

# Catálogo Técnico



**Perfeita para seus projetos mais importantes.**





## Janelas e portas de alumínio com desempenho superior.

### Perfis

### Componentes

### Envidraçamento



Roldanas

Batedeira

Os perfis de alumínio que compõem a Linha III Gold são extrudados pela Alcoa na liga 6060-T5. Sua espessura garante um comportamento estrutural adequado e precisão dimensional. Podem receber anodização ou pintura eletrostática a pó, que garante longa vida útil às esquadrias e confere um diferencial estético ao projeto.



Fechos

- Guias de nylon para deslizamento suave e preciso
- Folhas com travas externas de segurança
- Fitas vedadoras com barreira de proteção
- Caixa de dreno no trilho inferior e vedador no trilho superior

Permite a utilização de vidros laminados - com até 20 mm de espessura - ou vidros duplos, que reduzem a transmissão de calor e ruído.

- Batedeiras em nylon

Os componentes especialmente desenvolvidos para a Linha III Gold constituem-se em um importante diferencial desse produto. Entre eles podemos destacar:

- Roldanas duplas com rolamentos blindados
- Opções de fecho: tipo concha, com ou sem chave



**Perfeita para grandes vãos.**

### Acabamento

### Design

### Desempenho



A Linha III Gold possui conexões parafusadas, com cortes a 90 graus, o que proporciona encaixes perfeitos entre os elementos verticais e os horizontais. Além disso, estampos pneumáticos especialmente desenvolvidos pela Alcoa garantem usinagens perfeitas e acabamento impecável, com alto índice de produtividade.

O design é sem dúvida um dos grandes atributos da Linha III Gold e um dos principais responsáveis pela sua aceitação no mercado. Seus perfis com cantos arredondados propiciam um aspecto agradável, harmonioso e moderno ao conjunto. Projetada para grandes vãos, oferece maior liberdade construtiva e valoriza a criatividade do arquiteto.

A Linha III Gold atende a todas as exigências das Normas Brasileiras, apresentando excelente estanqueidade ao ar e à água e isolamento termo-acústico.

As persianas externas de enrolar tanto das janelas como das portas têm acionamento manual ou motorizado - controle remoto ou interruptor.



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# Capítulo 1

**Normas ABNT**

No Brasil, o comportamento estrutural de uma esquadria está regulamentada pela Norma NBR 10821.

Esta norma fixa as condições de desempenho de caixilhos em edificações residenciais e comerciais e visa assegurar ao consumidor, o recebimento de produtos com condições mínimas exigíveis de desempenho, especificamente quanto à resistência a cargas uniformemente distribuídas e que apresenta um roteiro de cálculo da pressão de ensaio (vento e vedação).

Gráfico das isoplethas da velocidade básica do vento: "V" em m/s no Brasil.

