**ECBG - 216**

Baguete  
0,234 Kg/m



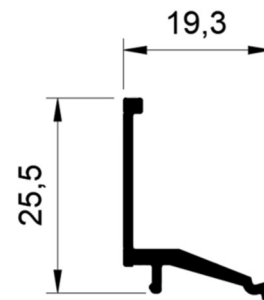
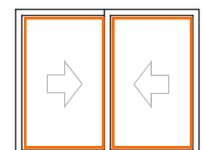
**ECBG - 217**

Baguete  
0,227 Kg/m



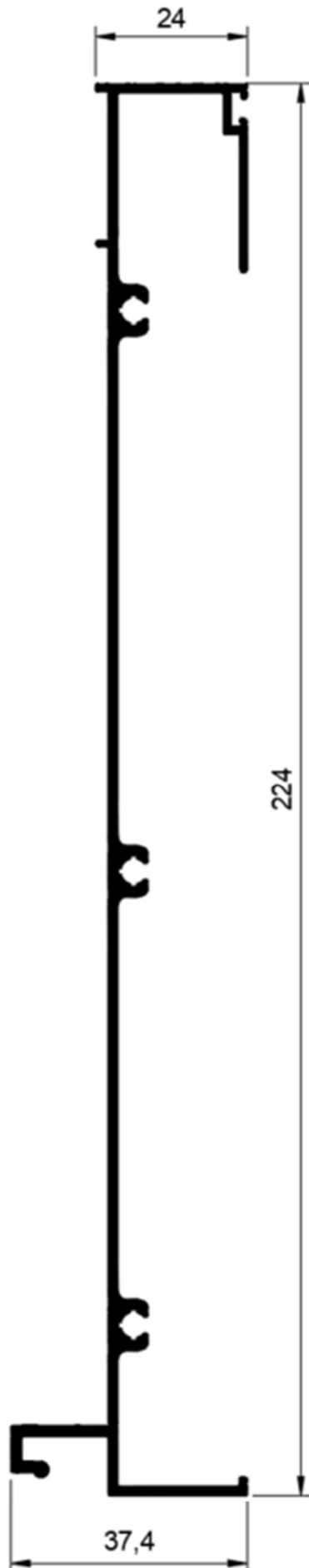
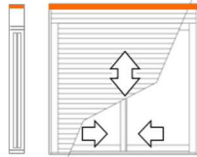
**ECBG - 218**

Baguete  
0,185 Kg/m



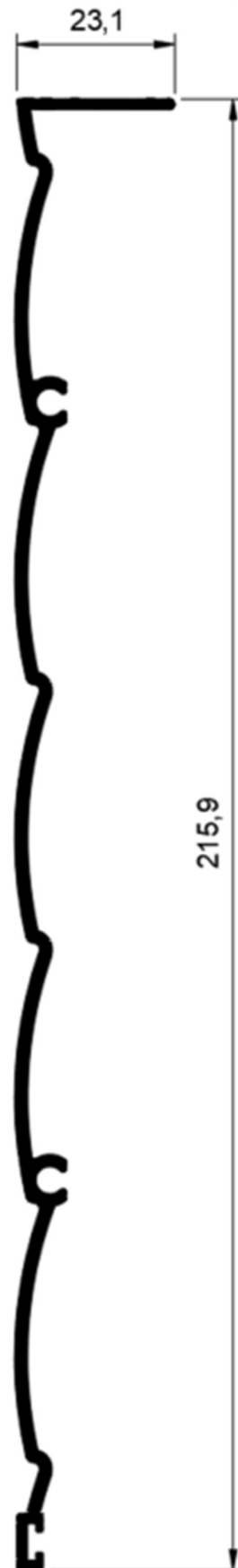
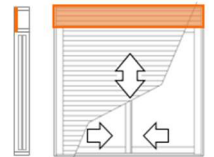
**CPU - 402**

Marco Superior da Integrada  
1,508 Kg/m



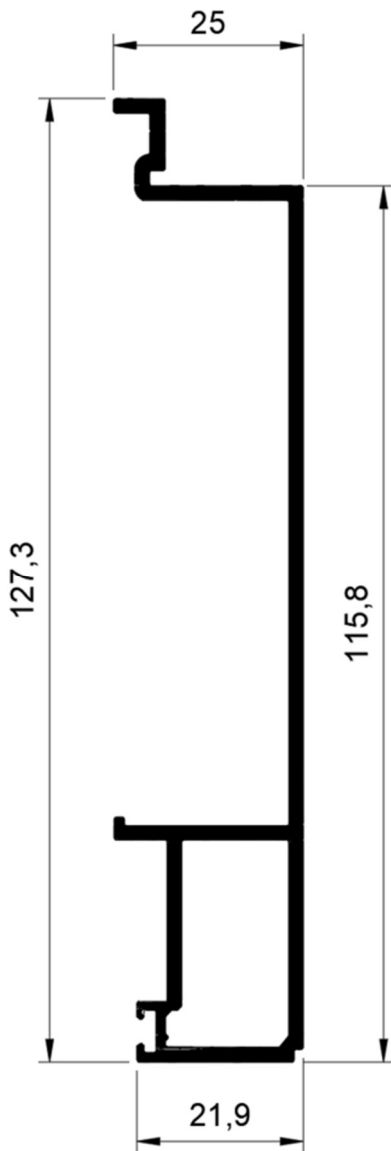
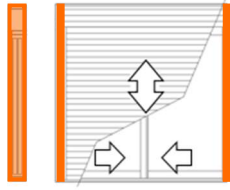
**CPU - 403**

Tampa Externa da Integrada  
1,280 Kg/m



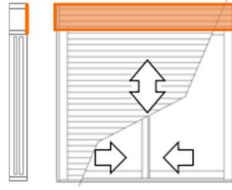
**CPU - 401**

Marco Lateral da Integrada  
1,220 Kg/m



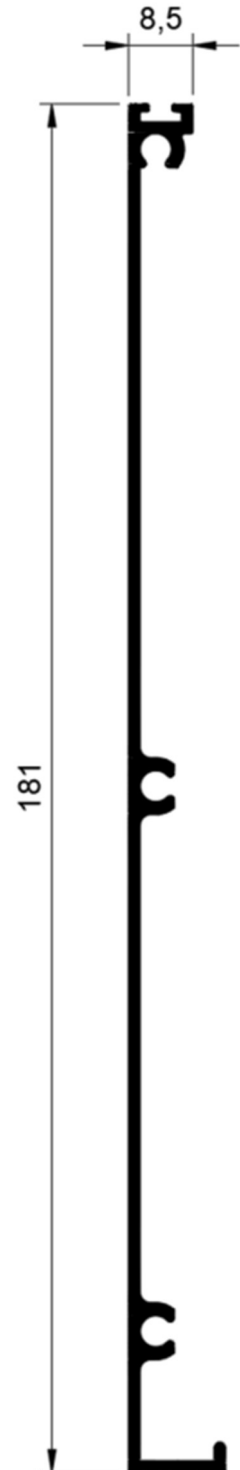
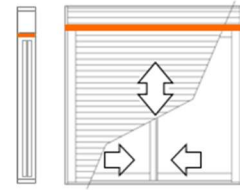
**CPU - 404**

Tampa Interna da Integrada  
1,665 Kg/m



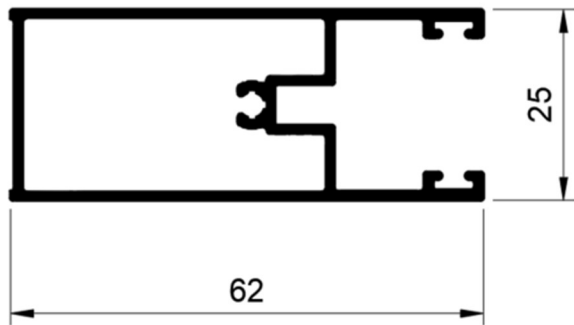
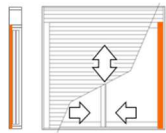
**CPU - 405**

Marco Intermediário da Integrada  
0,963 Kg/m



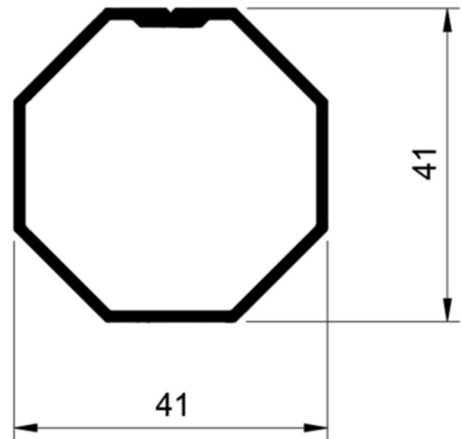
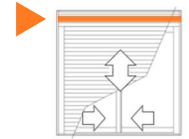
**SPI - I04**

Guia Lateral  
0,687 Kg/m



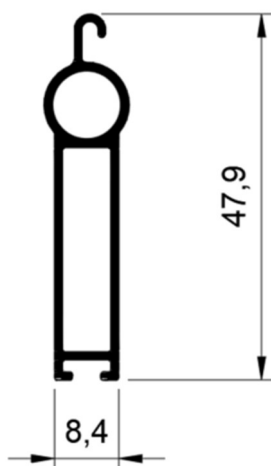
**DS - 238**

Tubo da Persiana  
0,521 Kg/m



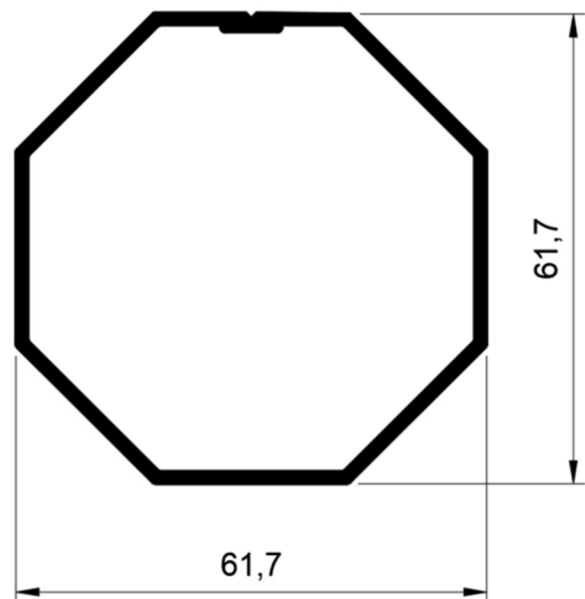
**MN - 055**

Terminal da Persiana  
0,371 Kg/m

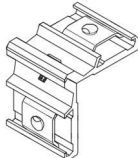

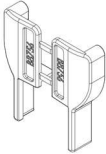





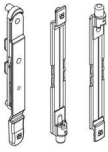
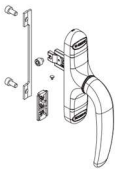
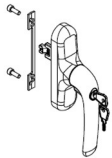




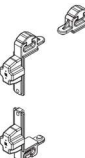
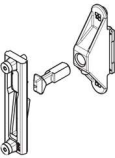
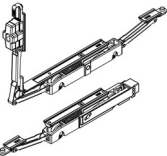
**MN - 015**

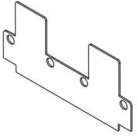
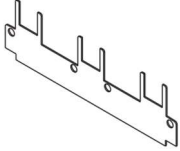
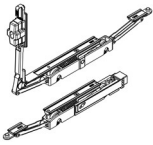
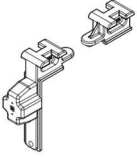
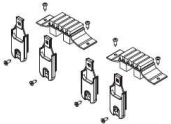

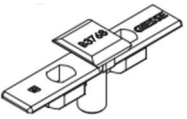
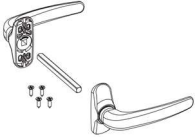
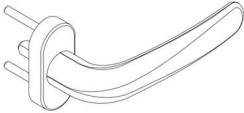

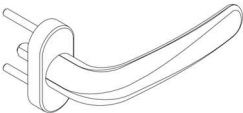
Tubo da Persiana  
0,881 Kg/m



ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	<b>COS-03524</b>	BARR10000	Vareta de Poliamida
	<b>COS-02979</b>	BATD10013	Batedeira
	<b>COS-08349</b>	BRAC10008NAT	Braço GS HD – 10
	<b>COS-08350</b>	BRAC10009NAT	Braço GS HD – 16
	<b>COS-08351</b>	BRAC10010NAT	Braço GS HD – 22
	<b>COS-08352</b>	BRAC10011NAT	Braço GS HD – 28
	<b>COS-08194</b>	BRAC10013INX	Braço GS HD – 24
	<b>COS-01971</b>	CALC10004PTO	Calço para Braço
	<b>COS-07681</b>	CILD10006NAT	Cilindro
	<b>COS-04630</b>	CONT10006NAT	Contra Fecho
	<b>81.39025.135</b>	81.39025.135	Conexão Anudal

ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	<b>COS-00340</b>	CONX10012NAT	Conexão Kamel
	<b>COS-00348</b>	CONX10013NAT	Conexão Folha
	<b>COS-00349</b>	CONX10014NAT	Conexão Kamel
	<b>COS-00350</b>	CONX10015NAT	Conexão de Canto para a Folha
	<b>COS-02921</b>	CONX10016NAT	Conexão de Alinhamento
	<b>COS-00357</b>	CONX10038NAT	Conexão Kamel
	<b>COS-00681</b>	DOBR10006	Dobradiça Flash
	<b>COS-02938</b>	DREN10000	Par de Tampas para Pingadeira
	<b>COS-07058N</b>	ESPL00951	Roseta
	<b>COS-04627</b>	FDRA10011NAT	Fechadura
	<b>COS-01164N</b>	FECH01098	Cremona Única

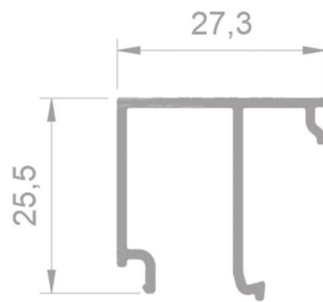
ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	<b>COS-02191N</b>	FECH01090NAT	Fecho unha 2° Folha
	<b>COS-01039</b>	FECH01089	Cremona Prima s/ chave
	<b>COS-01091</b>	FECH01089	Cremona Prima c/ chave
	<b>GUA-410</b>	GUAR00410PTO	Guarnição Folha e Marco
	<b>GUA-412</b>	GUAR00412PTO	Guarnição Vidro
	<b>GUA-413</b>	GUAR00413PTO	Guarnição Vidro
	<b>COS-02970</b>	GUAR10035PTO	Gaxeta
	<b>COS-02933</b>	KTTP10012	Kit de Adaptadores para Batedeira
	<b>COS-02929</b>	KTFC10000NAT	Kit para Fechamento GOS-S
	<b>ROL-03913</b>	KTRD10000NAT	Kit Roldana de 90 a 200 Kg

ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	<b>COS-02974</b>	VEDA10017NAT	Espuma selante para trilhos planos
	<b>COS-02975</b>	VEDA10018NAT	Espuma selante para trilhos planos
	<b>ROL-03916</b>	KTRD10001NAT	Kit Roldana até 90 Kg
	<b>COS-02939</b>	KTTP10001NAT	Kit de Adaptadores para Batedeira
	<b>COS-02945</b>	COS-02945	Kit de Adaptadores GOS-S
	<b>COS-04099</b>	KTTR00625NAT	Dispositivo de Ligação
			Vareta-Cremona
	<b>COS-02792</b>	MACN10000	Maçaneta Prima Plus
	<b>COS-02908</b>	MACN10010	Cremona Martelina Longo
	<b>COS-02942</b>	MACN10011	Fecho de Embutir para Janelas
	<b>COS-02948</b>	MACN10012	Cremona Martelina Curto



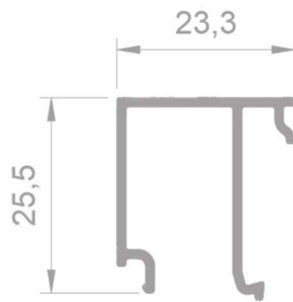
ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	<b>COS-06745</b>	NYLO00485PTO	Calço para Vidro de 5 mm
	<b>COS-06746</b>	NYLO00486PTO	Calço para Vidro de 2 mm
	<b>COS-00645</b>	SUPT10009NAT	Placa para perfil inversor
	<b>COS-02947</b>	TAMP10033PTO	Adaptadores para duas folhas
	<b>COS-04027K</b>	TRAV00015FCO	Botão para pontos de fechamento
	<b>COS-02954</b>	TRAV10010NAT	GOS-S Kit para folha fixa
	<b>COS-01353K</b>	TRAV00020NAT	Complemento do fecho
	<b>COS-02951</b>	TRAV10016NAT	Mecanismo da Cremona
	<b>COS-04020K</b>	TRAV10017NAT	Reenvio de ângulo

ECBG - 213



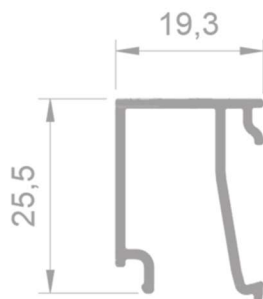
DETALHES		Espessura Vidro (mm)	Guarnição Interna	Guarnição Externa
45EC-247		4	GUA412	GUA414
		5	GUA411	GUA414
		6	GUA412	GUA413
		7	GUA411	GUA413
45EC-234		4	GUA412	GUA414
		5	GUA411	GUA414
		6	GUA412	GUA413
		7	GUA411	GUA413
45EC-251		4	GUA412	GUA414
		5	GUA411	GUA414
		6	GUA412	GUA413
		7	GUA411	GUA413
45EC-268		4	GUA412	GUA414
		5	GUA411	GUA414
		6	GUA412	GUA413
		7	GUA411	GUA413