Figura 1

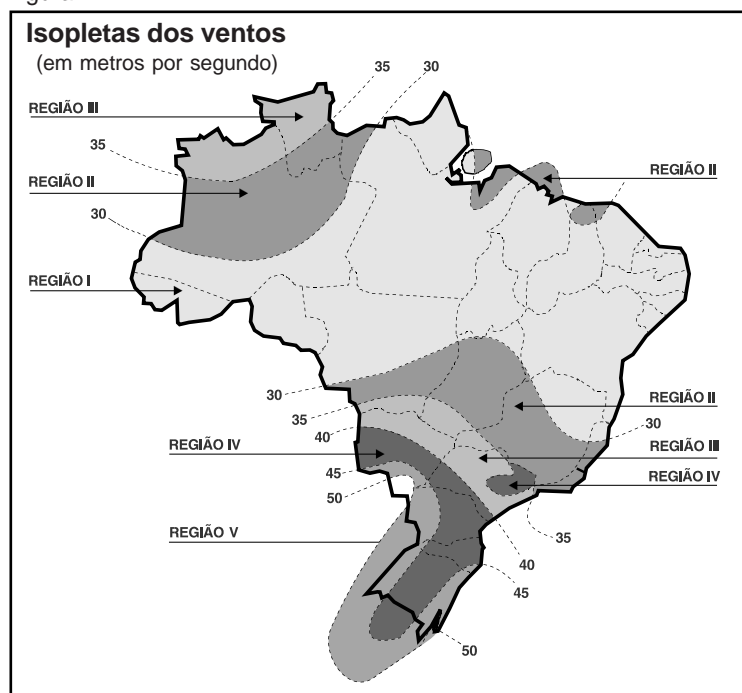


Tabela 1

### Pressão de ensaio de cargas uniformemente distribuídas.

Classe	Região do País	Pressão de projeto Pp em Pa	Pressão de sucção, em Pa, P.x0,8	Pressão de ensaio P= Ppx1,5 em Pa
Residencial Unifamiliar ou Comercial simples até 2 pavimentos Normal	I	300	350	450
	II	400	500	600
	III	550	650	800
	IV	650	800	950
	V	850	1000	1250
Residencial ou Comercial até 4 pavimentos ou 12 metros Melhorada	I	450	550	650
	II	600	700	900
	III	800	950	1200
	IV	1000	1200	1500
	V	1200	1450	1800
Comercial pesada ou edifícios residenciais com mais de 5 pavimentos Reforçada	Todas as regiões	Calcular conforme NBR 6123	Calcular conforme NBR 6123	Calcular conforme NBR 6123
Arquiteturas especiais (Shopping, industriais, hospitais, etc.) Excepcional	Todas as regiões	Calcular conforme NBR 6123	Calcular conforme NBR 6123	Calcular conforme NBR 6123

**Notas:** 1) Na classe reforçada, os valores de pressão, calculados conforme a NBR-6123, deverão ser, pelo menos, iguais aos valores das pressões de ensaio da classe Melhorada.  
2) Nos casos de arquiteturas especiais da classe Excepcional, os valores de pressão de ensaio, calculados conforme a NBR-6123, quando inferiores aos valores da classe Melhorada, deverão ser justificados através de ensaios em túneis de vento ou planilhas de cálculo e assinadas por um responsável técnico.

Tabela 2

### Pressão de ensaio de estanqueidade à água

Classe de utilização	Região do País	Pressão de estanqueidade à água - Pressão de projeto de vento - Pp x 0,15, em Pa
Residencial Unifamiliar ou Comercial simples - até dois pavimentos Normal	I	40
	II	60
	III	80
	IV	100
	V	120
Residencial ou Comercial até 4 pavimentos ou 12 metros Melhorada	I	60
	II	90
	III	120
	IV	150
	V	180
Comercial pesada ou edifícios residenciais com mais de 5 pavimentos Reforçada	Todas as regiões	Pressões de ensaio = o maior dos dois valores. 0,15 x Pp (pressão de projeto das cargas de vento) e os valores das pressões da classe Melhorada.
Arquiteturas especiais (Shopping, indústrias, hospitais, etc.) Excepcional	Todas as regiões	Pressões de ensaio = o maior dos dois valores: 0,15 x Pp (pressão de projeto das cargas de vento) e os valores das pressões de classe Melhorada.

Tabela 3

### Fator topográfico de correção $s_1$

Topografia	$S_1$
Vales profundos, protegidos de todos os ventos.	0,9
Encostas e cristas de morro em que ocorre aceleração do vento.	1,1
Vales com efeitos de afunilamento.	
Todos os casos, exceto os acima citados.	1

Tabela 4

### Fator de Correção $s_2$

Rugosidade do terreno, dimensões da edificação e altura acima do terreno.

Altura acima do terreno H (m)	CATEGORIA			
	Terreno aberto sem obstruções	Terreno aberto com poucas obstruções	Terreno com muitas obstruções; pequenas cidades; subúrbios de grandes cidades	Terreno com obstruções grandes e frequentes Ex: centros de grandes cidades
3	0,83	0,72	0,64	0,56
5	0,88	0,79	0,70	0,60
10	1,00	0,93	0,78	0,67
15	1,03	1,00	0,88	0,74
20	1,06	1,03	0,95	0,79
30	1,09	1,07	1,01	0,90
40	1,12	1,10	1,05	0,97
50	1,14	1,12	1,08	1,02
60	1,15	1,14	1,10	1,05
80	1,18	1,17	1,13	1,10
100	1,20	1,19	1,16	1,13
120	1,22	1,21	1,18	1,15
140	1,24	1,22	1,20	1,17
160	1,25	1,24	1,21	1,19
180	1,26	1,25	1,23	1,20
200	1,27	1,26	1,24	1,22

Fator Probabilístico  $s_3 = 0,88$

### EXEMPLO SIMPLIFICADO DE PRESSÃO DE ENSAIO NA CLASSE REFORÇADA.

**P = Pressão de Ensaio**

$$P = q \cdot (C_e - C_i)$$

onde:

**P** = Pressão de Ensaio (Pa)

**q** = Pressão de Obstrução (Pa)

**C<sub>e</sub>-C<sub>i</sub>** = Para este exemplo, adotamos o valor de 1,5 para **(C<sub>e</sub>-C<sub>i</sub>)** que é um coeficiente válido para condições desfavoráveis.