ECBG - 214



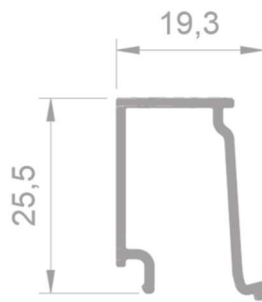
DETALHES		Espessura Vidro (mm)	Guarnição Interna	Guarnição Externa
45EC-247		8	GUA412	GUA414
		9	GUA411	GUA414
		10	GUA412	GUA413
		11	GUA411	GUA413
45EC-234		8	GUA412	GUA414
		9	GUA411	GUA414
		10	GUA412	GUA413
		11	GUA411	GUA413
45EC-251		8	GUA412	GUA414
		9	GUA411	GUA414
		10	GUA412	GUA413
		11	GUA411	GUA413
45EC-268		8	GUA412	GUA414
		9	GUA411	GUA414
		10	GUA412	GUA413
		11	GUA411	GUA413

ECBG - 215



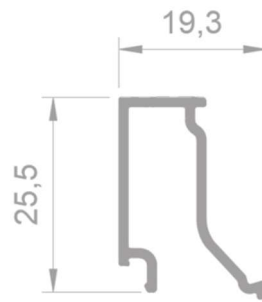
DETALHES		Espessura Vidro (mm)	Guarnição Interna	Guarnição Externa
45EC-247		12	GUA412	GUA414
		13	GUA411	GUA414
		14	GUA412	GUA413
		15	GUA411	GUA413
45EC-234		12	GUA412	GUA414
		13	GUA411	GUA414
		14	GUA412	GUA413
		15	GUA411	GUA413
45EC-251		12	GUA412	GUA414
		13	GUA411	GUA414
		14	GUA412	GUA413
		15	GUA411	GUA413
45EC-268		12	GUA412	GUA414
		13	GUA411	GUA414
		14	GUA412	GUA413
		15	GUA411	GUA413

ECBG - 216



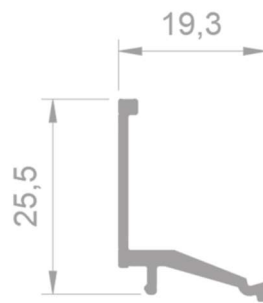
DETALHES		Espessura Vidro (mm)	Guarnição Interna	Guarnição Externa
45EC-247		16	GUA412	GUA414
		17	GUA411	GUA414
		18	GUA412	GUA413
		19	GUA411	GUA413
45EC-234		16	GUA412	GUA414
		17	GUA411	GUA414
		18	GUA412	GUA413
		19	GUA411	GUA413
45EC-251		16	GUA412	GUA414
		17	GUA411	GUA414
		18	GUA412	GUA413
		19	GUA411	GUA413
45EC-268		16	GUA412	GUA414
		17	GUA411	GUA414
		18	GUA412	GUA413
		19	GUA411	GUA413

ECBG - 217



DETALHES		Espessura Vidro (mm)	Guarnição Interna	Guarnição Externa
45EC-247		20	GUA412	GUA414
		21	GUA411	GUA414
		22	GUA412	GUA413
		23	GUA411	GUA413
45EC-234		20	GUA412	GUA414
		21	GUA411	GUA414
		22	GUA412	GUA413
		23	GUA411	GUA413
45EC-251		20	GUA412	GUA414
		21	GUA411	GUA414
		22	GUA412	GUA413
		23	GUA411	GUA413
45EC-268		20	GUA412	GUA414
		21	GUA411	GUA414
		22	GUA412	GUA413
		23	GUA411	GUA413

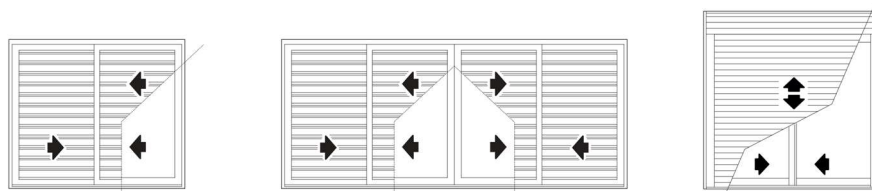
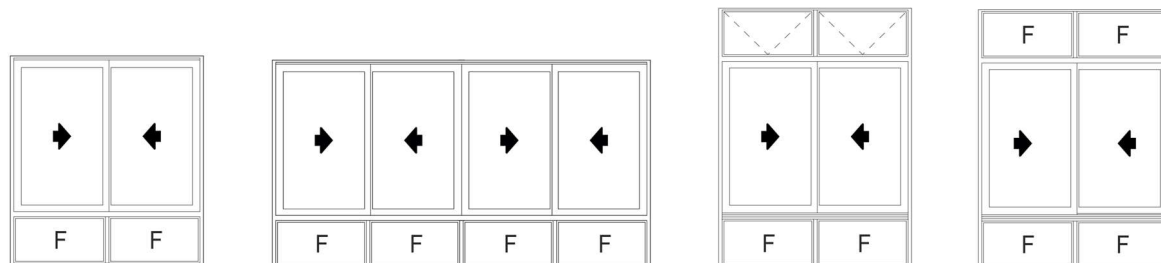
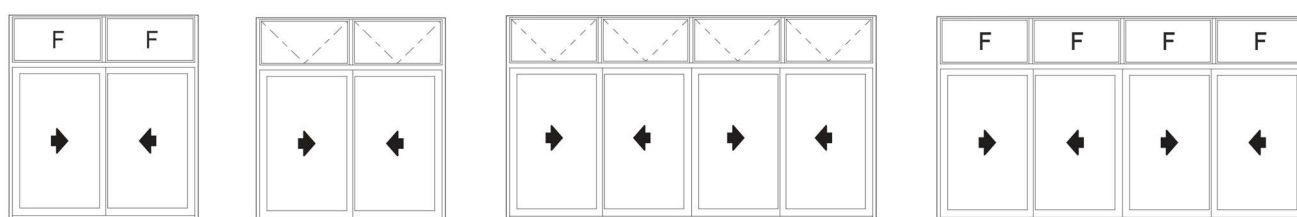
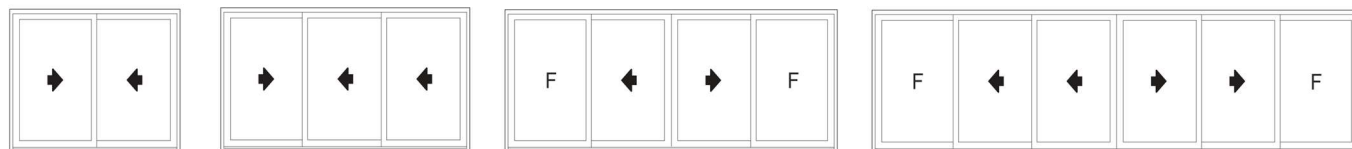
ECBG - 218



DETALHES		Espessura Vidro (mm)	Guarnição Interna	Guarnição Externa
45EC-247		28	GUA412	GUA414
		30	GUA412	GUA413
		32	GUA411	GUA413
45EC-234		28	GUA412	GUA414
		30	GUA412	GUA413
		32	GUA411	GUA413
45EC-251		28	GUA412	GUA414
		30	GUA412	GUA413
		32	GUA411	GUA413
45EC-268		28	GUA412	GUA414
		30	GUA412	GUA413
		32	GUA411	GUA413

**Janelas** de 02, 03, 04 e 06 folhas de correr

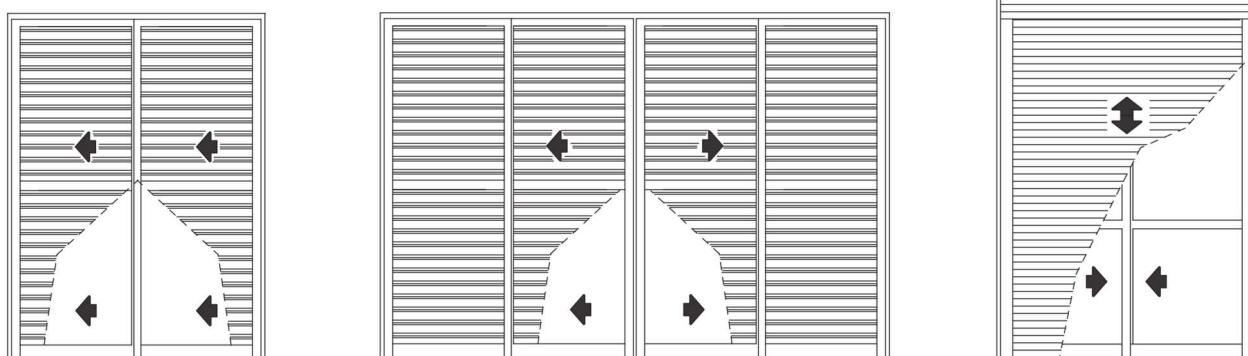
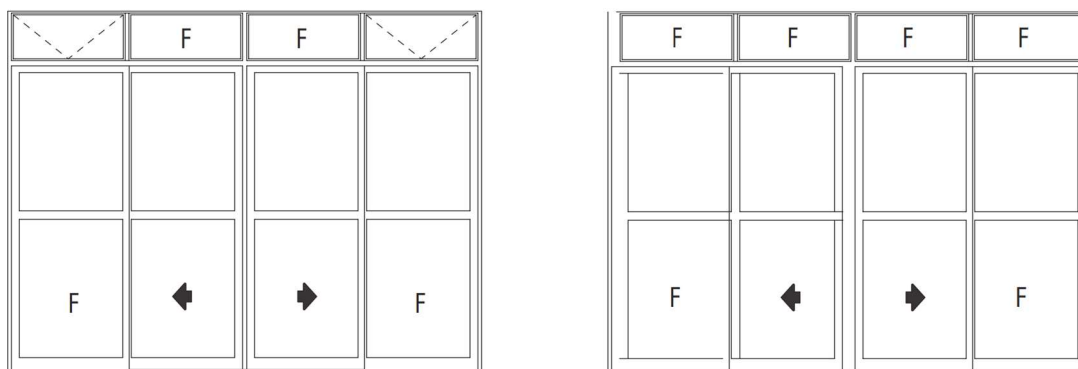
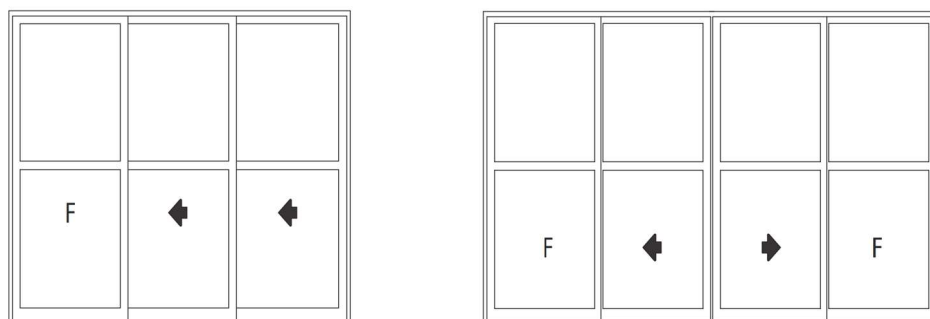
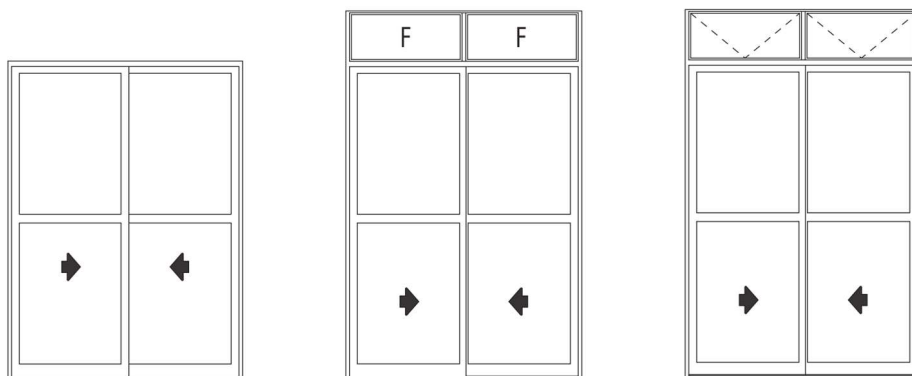
Opcionais: Persiana Integrada, Basculante Superior e/ou Inferior, Venezianas





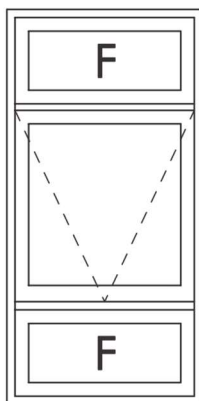
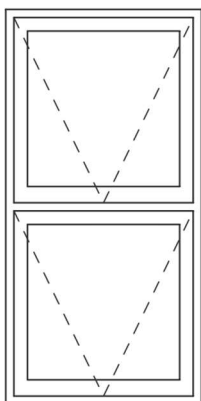
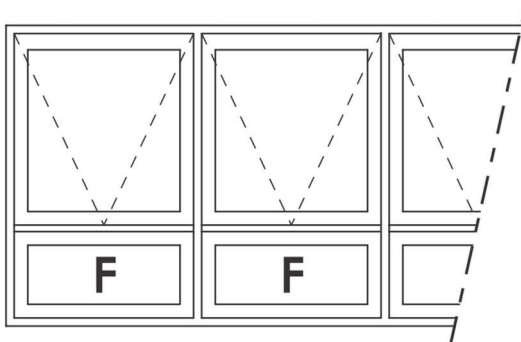
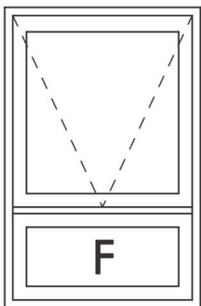
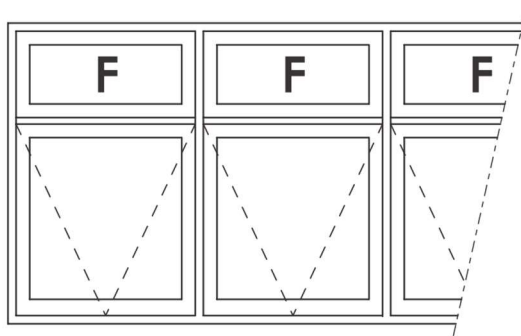
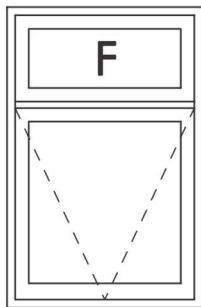
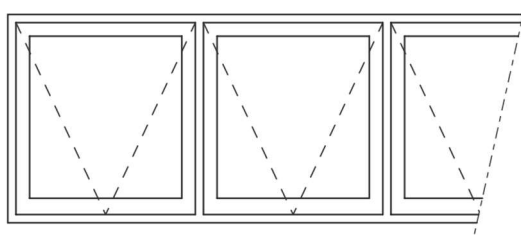
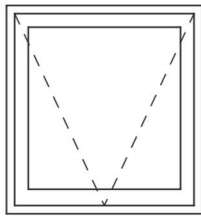
Portas de 02, 03, 04 e 06 folhas de correr

Opcionais: Persiana Integrada, Basculante Superior, Venezianas



Maxim-ar

Fixo, Inferior, Superior e Múltiplo

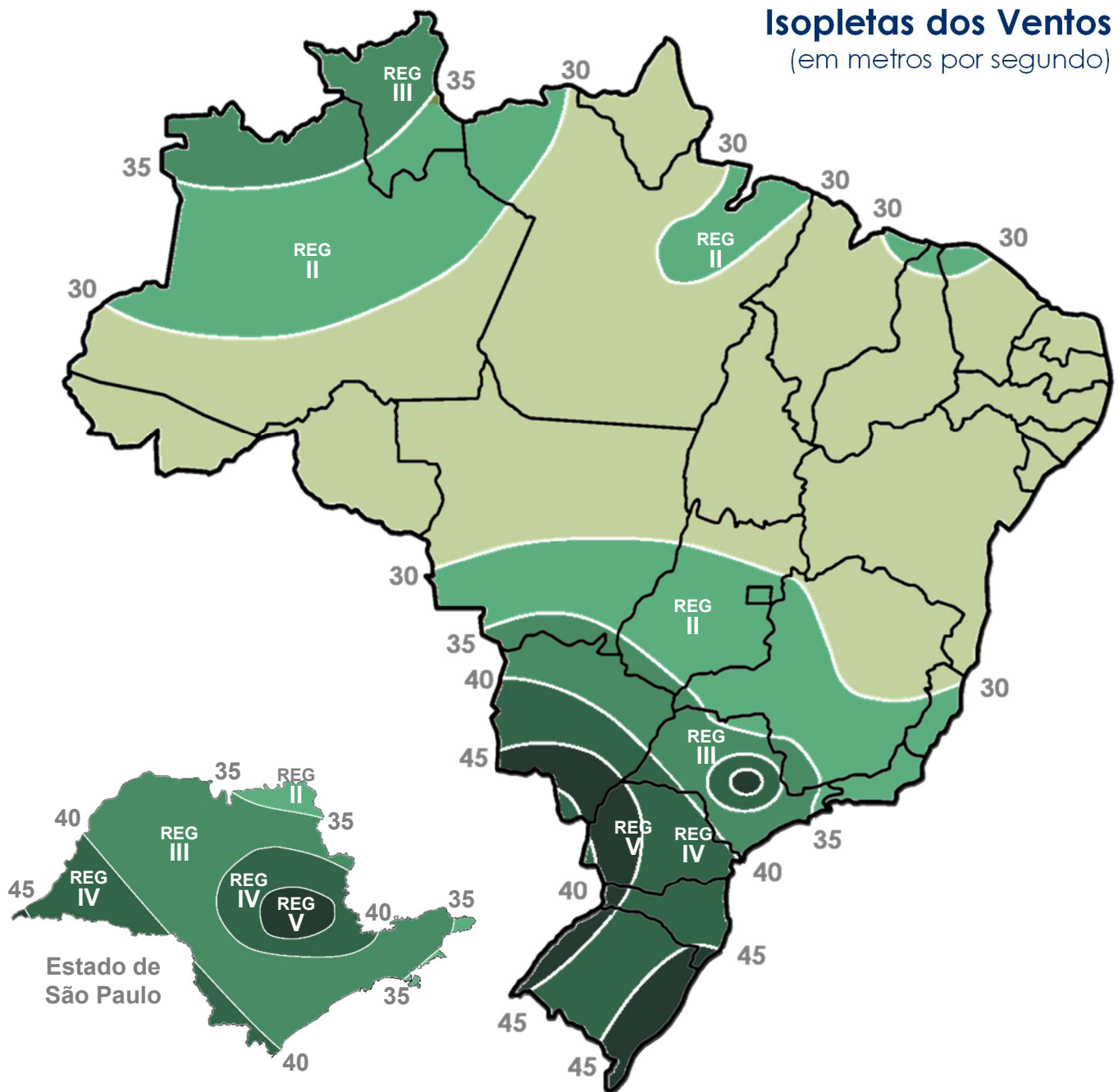


No Brasil, o comportamento de uma esquadria está regulamentado pela Norma **ABNT NBR 10.821**. Esta norma determina os parâmetros de desempenho mínimas de caixilhos em edificações residenciais e comerciais.