**q = Pressão de Obstrução**

$$q = \frac{(VK)^2}{1,6}$$

onde:

**VK = Velocidade Características do Vento**

$$VK = V_0 \cdot S_1 \cdot S_2 \cdot S_3$$

onde:

**V<sub>0</sub>** Velocidade Básica do Vento em m/s, dada pelas isopletas. (Figura 1)

**S<sub>1</sub>** Fator Topográfico de Correção, dado pela tabela 3.

**S<sub>2</sub>** Fator de Correção que considera as influências da rugosidade do terreno, das dimensões da edificação e de sua altura sobre o terreno, dado pela tabela 4.

**S<sub>3</sub>** Fator Probabilístico, de valor igual a 0,88.

$$1) VK = V_0 \cdot S_1 \cdot S_2 \cdot S_3$$

onde:

$$V_0 = 40 \text{ m/s}$$

$$S_1 = 1$$

$$S_2 = 1,12$$

$$S_3 = 0,88$$

$$VK = 39,42 \text{ m/s}$$

$$2) q = \frac{(VK)^2}{1,6}$$

$$q = 971 \text{ Pa (também é igual a Pressão de Projeto = Pp)}$$

$$3) P = q \cdot (C_e - C_i)$$

$$P = 1457 \text{ Pa ou } 145,7 \text{ kg/m}^2$$

### Conclusão deste exemplo:

a) Para efeito de cálculo estrutural, temos que utilizar o valor de

$$145,7 \text{ kg/m}^2 \text{ ou } 1457 \text{ Pa}$$

b) Para efeito de ensaio de estanqueidade à água, temos que utilizar o valor que representa 15% do valor da Pressão de Projeto, que é

$$97,1 \text{ kg/m}^2 \text{ ou } 971 \text{ Pa,}$$

cujo valor é

$$14,6 \text{ kg/m}^2 \text{ ou } 140 \text{ Pa}$$

### Descrição do exemplo a ser calculado

Obra localizada em São Paulo, REGIÃO III, em local de terreno aberto e poucas obstruções, com 16 pavimentos ( $\pm 50$  metros).  
Vide tabela 4, 3.<sup>a</sup> coluna.



## Capítulo 2

### Resultados dos ensaios



# Resultado dos ensaios

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**RELATÓRIO DE ENSAIO ENTI 0000**

**ENGENHARIA DE ALUMÍNIO**

**DETERMINAÇÕES DIVERSAS**

**Interessado:** ALCOA ALUMÍNIO S.A.  
 Rua Felipe Camarão, 535 - Uruguá,  
 96233-902 - Santo André - SP.

**Ensaio:** (1) 100(A)

**1. MATERIAL ENSAIADO:**  
 Um protótipo de esquadra de alumínio entregue pelo interessado em testes laboratoriais em 05/06/04.

**1.1 - Tipo:**  
 Janela resamim, constituída por duas folhas móveis, identificada pelo fabricante como MAX LINHA 8 GOLD.

**1.2 - Dimensões do protótipo:**  
 - vão: (2 040 x 1 120) mm.  
 - Folha móvel-à esquerda: (900 x 1 120) mm.  
 - Folha móvel-à direita: (900 x 1 136) mm.

**1.3 - Fixação ao vão:**  
 A janela de alumínio foi fixada em cantoneiros instalados em alvenaria acabada de blocos cerâmicos.

**1.4 - Sistema de ventilação:**  
 Idêntico ao apresentado em planta anexa.

**2. ENSAIO REALIZADOS - METODOLOGIAS:**

**2.1 - Verificação da Penetração de Ar, conforme NBR 9485.**

**2.2 - Verificação da estanqueidade à Água, conforme NBR 9486.**

**2.3 - Comportamento sob Cargas Uniformemente Distribuídas, conforme NBR 9487.**

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**RESULTADOS CRÍTICOS:**

**2.1 - Penetração de Ar:**

Pressão (Pa)	Máxima vazão de ar detectada	Localização
50	0,20m³/s	—
90(*)	0,20m³/s	—

(\*) realizado após o término do ensaio de deformação.

**2.2 - Estanqueidade à Água:**

De acordo a seguir correlaciono os valores das pressões aplicadas em função da classe e região de utilização, os tempos de aplicação e as observações obtidas durante o ensaio.

A vazão de água aplicada foi 4 l min. m<sup>2</sup>.

Classe e Região de Utilização de Janela	Pressão de Ensaio (Pa)	Tempo (min)	Observações
Melhorada II	120	15	Nenhuma observada
Melhorada IV	180	30	Nenhuma observada
A partir de melhorada	300	15	Nenhuma observada
A partir de melhorada	250	15	Nenhuma observada
A partir de melhorada	300	15	Nenhuma observada

PI - permeabilidade total, na qual não ocorre escoamento de água para o interior.  
 PE - permeabilidade aparente, na qual ocorre escoamento de água para o interior.

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**3.2 - Comportamento sob Cargas Uniformemente Distribuídas**

**3.2.1 - Pressão positiva:**

Pressão (Pa)	Vazão de ar (m³/s)	Deformação (mm) D1	Deformação (mm) D2	Deformação (mm) D3	Deformação Residual (mm) D1 + D2 + D3
1 200	1,98	1,26	0,00	0,00	0,84
0	—	0,02	0,02	0,02	0,06
1 800	1,76	1,61	0,15	0,16	0,84
0	—	0,00	0,00	0,04	0,04
1 800	1,60	2,04	0,30	0,07	1,06
0	—	0,06	0,06	0,06	-0,01

Deformação máxima (comprimento livre do perfil): 8,23  
 Deformação residual máxima (0,4% do comprimento livre do perfil): 4,35

**3.2.2 - Pressão negativa (sugão):**

Pressão (Pa)	Vazão de ar (m³/s)	Deformação (mm) D1	Deformação (mm) D2	Deformação (mm) D3	Deformação Residual (mm) D1 + D2 + D3
900	1,61	1,06	1,04	1,14	0,90
0	—	0,22	0,22	0,03	0,00
1 200	1,60	2,06	1,39	1,17	0,51
0	—	0,00	0,04	0,00	-0,02
1 440	1,74	2,00	1,17	2,00	0,89
0	—	0,00	0,07	0,00	0,00

Deformação máxima (comprimento livre do perfil): 8,23  
 Deformação residual máxima (0,4% do comprimento livre do perfil): 4,35

Os defectômetros para medição das deformações foram posicionados no seguinte padrão de acordo com o estabelecido em 1 088 mm:

D 1 - na parte do montante;  
 D 2 - na parte superior do montante;  
 D 3 - na parte inferior do montante.

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**4. OBSERVAÇÕES:**

**4.1 - Os requisitos de desempenho das esquadras, são estabelecidos para quatro categorias de edifício, denominadas classes de utilização:**

- classe normal: são esquadras que serão instaladas em edifícios de caráter residencial ou comercial sujeitos de até dois pavimentos;
- classe melhorada: são esquadras que serão instaladas em edifícios de caráter residencial ou comercial de até quatro pavimentos ou 12 metros;
- classe reforçada: são esquadras que serão instaladas em edifícios de caráter comercial sujeitos de até cinco pavimentos ou 15 metros;
- classe especializada: são esquadras que serão instaladas em edifícios de arquitetura especial (shopping, indústrias, hospitais, etc.).

Para todas as classes de utilização, os ensaios de estanqueidade à água e resistências às cargas uniformemente distribuídas, são realizados de acordo com as regras de teste antes e depois de utilizada, conforme indica a Figura 2 de NBR 10.821.

Nas classes de utilização Reforçada e Especializada, para a realização dos ensaios de estanqueidade à água e resistências às cargas uniformemente distribuídas, para efeito de determinação da pressão a ser aplicada, é utilizado o pressão de projeto das cargas de vento especifica para cada edificação, conforme especifica o Anexo B) da NBR 10.821, sendo esta informada pelo interessado e de sua total responsabilidade.