A velocidade do vento é o fator inicial para calcular a pressão do vento no local desejado.

### Isopletas dos Ventos

(em metros por segundo)

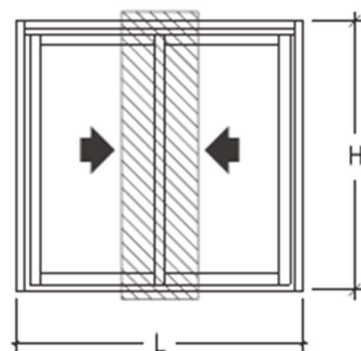
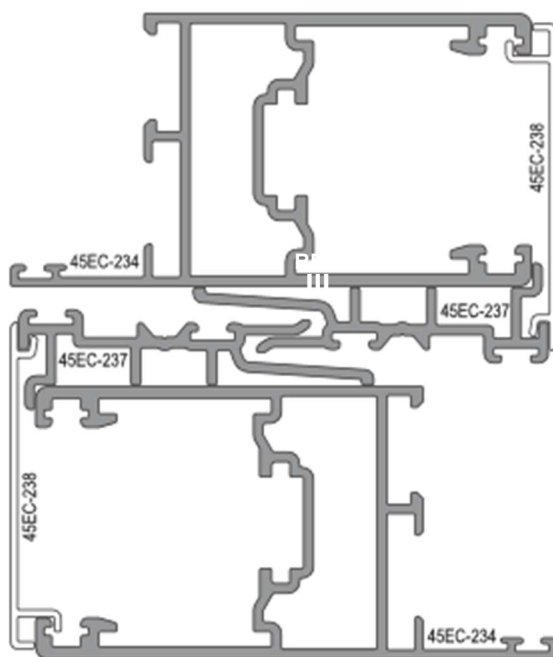


#### VELOCIDADE DO VENTO POR REGIÃO CONSIDERADA NA NORMA ABNT NBR 10.821

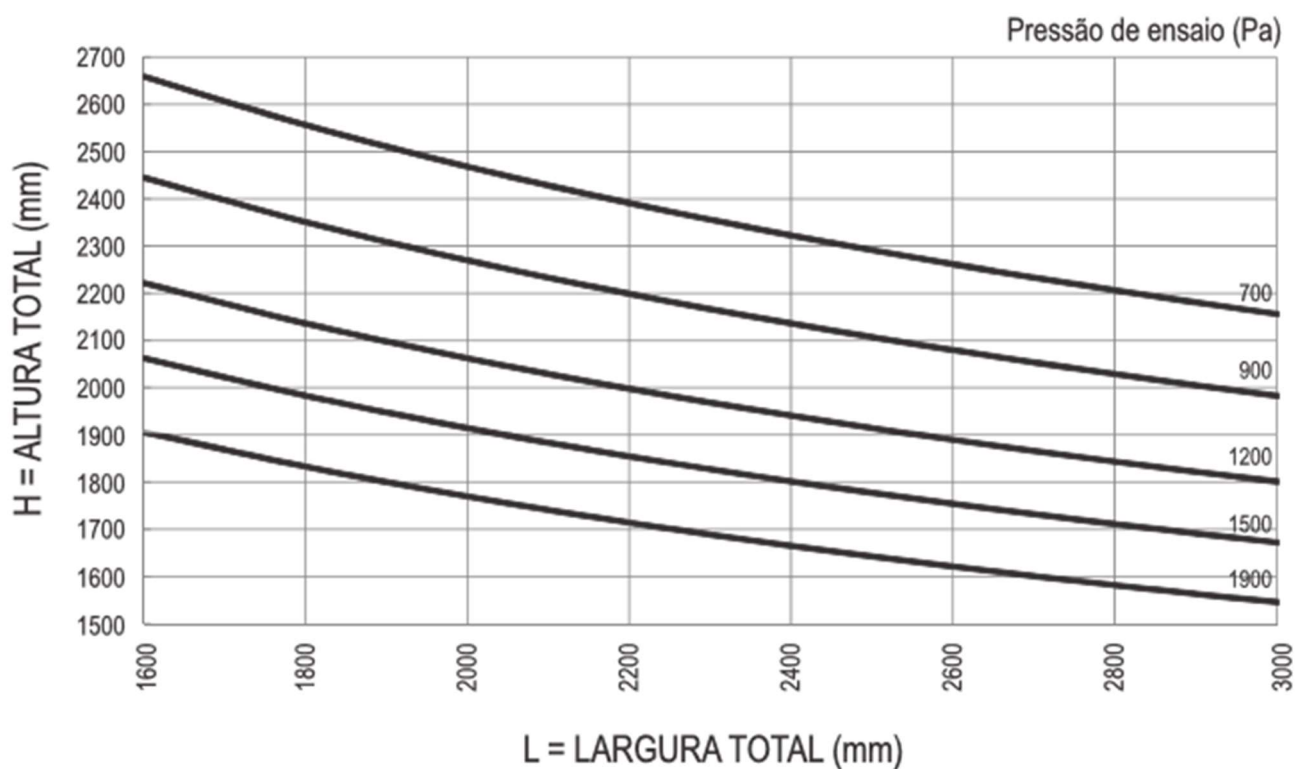
REGIÃO 1	REGIÃO 2	REGIÃO 3	REGIÃO 4	REGIÃO 5
até 30 m/s até 108 km/h	30 - 35 m/s 108 - 126 km/h	35 - 40 m/s 126 - 144 km/h	40 - 45 m/s 144 - 162 km/h	45 - 50 m/s 162 - 180 km/h

QUANTIDADE DE PAVIMENTOS	ALTURA MÁXIMA	REGIÕES DO PAÍS	PRESSÃO DO ENSAIO	PRESSÃO DE SEGURANÇA	PRESSÃO DE ÁGUA
			Pe em (Pa) Positiva e negativa Pe – Pp x 1,2	Ps em (Pa) Positiva e negativa Ps – Pp x 1,5	Pa em (Pa) Positiva e negativa Pa – Pp x 0,2
02	6 m	I	350	520	60
		II	470	700	80
		III	610	920	100
		IV	770	1160	130
		V	950	1430	160
05	15 m	I	420	640	70
		II	580	860	100
		III	750	1130	130
		IV	950	1430	160
		V	1180	1780	200
10	30 m	I	500	750	80
		II	680	1030	110
		III	890	1340	150
		IV	1130	1700	190
		V	1400	2090	230
20	60 m	I	600	900	100
		II	815	1220	140
		III	1060	1600	180
		IV	1350	2020	220
		V	1660	2500	280
30	90 m	I	660	980	110
		II	890	1340	150
		III	1170	1750	200
		IV	1480	2210	250
		V	1820	2730	300

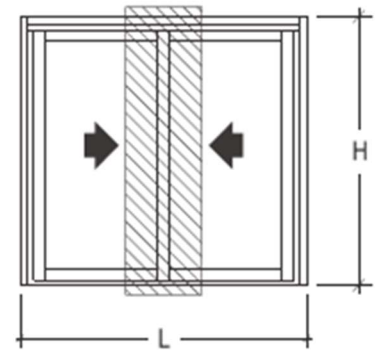
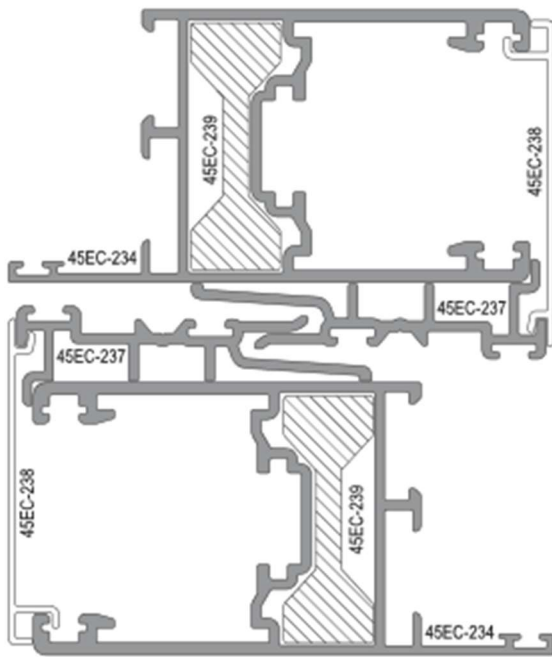
JANELAS DE CORRER 2 FOLHAS



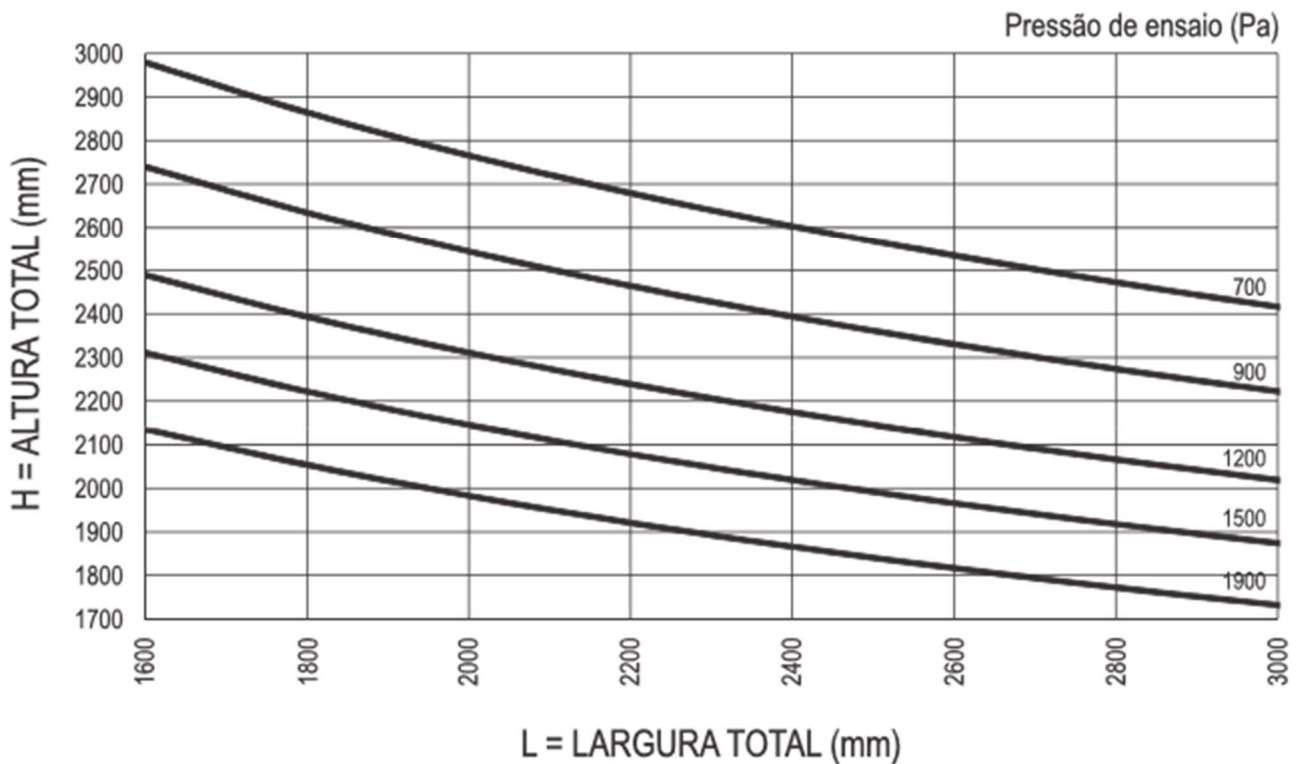
45EC-234	45EC-237	45EC-234	45EC-237
$Jx = 17,252 \text{ cm}^4$	$Jx = 0,218 \text{ cm}^4$	$Jx = 17,252 \text{ cm}^4$	$Jx = 0,218 \text{ cm}^4$
$Jy = 24,748 \text{ cm}^4$	$Jy = 5,461 \text{ cm}^4$	$Jy = 24,748 \text{ cm}^4$	$Jy = 5,461 \text{ cm}^4$
$Wx = 7,146 \text{ cm}^3$	$Wx = 0,221 \text{ cm}^3$	$Wx = 7,146 \text{ cm}^3$	$Wx = 0,221 \text{ cm}^3$
$Wy = 5,194 \text{ cm}^3$	$Wy = 1,640 \text{ cm}^3$	$Wy = 5,194 \text{ cm}^3$	$Wy = 1,640 \text{ cm}^3$
$Jx \text{ Total} = 34,940 \text{ cm}^4$		(perfil 45EC-238 não considerado no cálculo)	



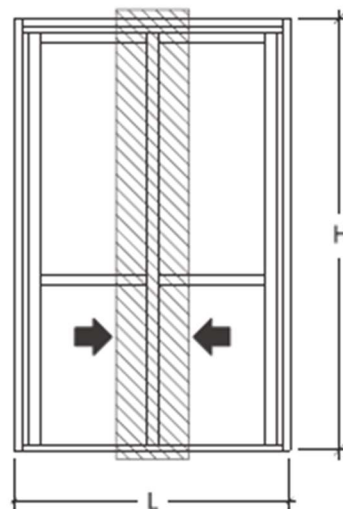
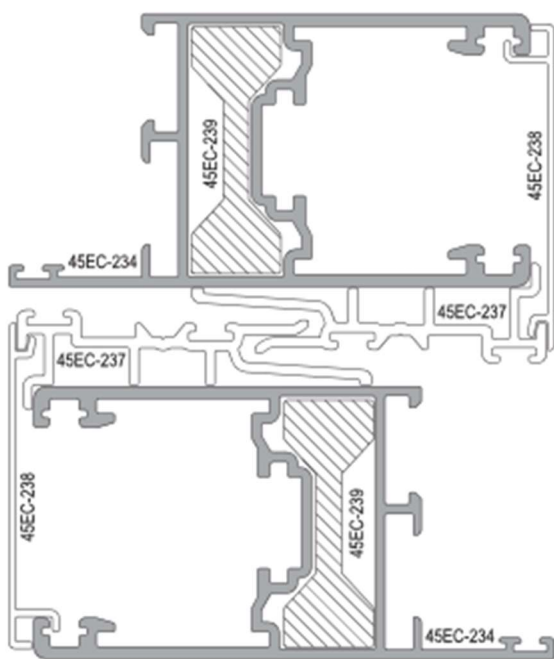
JANELAS DE CORRER 2 FOLHAS



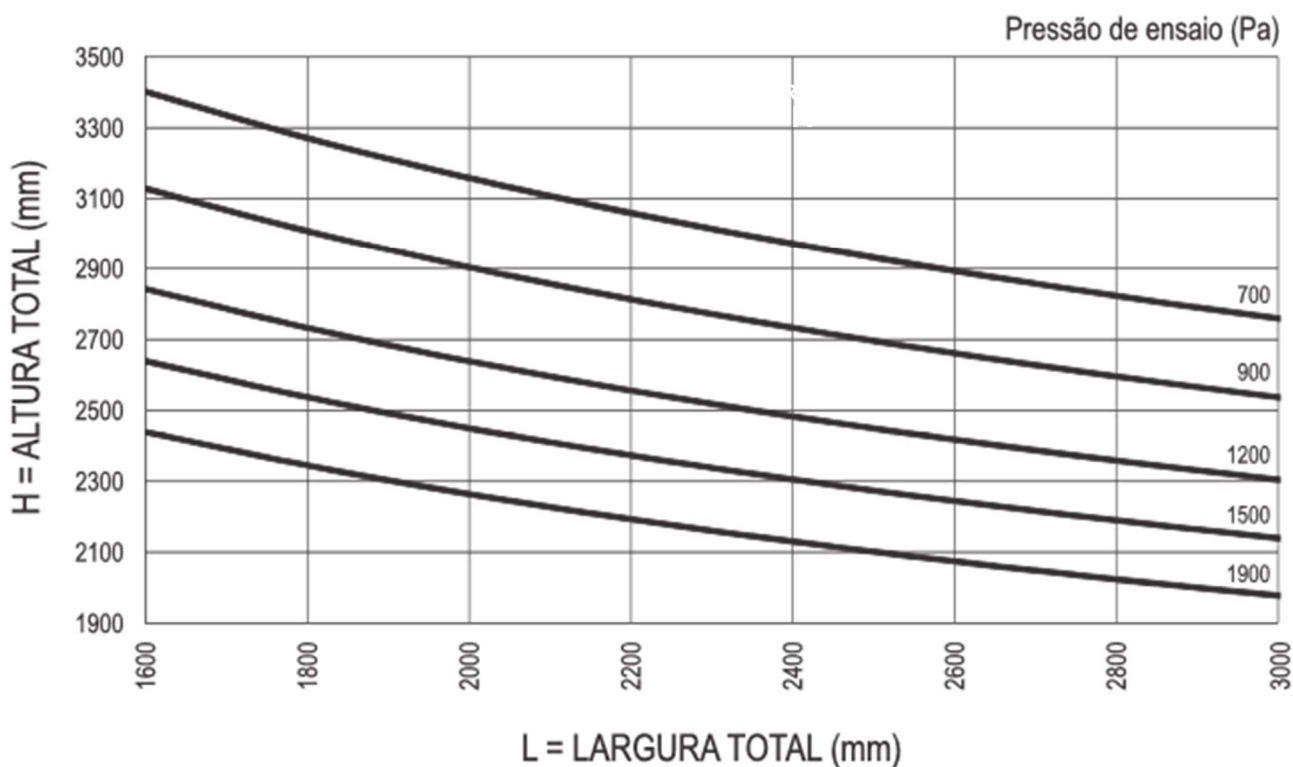
45EC-234	45EC-237	45EC-239	45EC-234	45EC-237	45EC-239
$J_x = 17,252 \text{ cm}^4$	$J_x = 0,218 \text{ cm}^4$	$J_x = 7,341 \text{ cm}^4$	$J_x = 17,252 \text{ cm}^4$	$J_x = 0,218 \text{ cm}^4$	$J_x = 7,341 \text{ cm}^4$
$J_y = 24,748 \text{ cm}^4$	$J_y = 5,461 \text{ cm}^4$	$J_y = 0,465 \text{ cm}^4$	$J_y = 24,748 \text{ cm}^4$	$J_y = 5,461 \text{ cm}^4$	$J_y = 0,465 \text{ cm}^4$
$W_x = 7,146 \text{ cm}^3$	$W_x = 0,221 \text{ cm}^3$	$W_x = 3,598 \text{ cm}^3$	$W_x = 7,146 \text{ cm}^3$	$W_x = 0,221 \text{ cm}^3$	$W_x = 3,598 \text{ cm}^3$
$W_y = 5,194 \text{ cm}^3$	$W_y = 1,640 \text{ cm}^3$	$W_y = 0,628 \text{ cm}^3$	$W_y = 5,194 \text{ cm}^3$	$W_y = 1,640 \text{ cm}^3$	$W_y = 0,628 \text{ cm}^3$
$J_x \text{ Total} = 49,622 \text{ cm}^4$			(perfil 45EC-238 não considerado no cálculo)		



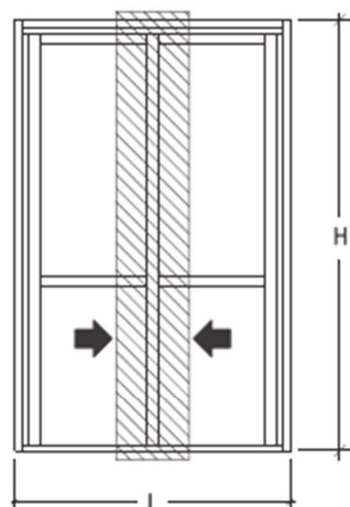
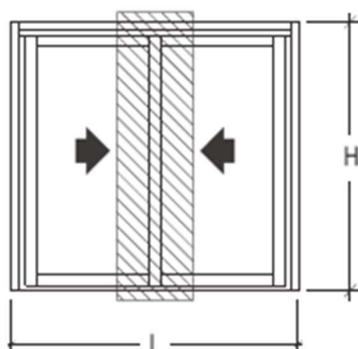
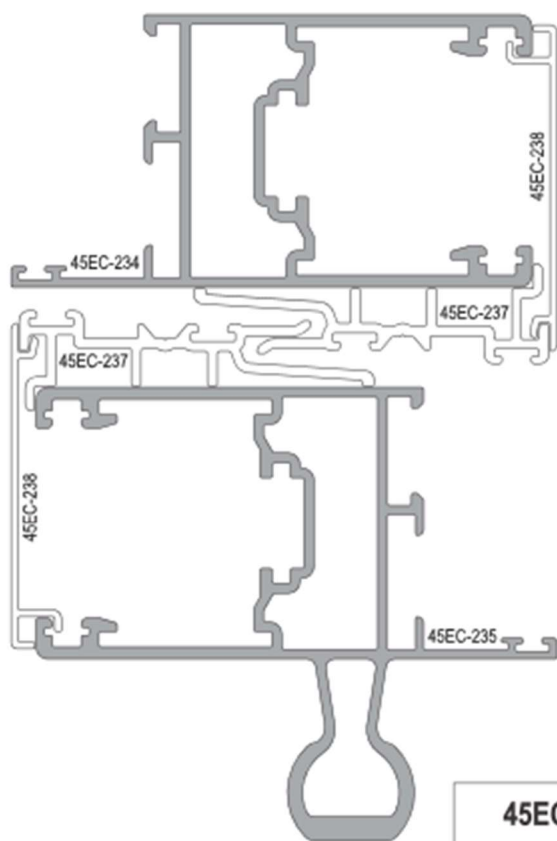
PORTA DE CORRER 2 FOLHAS



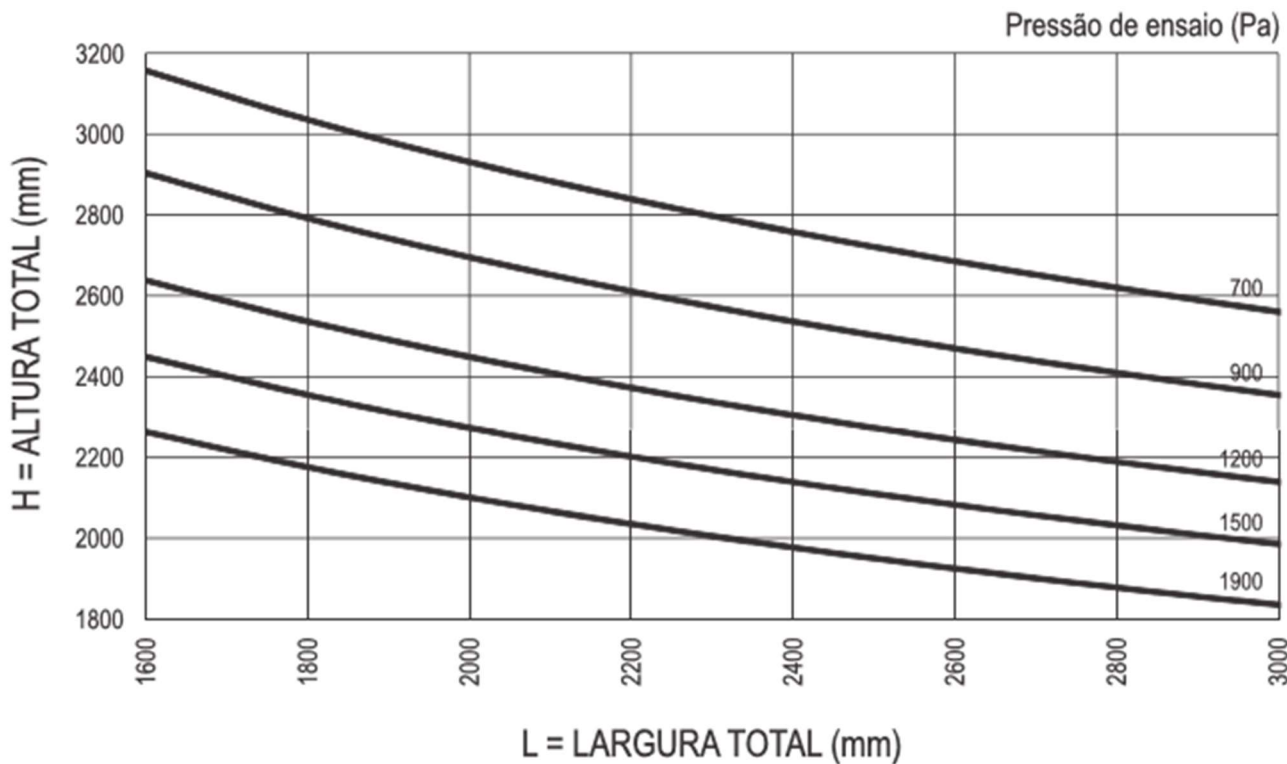
<p><b>45EC-234</b></p> <p>Jx = 17,252 cm<sup>4</sup>                  Jy = 24,748 cm<sup>4</sup>                  Wx = 7,146 cm<sup>3</sup>                  Wy = 5,194 cm<sup>3</sup></p>	<p><b>45EC-237</b></p> <p>Jx = 0,218 cm<sup>4</sup>                  Jy = 5,461 cm<sup>4</sup>                  Wx = 0,221 cm<sup>3</sup>                  Wy = 1,640 cm<sup>3</sup></p>	<p><b>45EC-239</b></p> <p>Jx = 7,341 cm<sup>4</sup>                  Jy = 0,465 cm<sup>4</sup>                  Wx = 3,598 cm<sup>3</sup>                  Wy = 0,628 cm<sup>3</sup></p>	<p><b>45EC-235</b></p> <p>Jx = 40,823 cm<sup>4</sup>                  Jy = 28,022 cm<sup>4</sup>                  Wx = 10,089 cm<sup>3</sup>                  Wy = 6,354 cm<sup>3</sup></p>	<p><b>45EC-237</b></p> <p>Jx = 0,218 cm<sup>4</sup>                  Jy = 5,461 cm<sup>4</sup>                  Wx = 0,221 cm<sup>3</sup>                  Wy = 1,640 cm<sup>3</sup></p>	<p><b>45EC-239</b></p> <p>Jx = 7,341 cm<sup>4</sup>                  Jy = 0,465 cm<sup>4</sup>                  Wx = 3,598 cm<sup>3</sup>                  Wy = 0,628 cm<sup>3</sup></p>
<p>Jx Total = 73,193 cm<sup>4</sup> (perfil 45EC-235 não considerado no cálculo)</p>					



JANELA/PORTA DE CORRER 2 FOLHAS

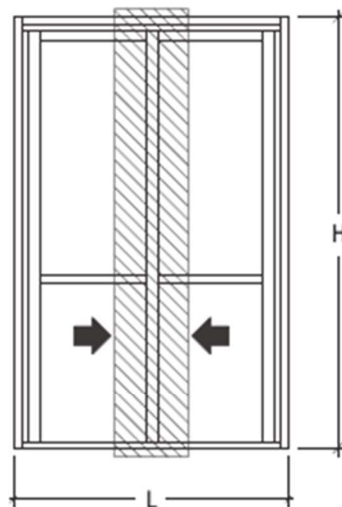
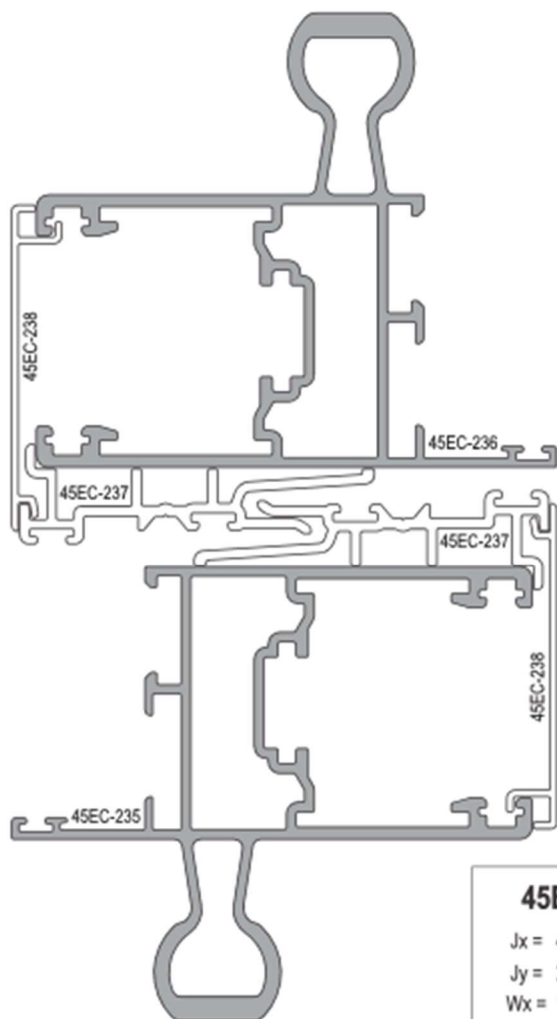


45EC-234	45EC-237	45EC-235	45EC-237
$J_x = 17,252 \text{ cm}^4$	$J_x = 0,218 \text{ cm}^4$	$J_x = 40,823 \text{ cm}^4$	$J_x = 0,218 \text{ cm}^4$
$J_y = 24,748 \text{ cm}^4$	$J_y = 5,461 \text{ cm}^4$	$J_y = 28,022 \text{ cm}^4$	$J_y = 5,461 \text{ cm}^4$
$W_x = 7,146 \text{ cm}^3$	$W_x = 0,221 \text{ cm}^3$	$W_x = 10,089 \text{ cm}^3$	$W_x = 0,221 \text{ cm}^3$
$W_y = 5,194 \text{ cm}^3$	$W_y = 1,640 \text{ cm}^3$	$W_y = 6,354 \text{ cm}^3$	$W_y = 1,640 \text{ cm}^3$
$J_x \text{ Total} = 58,511 \text{ cm}^4$		(perfil 45EC-238 não considerado no cálculo)	

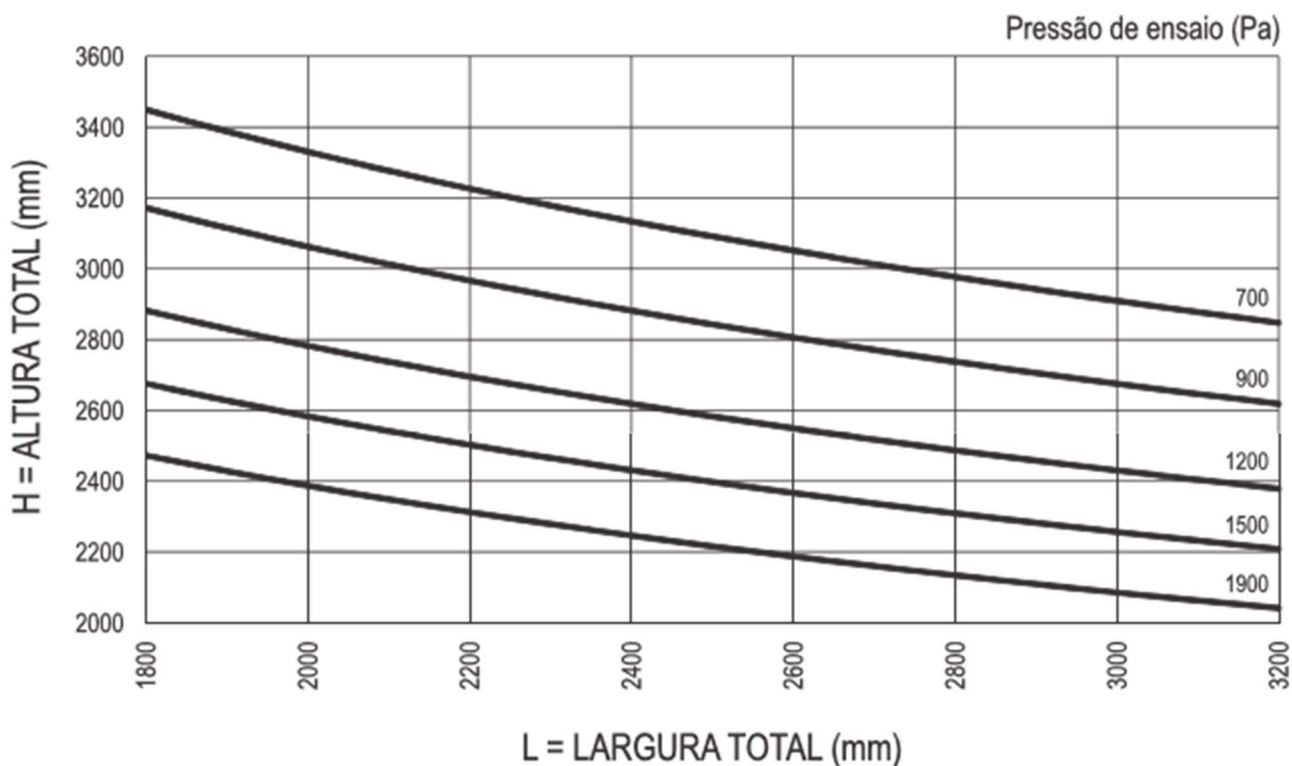




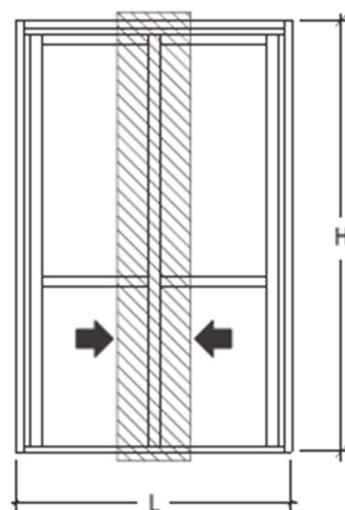
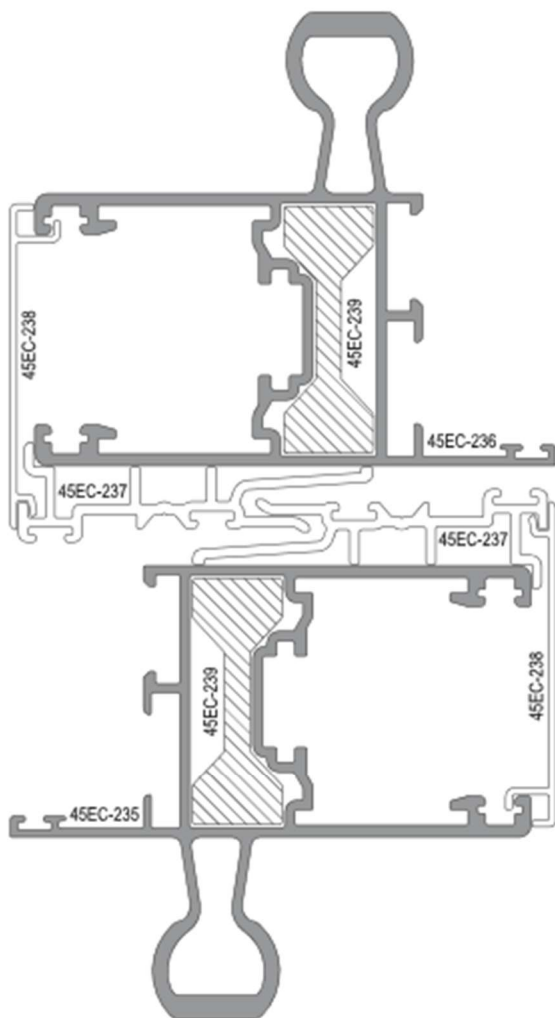
PORTA DE CORRER 2 FOLHAS