**4.2 - Segundo os resultados obtidos no ensaio verificação de penetração de ar, o protótipo atendeu as exigências para ambientes não condicionados ou não climatizados, instalados em São Paulo, Paraná, Santa Catarina e Rio Grande do Sul, para todas as classes de utilização.**

Quanto ao ensaio de estanqueidade à água, o protótipo atendeu as exigências da NBR 10.821 até a pressão máxima de 900 Pa, no vão, assim da classe Melhorada, na região V (90 Pa).

No ensaio de resistência a cargas uniformemente distribuídas o protótipo atendeu as exigências da NBR 10.821, até a pressão 1800 Pa (785 N/m<sup>2</sup>) e quanto à pressão de sugão o protótipo atendeu as exigências até a pressão de 1440 Pa (174 N/m<sup>2</sup>), atendendo as exigências da NBR 10.821 até a região V de classe Melhorada.

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4.2 - É PARTE INTEGRANTE DESTES RELATÓRIOS O COMPLEMENTO, O DESENHO DA ESCALARIA DE ALUMÍNIO, COM CARIMBO E RUBRICA DESTES LABORATÓRIOS. Segue em anexo documentação fotográfica (fotos nº 01 a 03).

4.4 - Fecho de ensai - FE 8008

4.5 - Ensaio finalizado em julho de 2004.

4.6 - Este relatório atende aos requisitos de atendimento do IMBRETRO, o qual avalia a competência do laboratório.

**NOTA IMPORTANTE:**  
 Os resultados têm significação estatística, aplicando-se 5% erro em 1 amostra ensaiada.

São Paulo, 22 de julho de 2004.

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**ANEXOS**

- Documentação fotográfica (fotos nº 01 a 03).
- Desenho de esqueleto de alumínio com carimbo e rubrica do laboratório.

São Paulo, 22 de julho de 2004.

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**Foto nº. 01**  
 verificação de penetração de ar.



**Foto nº. 02**  
 verificação de estanqueidade à água.



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**Foto nº. 03**  
 Posicionamento dos defletores no ensaio de comportamento sob cargas uniformemente distribuídas.



São Paulo, 22 de julho de 2004.

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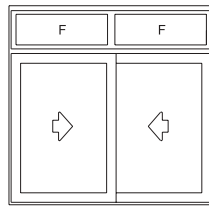
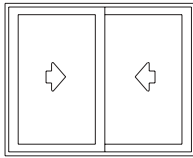
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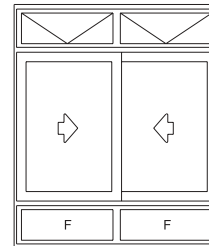
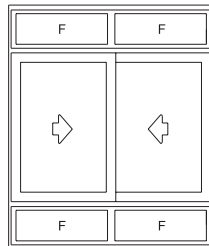
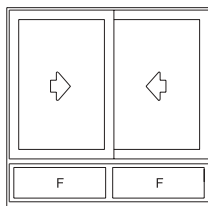
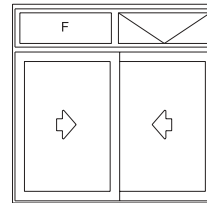
## Capítulo 3

# Tipologia

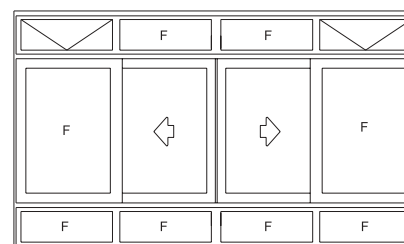
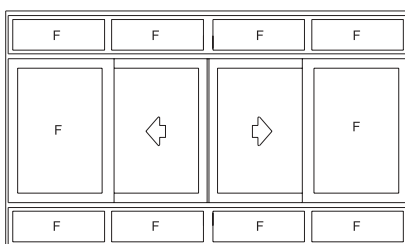
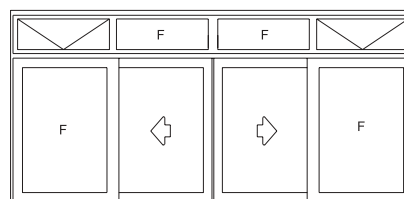
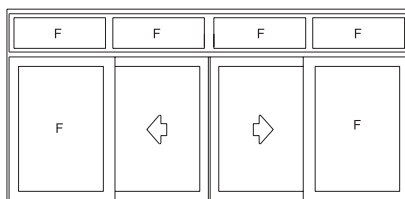
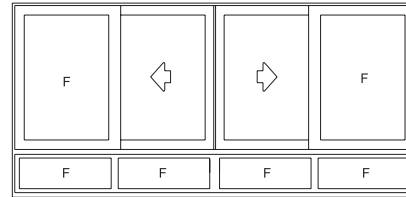
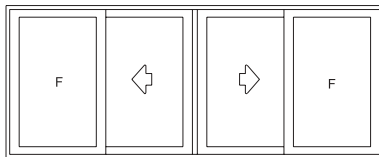
JC2F

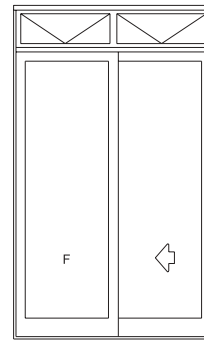
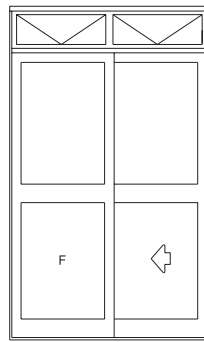
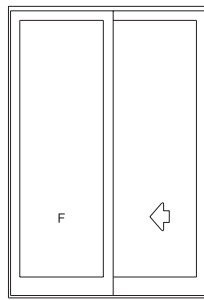
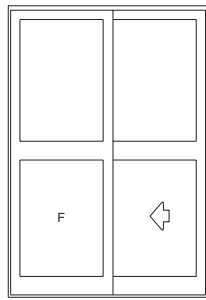


JC2F BMF

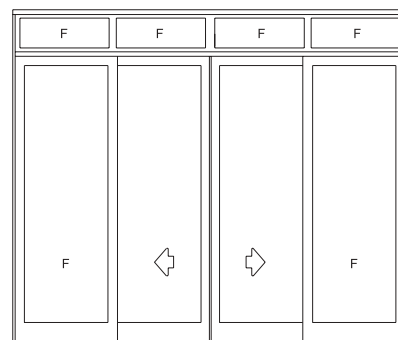
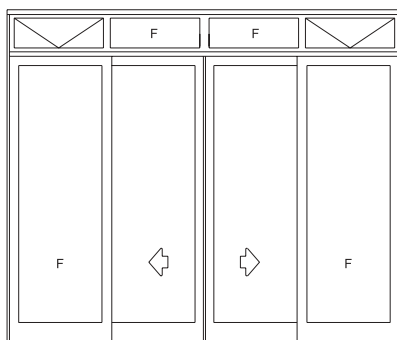
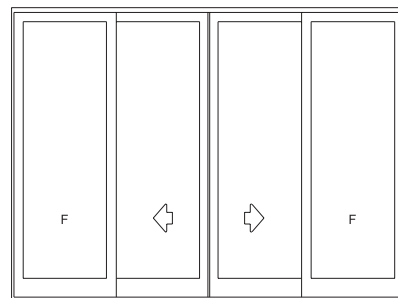
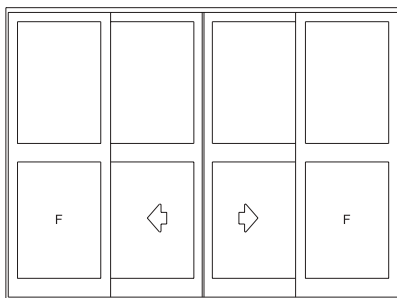
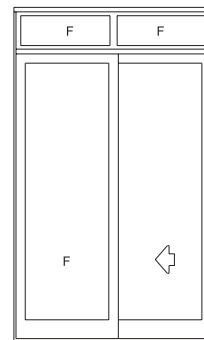
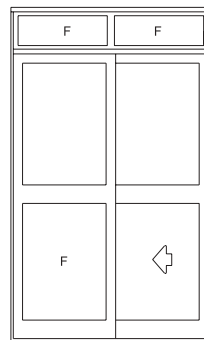
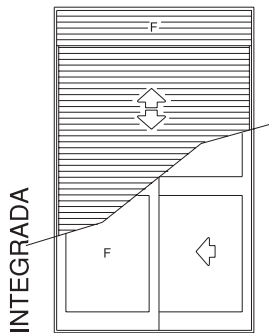