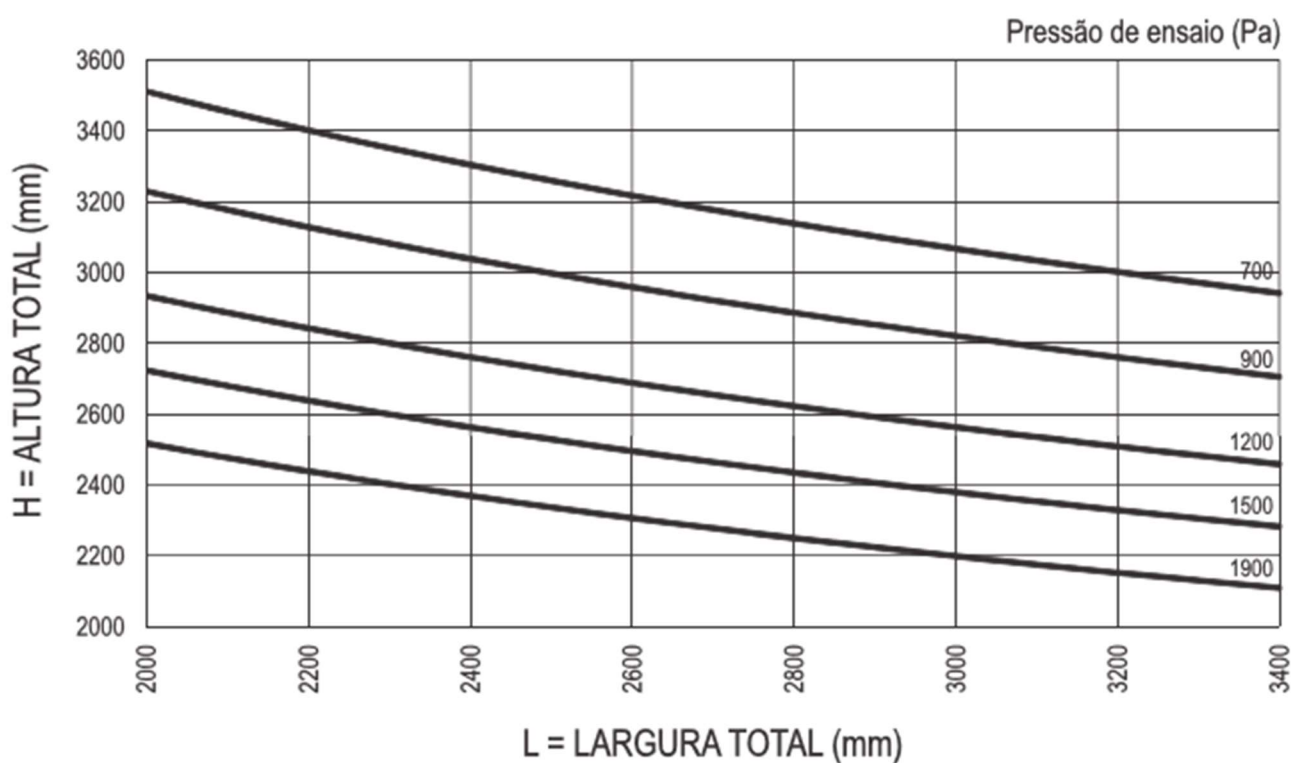
45EC-236	45EC-237	45EC-235	45EC-237
$J_x = 44,580 \text{ cm}^4$	$J_x = 0,218 \text{ cm}^4$	$J_x = 40,823 \text{ cm}^4$	$J_x = 0,218 \text{ cm}^4$
$J_y = 28,022 \text{ cm}^4$	$J_y = 5,461 \text{ cm}^4$	$J_y = 28,022 \text{ cm}^4$	$J_y = 5,461 \text{ cm}^4$
$W_x = 10,396 \text{ cm}^3$	$W_x = 0,221 \text{ cm}^3$	$W_x = 10,089 \text{ cm}^3$	$W_x = 0,221 \text{ cm}^3$
$W_y = 6,354 \text{ cm}^3$	$W_y = 1,640 \text{ cm}^3$	$W_y = 6,354 \text{ cm}^3$	$W_y = 1,640 \text{ cm}^3$
$J_x \text{ Total} = 85,839 \text{ cm}^4$		(perfil 45EC-238 não considerado no cálculo)	



PORTA DE CORRER 2 FOLHAS

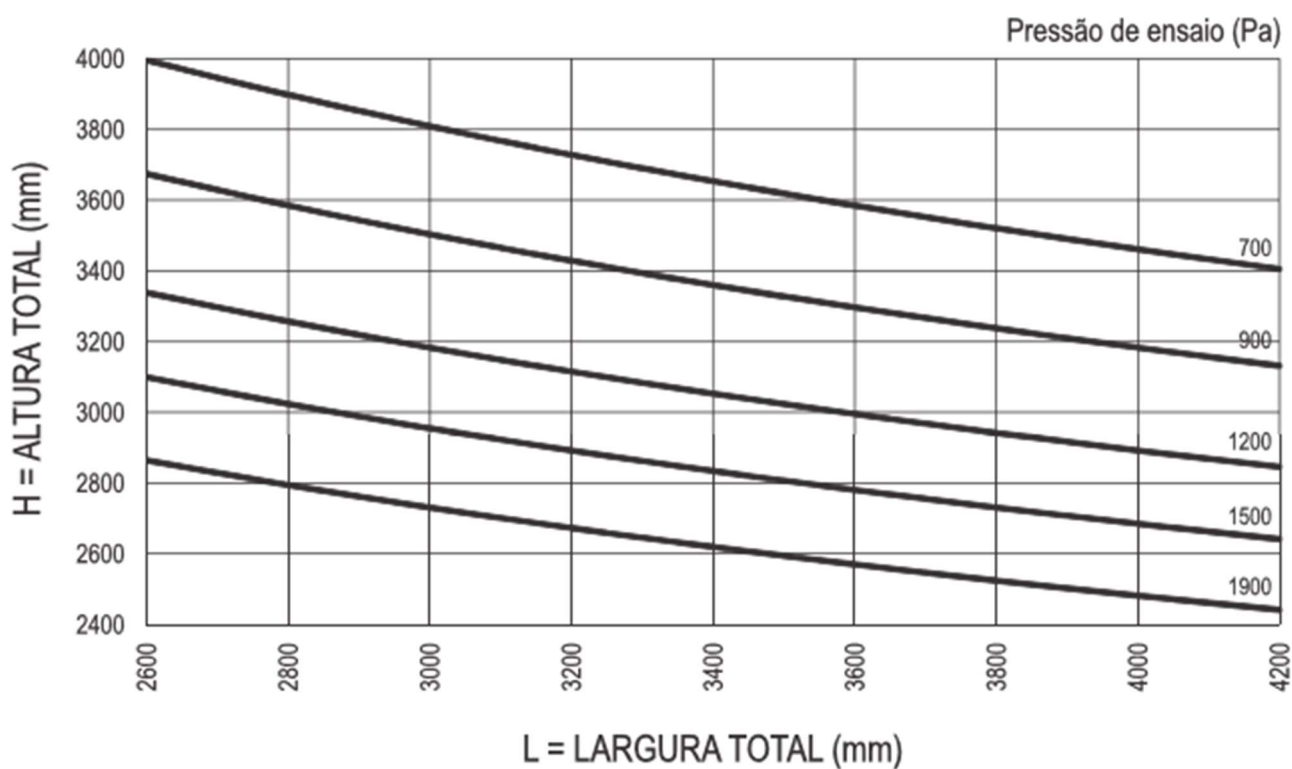
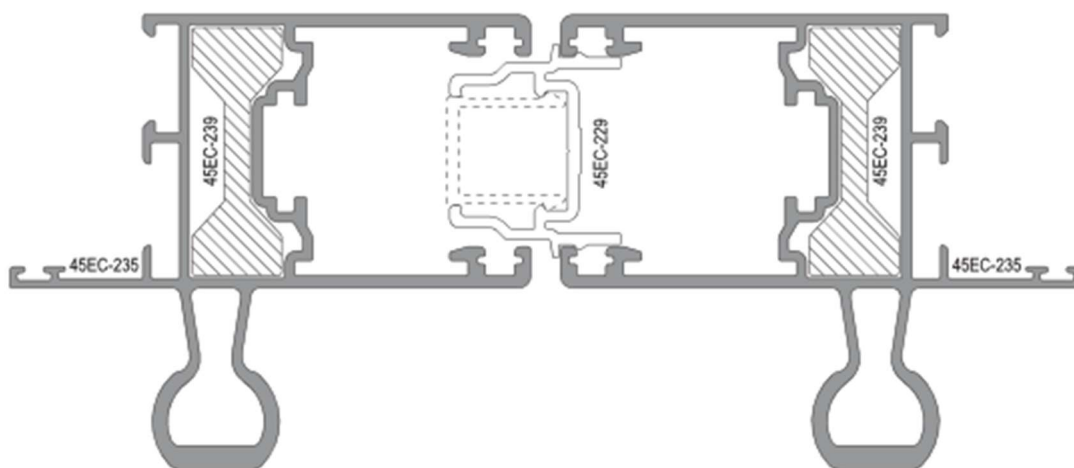
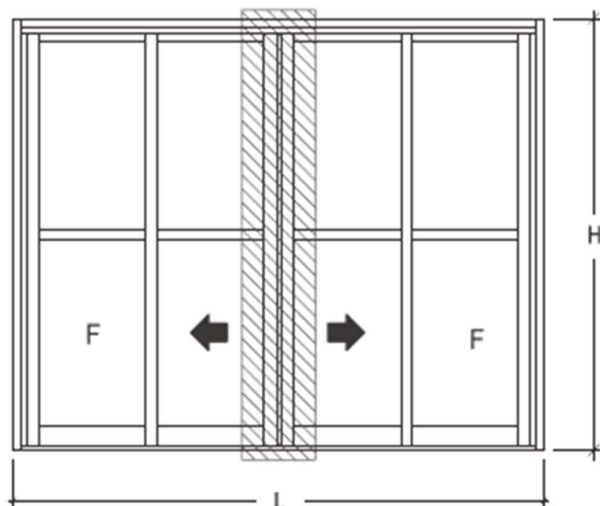


<p><b>45EC-236</b></p> <p>Jx = 44,580 cm<sup>4</sup>                      Jy = 28,022 cm<sup>4</sup>                      Wx = 10,396 cm<sup>3</sup>                      Wy = 6,354 cm<sup>3</sup></p>	<p><b>45EC-237</b></p> <p>Jx = 0,218 cm<sup>4</sup>                      Jy = 5,461 cm<sup>4</sup>                      Wx = 0,221 cm<sup>3</sup>                      Wy = 1,640 cm<sup>3</sup></p>	<p><b>45EC-239</b></p> <p>Jx = 7,341 cm<sup>4</sup>                      Jy = 0,465 cm<sup>4</sup>                      Wx = 3,598 cm<sup>3</sup>                      Wy = 0,628 cm<sup>3</sup></p>
<p><b>45EC-235</b></p> <p>Jx = 40,823 cm<sup>4</sup>                      Jy = 28,022 cm<sup>4</sup>                      Wx = 10,089 cm<sup>3</sup>                      Wy = 6,354 cm<sup>3</sup></p>	<p><b>45EC-237</b></p> <p>Jx = 0,218 cm<sup>4</sup>                      Jy = 5,461 cm<sup>4</sup>                      Wx = 0,221 cm<sup>3</sup>                      Wy = 1,640 cm<sup>3</sup></p>	<p><b>45EC-239</b></p> <p>Jx = 7,341 cm<sup>4</sup>                      Jy = 0,465 cm<sup>4</sup>                      Wx = 3,598 cm<sup>3</sup>                      Wy = 0,628 cm<sup>3</sup></p>
<p>Jx Total = 100,521 cm<sup>4</sup> (perfil 45EC-238 não considerado no cálculo)</p>		

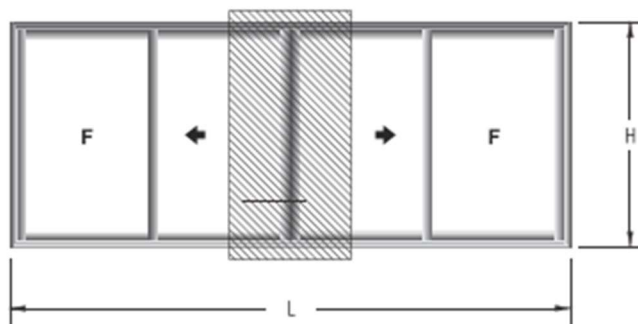


PORTA DE CORRER 4 FOLHAS

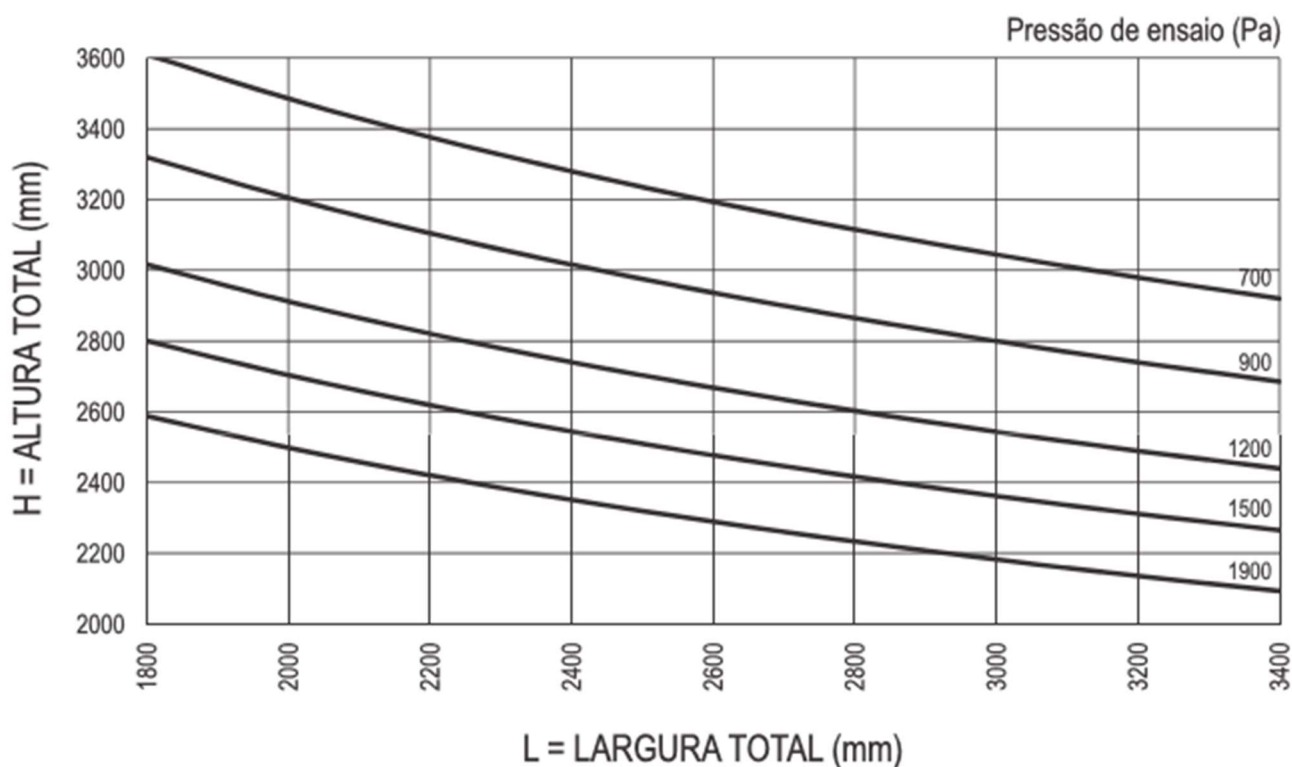
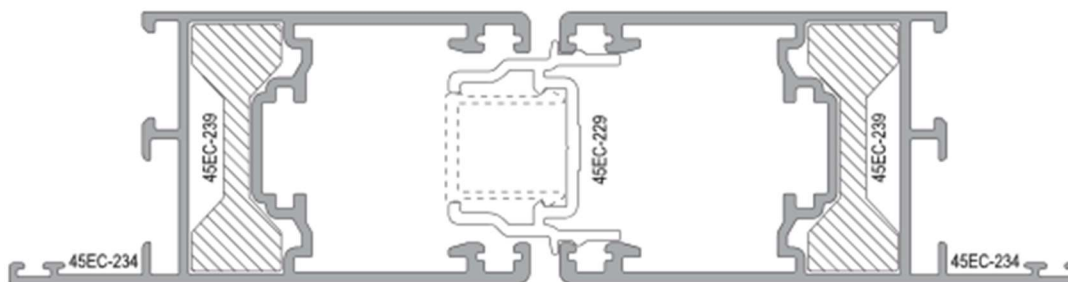
<p><b>45EC-235</b></p> <p>Jx = 40,823 cm<sup>4</sup>          Jy = 28,022 cm<sup>4</sup>          Wx = 10,089 cm<sup>3</sup>          Wy = 6,354 cm<sup>3</sup></p>	<p><b>45EC-239</b></p> <p>Jx = 7,341 cm<sup>4</sup>          Jy = 0,465 cm<sup>4</sup>          Wx = 3,598 cm<sup>3</sup>          Wy = 0,628 cm<sup>3</sup></p>
<p><b>45EC-235</b></p> <p>Jx = 40,823 cm<sup>4</sup>          Jy = 28,022 cm<sup>4</sup>          Wx = 10,089 cm<sup>3</sup>          Wy = 6,354 cm<sup>3</sup></p>	<p><b>45EC-239</b></p> <p>Jx = 7,341 cm<sup>4</sup>          Jy = 0,465 cm<sup>4</sup>          Wx = 3,598 cm<sup>3</sup>          Wy = 0,628 cm<sup>3</sup></p>
<p><b>Jx Total = 96,328 cm<sup>4</sup></b>          (perfil 45EC-299 não considerado no cálculo)</p>	



JANELA DE CORRER 4 FOLHAS

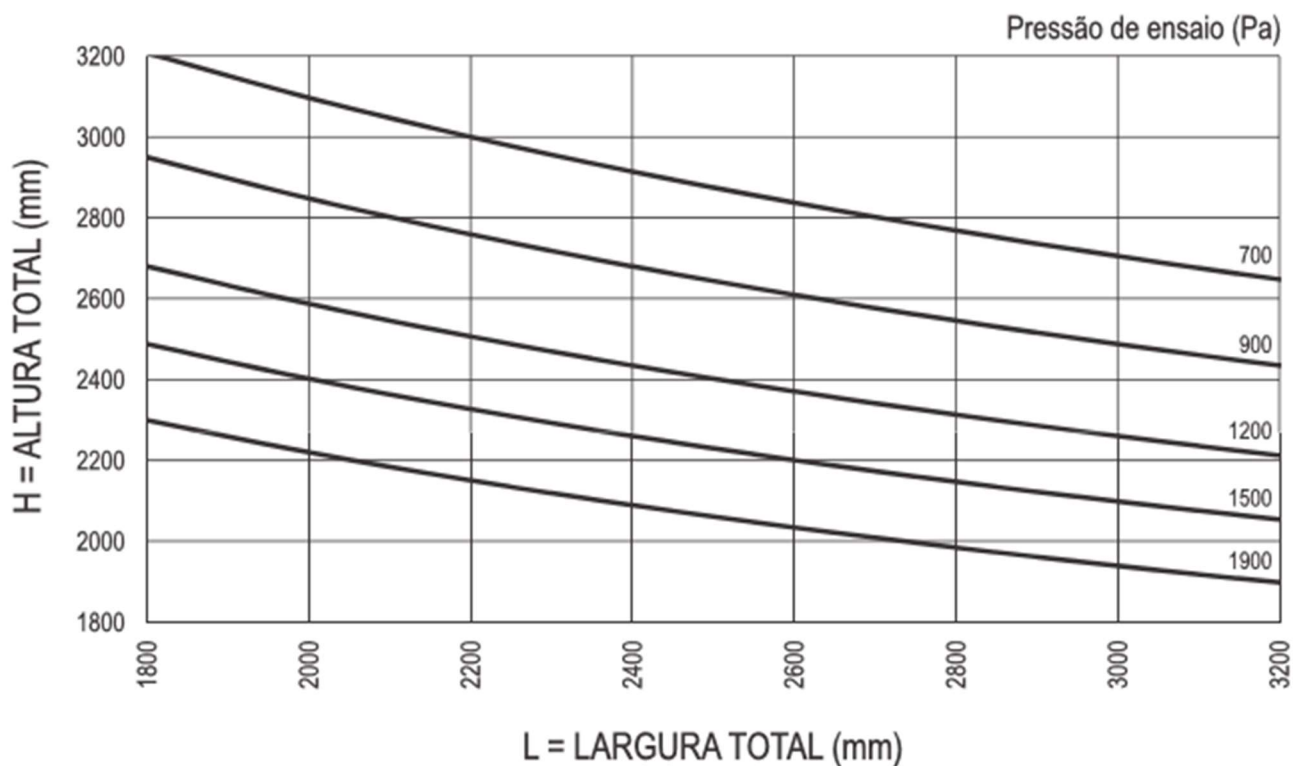
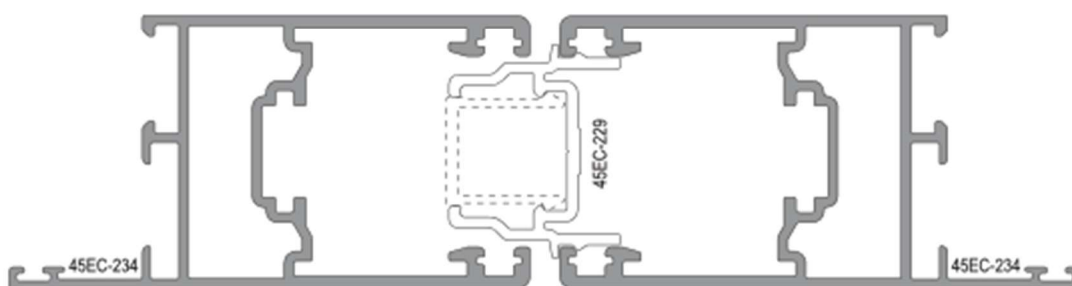
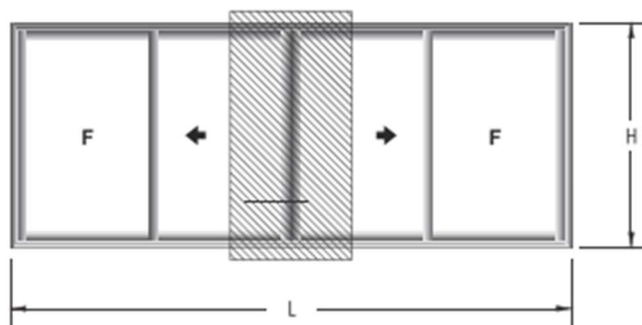


<b>45EC-234</b>	<b>45EC-239</b>	<b>45EC-234</b>	<b>45EC-239</b>
$J_x = 17,252 \text{ cm}^4$	$J_x = 7,341 \text{ cm}^4$	$J_x = 17,252 \text{ cm}^4$	$J_x = 7,341 \text{ cm}^4$
$J_y = 24,748 \text{ cm}^4$	$J_y = 0,465 \text{ cm}^4$	$J_y = 24,748 \text{ cm}^4$	$J_y = 0,465 \text{ cm}^4$
$W_x = 7,146 \text{ cm}^3$	$W_x = 3,598 \text{ cm}^3$	$W_x = 7,146 \text{ cm}^3$	$W_x = 3,598 \text{ cm}^3$
$W_y = 5,194 \text{ cm}^3$	$W_y = 0,628 \text{ cm}^3$	$W_y = 5,194 \text{ cm}^3$	$W_y = 0,628 \text{ cm}^3$
$J_x \text{ Total} = 49,186 \text{ cm}^4$		(perfil 45EC-229 não considerado no cálculo)	

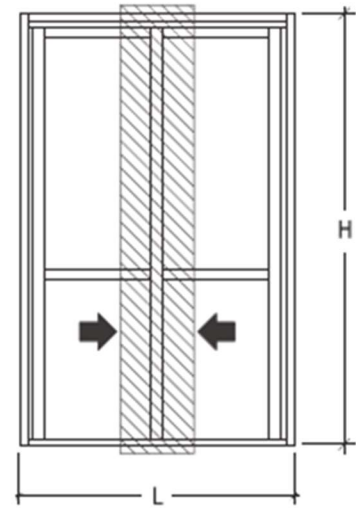
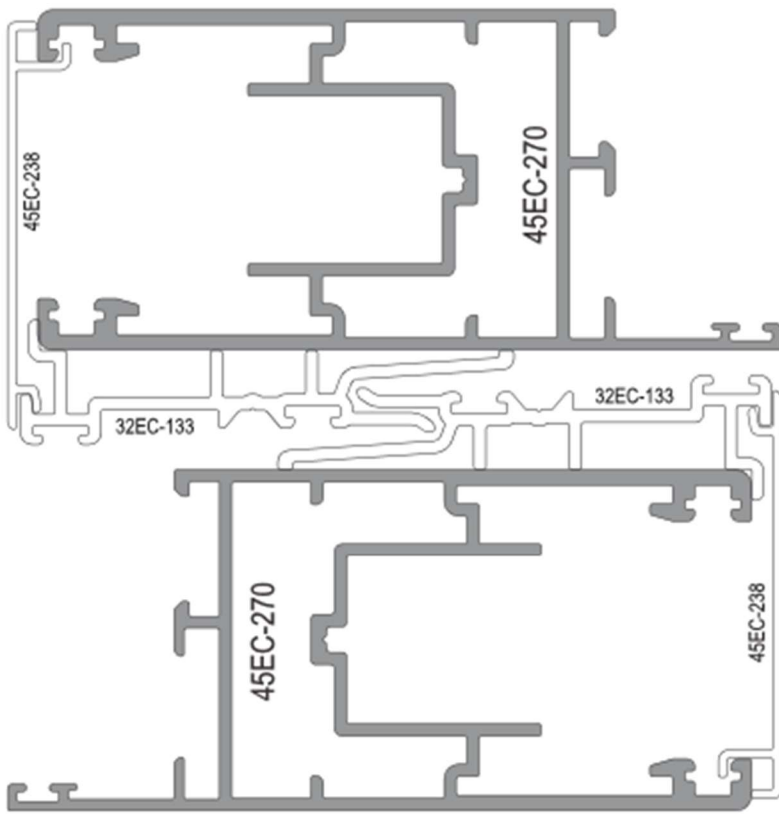


JANELA DE CORRER 4 FOLHAS

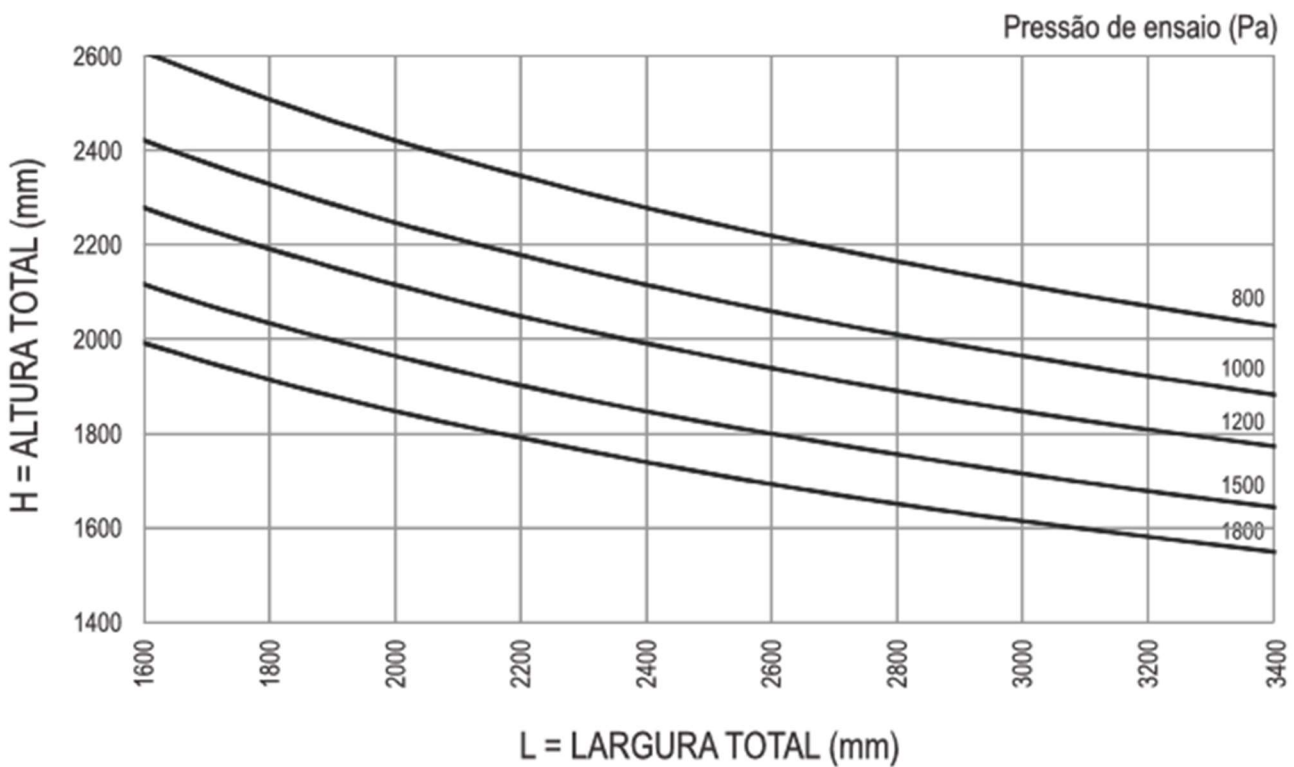
<b>45EC-234</b> Jx = 17,252 cm <sup>4</sup> Jy = 24,748 cm <sup>4</sup> Wx = 7,146 cm <sup>3</sup> Wy = 5,194 cm <sup>3</sup>	<b>45EC-234</b> Jx = 17,252 cm <sup>4</sup> Jy = 24,748 cm <sup>4</sup> Wx = 7,146 cm <sup>3</sup> Wy = 5,194 cm <sup>3</sup>
Jx Total = 34,504 cm <sup>4</sup> (perfil 45EC-229 não considerado no cálculo)	



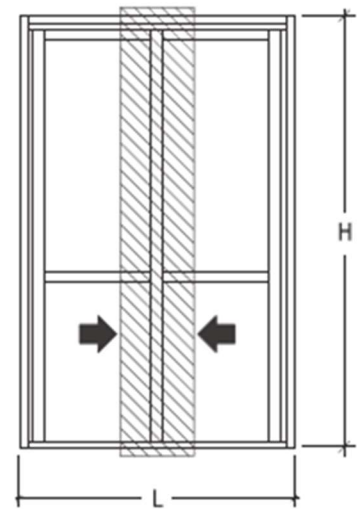
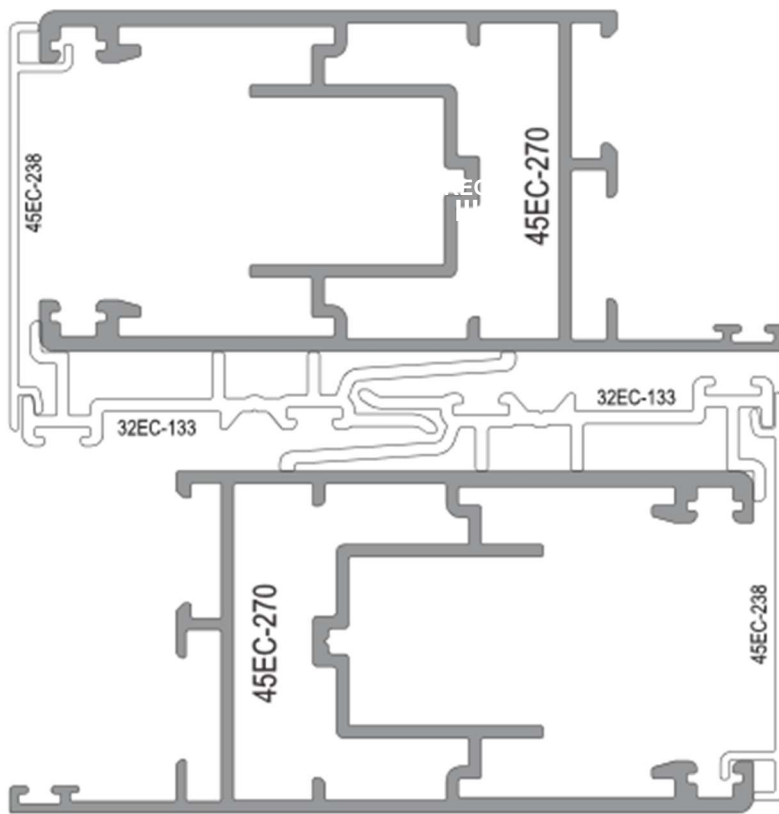
PORTA DE CORRER 2 FOLHAS



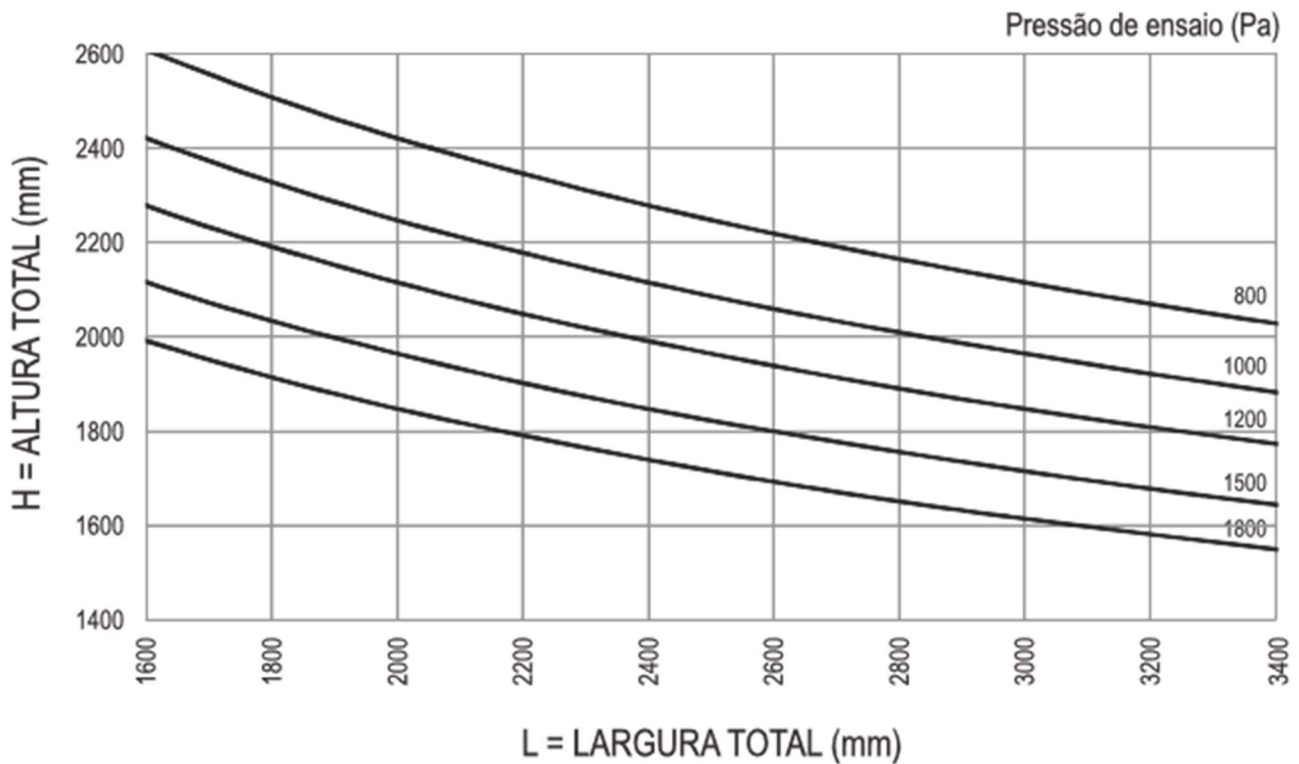
<b>45EC-270</b>	<b>45EC-270</b>
Jx = 20,336 cm <sup>4</sup>	Jx = 20,336 cm <sup>4</sup>
Jy = 38,912 cm <sup>4</sup>	Jy = 38,912 cm <sup>4</sup>
Wx = 8,526 cm <sup>3</sup>	Wx = 8,526 cm <sup>3</sup>
Wy = 7,215 cm <sup>3</sup>	Wy = 7,215 cm <sup>3</sup>
<b>Jx Total = 40,672 cm<sup>4</sup></b>	



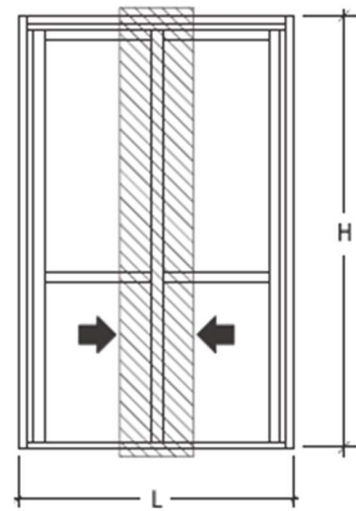
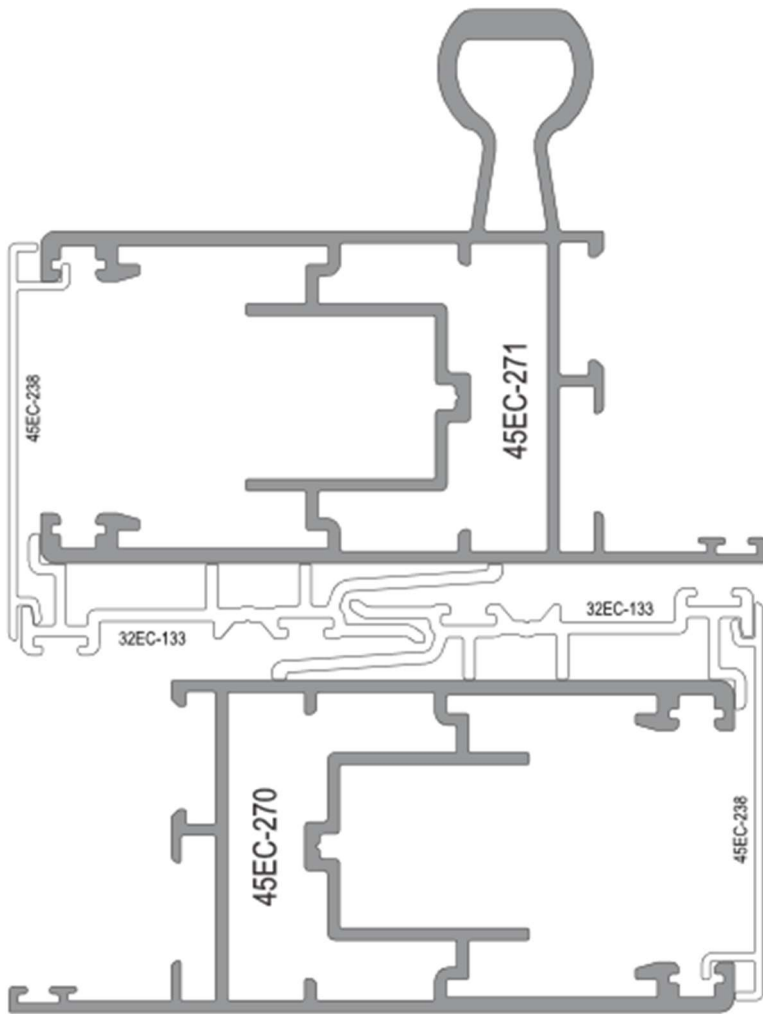
PORTA DE CORRER 2 FOLHAS



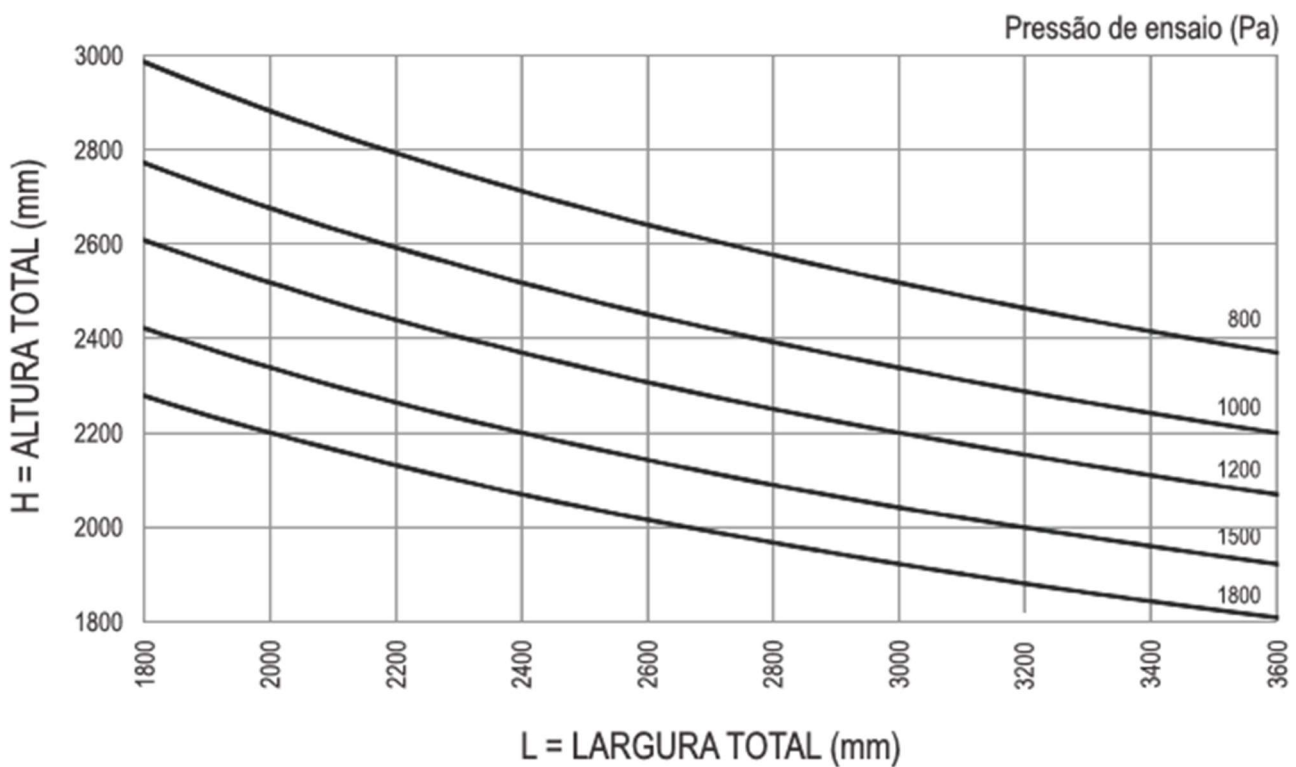
45EC-270	45EC-270
$J_x = 20,336 \text{ cm}^4$	$J_x = 20,336 \text{ cm}^4$
$J_y = 38,912 \text{ cm}^4$	$J_y = 38,912 \text{ cm}^4$
$W_x = 8,526 \text{ cm}^3$	$W_x = 8,526 \text{ cm}^3$
$W_y = 7,215 \text{ cm}^3$	$W_y = 7,215 \text{ cm}^3$
<b><math>J_x \text{ Total} = 40,672 \text{ cm}^4</math></b>	



PORTA DE CORRER 2 FOLHAS

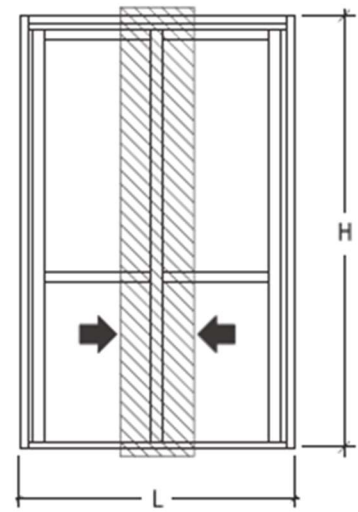
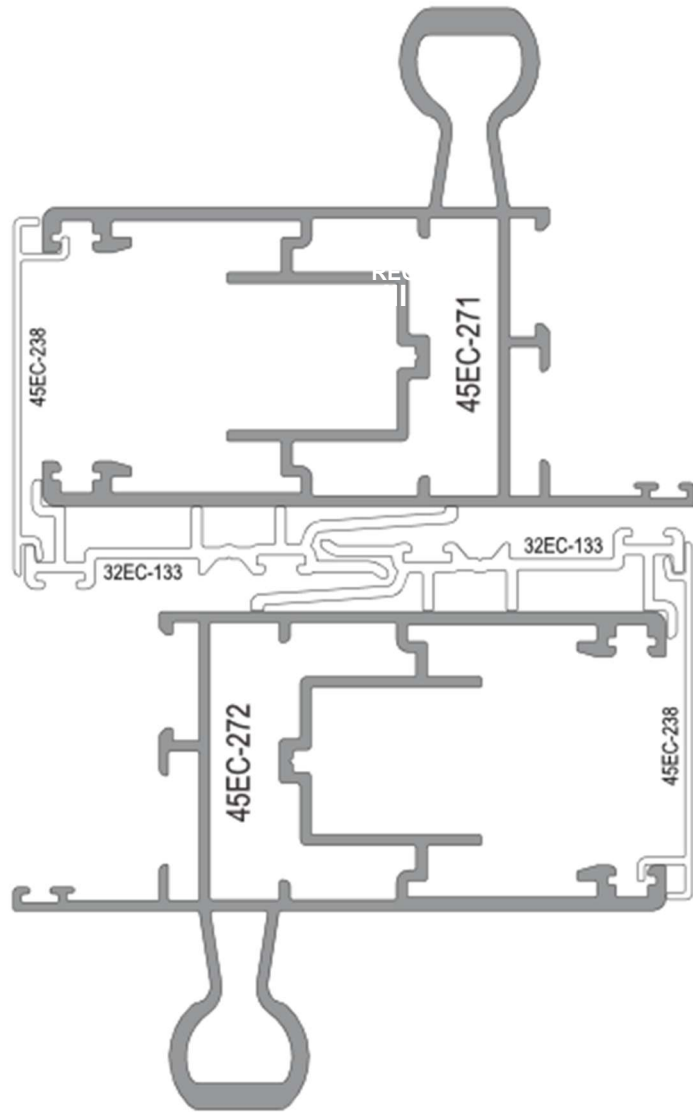


45EC-270	45EC-271
$Jx = 20,336 \text{ cm}^4$	$Jx = 48,561 \text{ cm}^4$
$Jy = 38,912 \text{ cm}^4$	$Jy = 45,314 \text{ cm}^4$
$Wx = 8,526 \text{ cm}^3$	$Wx = 10,994 \text{ cm}^3$
$Wy = 7,215 \text{ cm}^3$	$Wy = 9,159 \text{ cm}^3$
$Jx \text{ Total} = 68,897 \text{ cm}^4$	

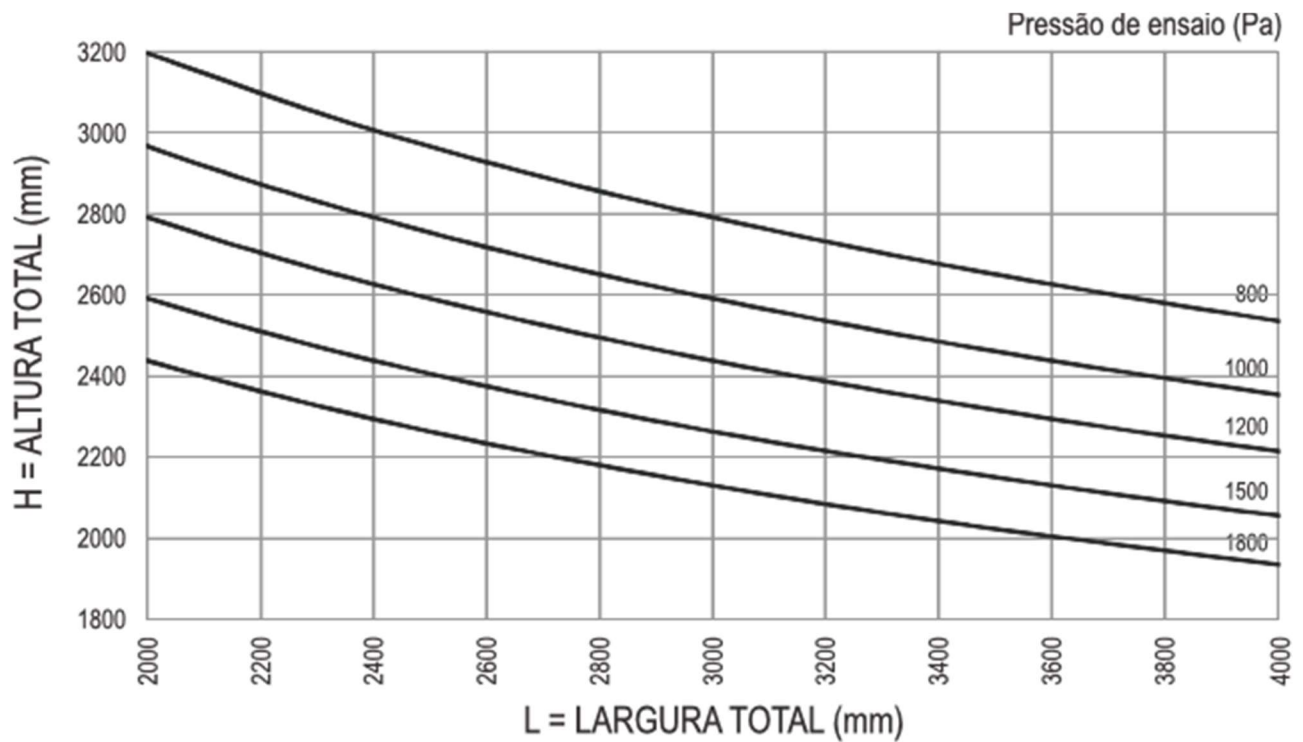




PORTA DE CORRER 2 FOLHAS



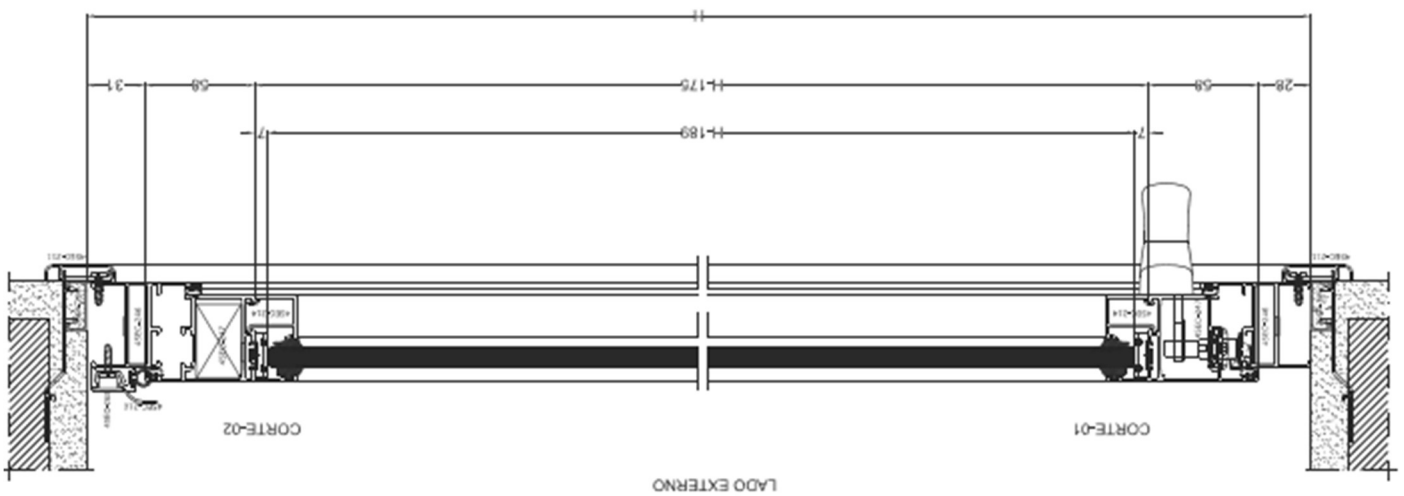
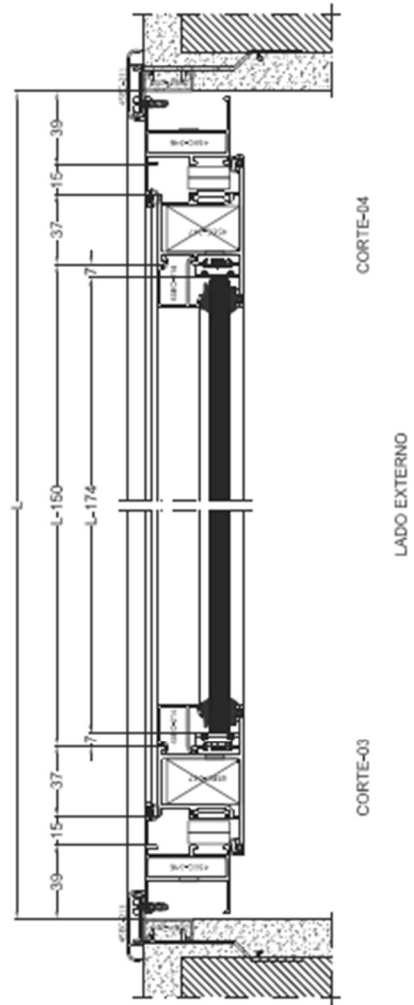
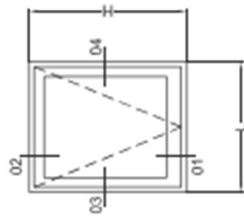
45EC-271	45EC-272
Jx = 48,561 cm <sup>4</sup>	Jx = 45,302 cm <sup>4</sup>
Jy = 45,314 cm <sup>4</sup>	Jy = 45,314 cm <sup>4</sup>
Wx = 10,994 cm <sup>3</sup>	Wx = 10,740 cm <sup>3</sup>
Wy = 9,159 cm <sup>3</sup>	Wy = 9,159 cm <sup>3</sup>
<b>Jx Total = 93,863 cm<sup>4</sup></b>	



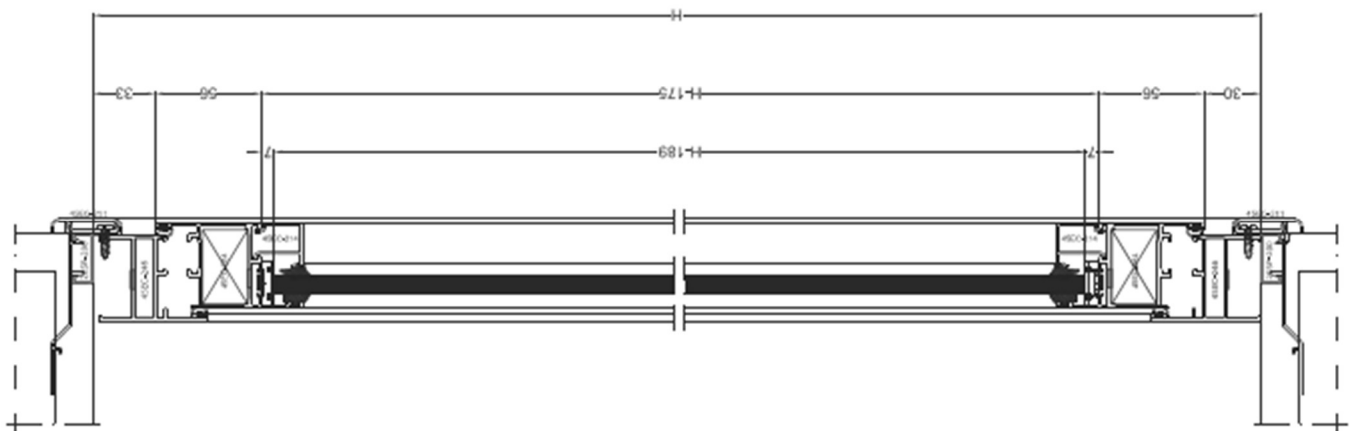
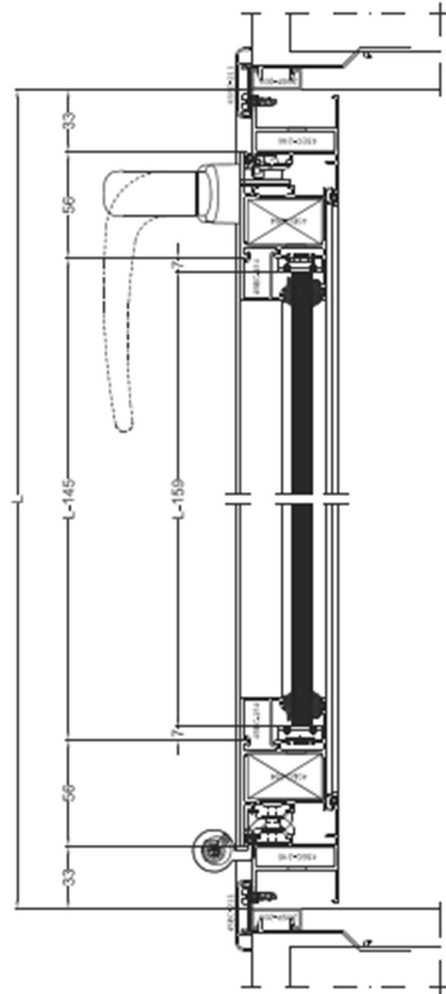
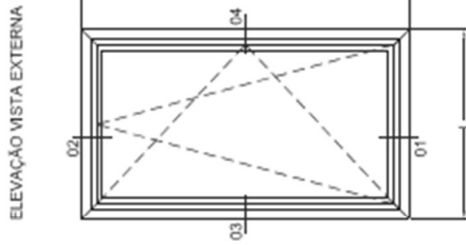


Janela Maxim-ar 01 folha

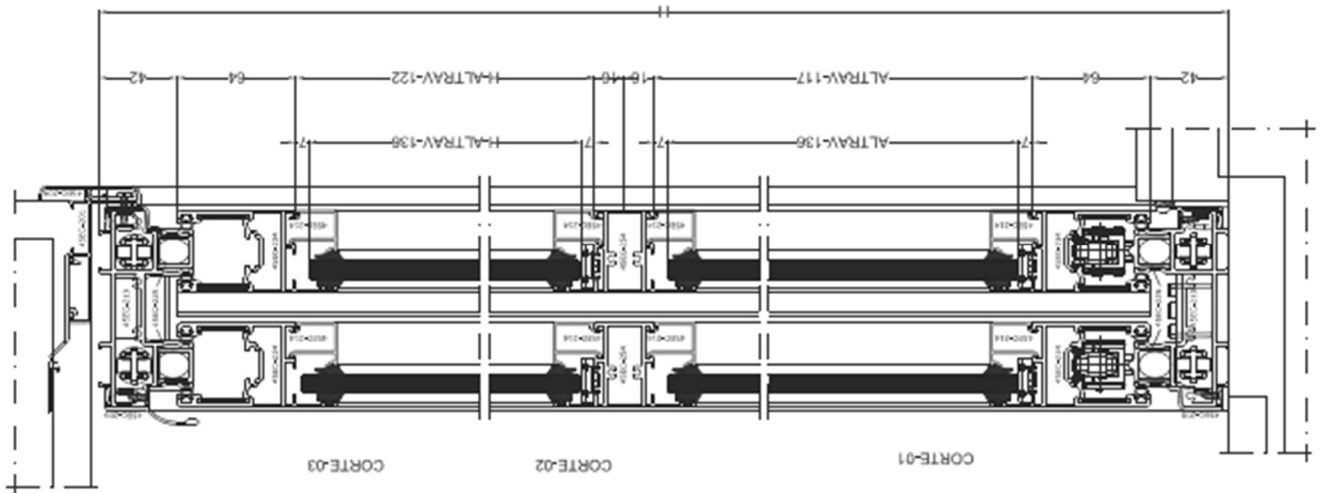
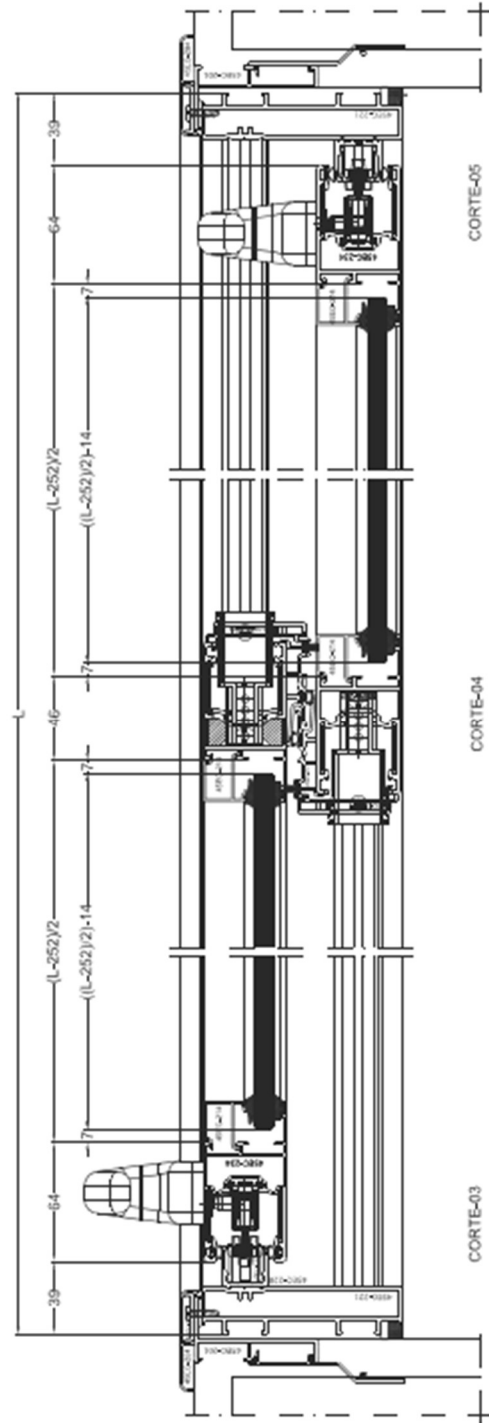
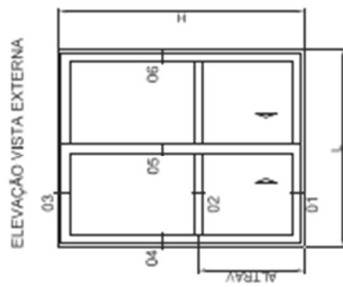
ELEVAÇÃO VISTA EXTERNA



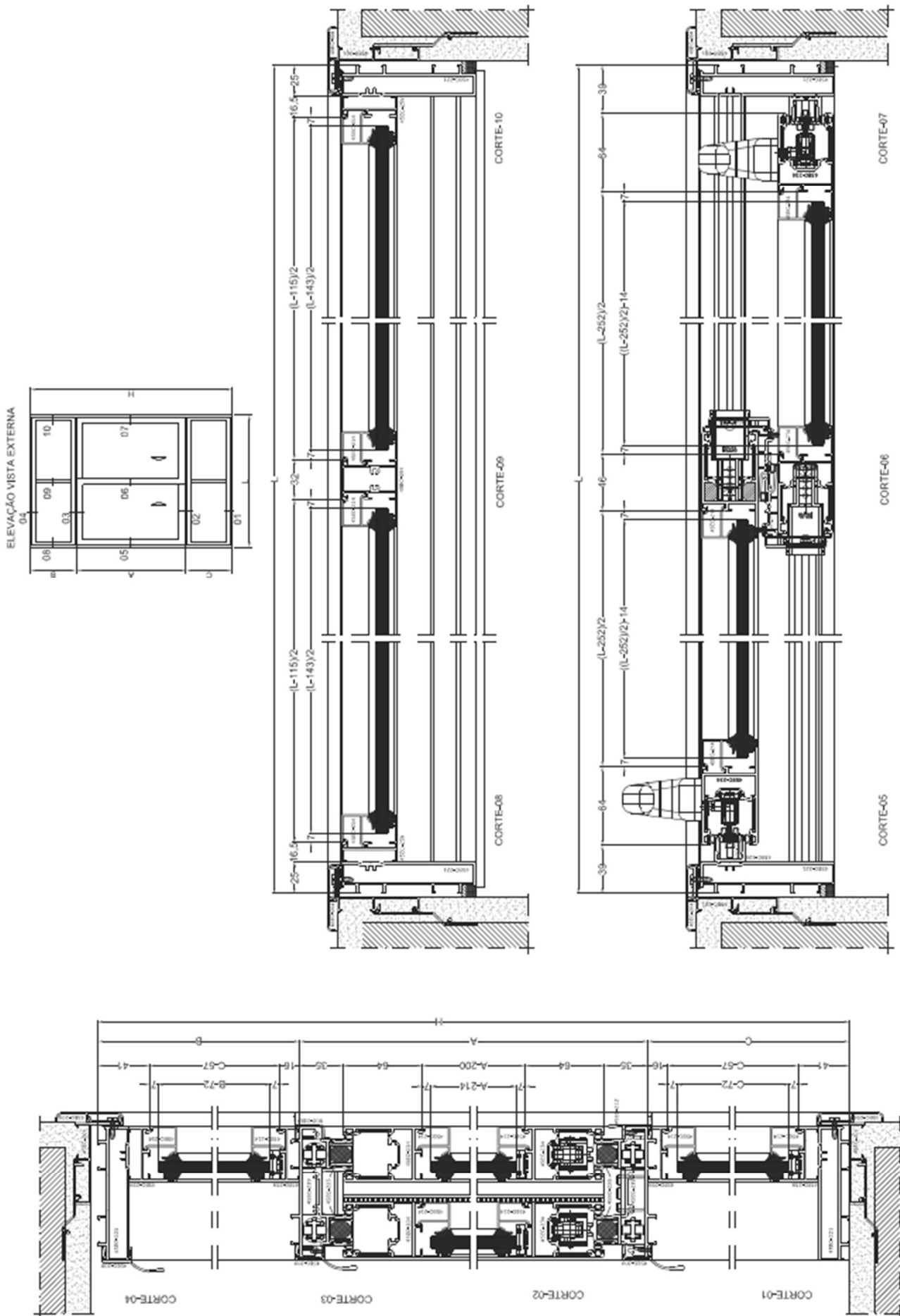
Janela de Oscilobatente 01 folha






Porta de Correr 02 Folhas com Travessa



Janela de Correr 02 Folhas com Bandeira e Peitoril



aluminorte		INFORMATIVO DE SISTEMAS ALUMINORTE				SP-EURO45		
TIPOLOGIA	CROQUI	NBR 10.821 / 2017			NBR. 15575 / 2021			
		RESISTENCIA	ESTANQUEIDADE	DIMENSÕES	ANO	ACÚSTICA	DIMENSÕES	ANO
Porta Integrada 02 folhas com travessa		Região IV - (30 pav = 90m)	300Pa	1595 x 2390		38dB		
Porta Integrada 02 folhas com travessa						31dB	1500 x 2300 ESTIMATIVA	
Porta Integrada 02 folhas com travessa						38dB	1500 x 2300 ESTIMATIVA	

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