JC4F

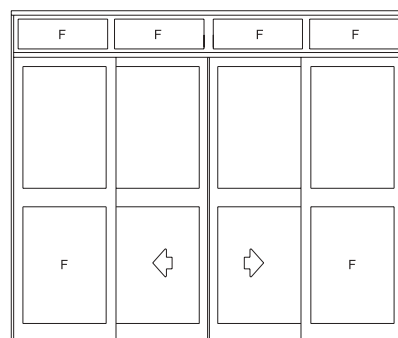
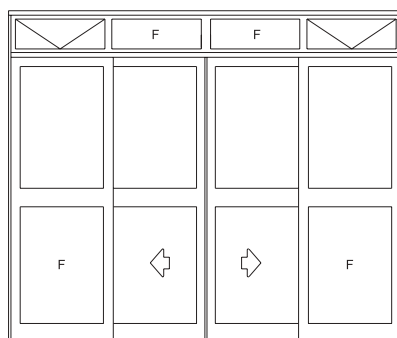




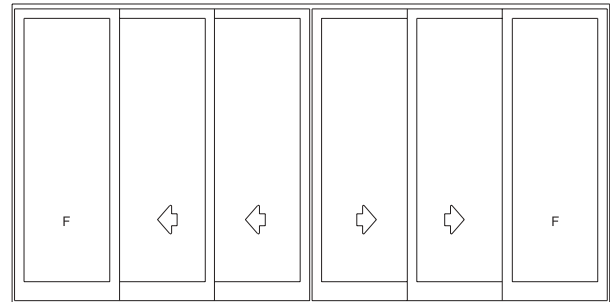
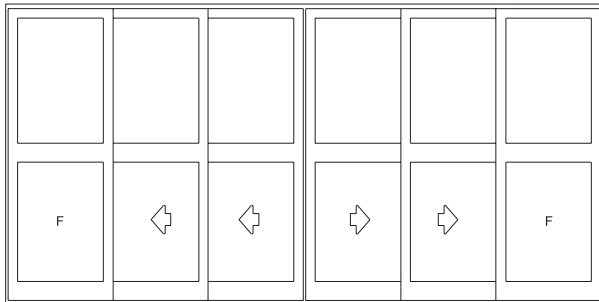
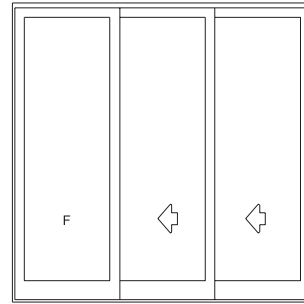
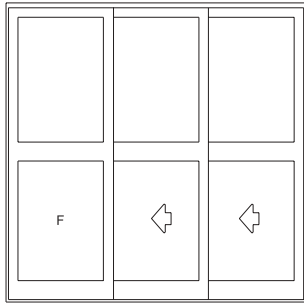
PC2 FPE



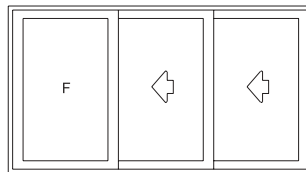
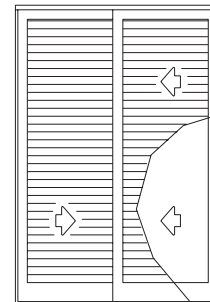
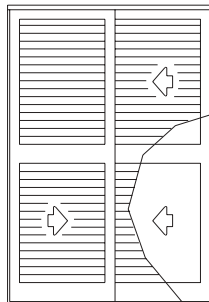
PC4F BMF



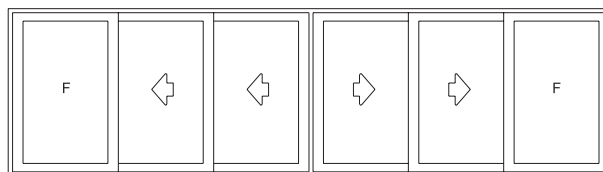
Dimensões máximas, ver Diagrama de Dimensões



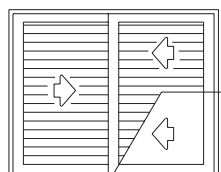
PC3 FVZ



JC6F



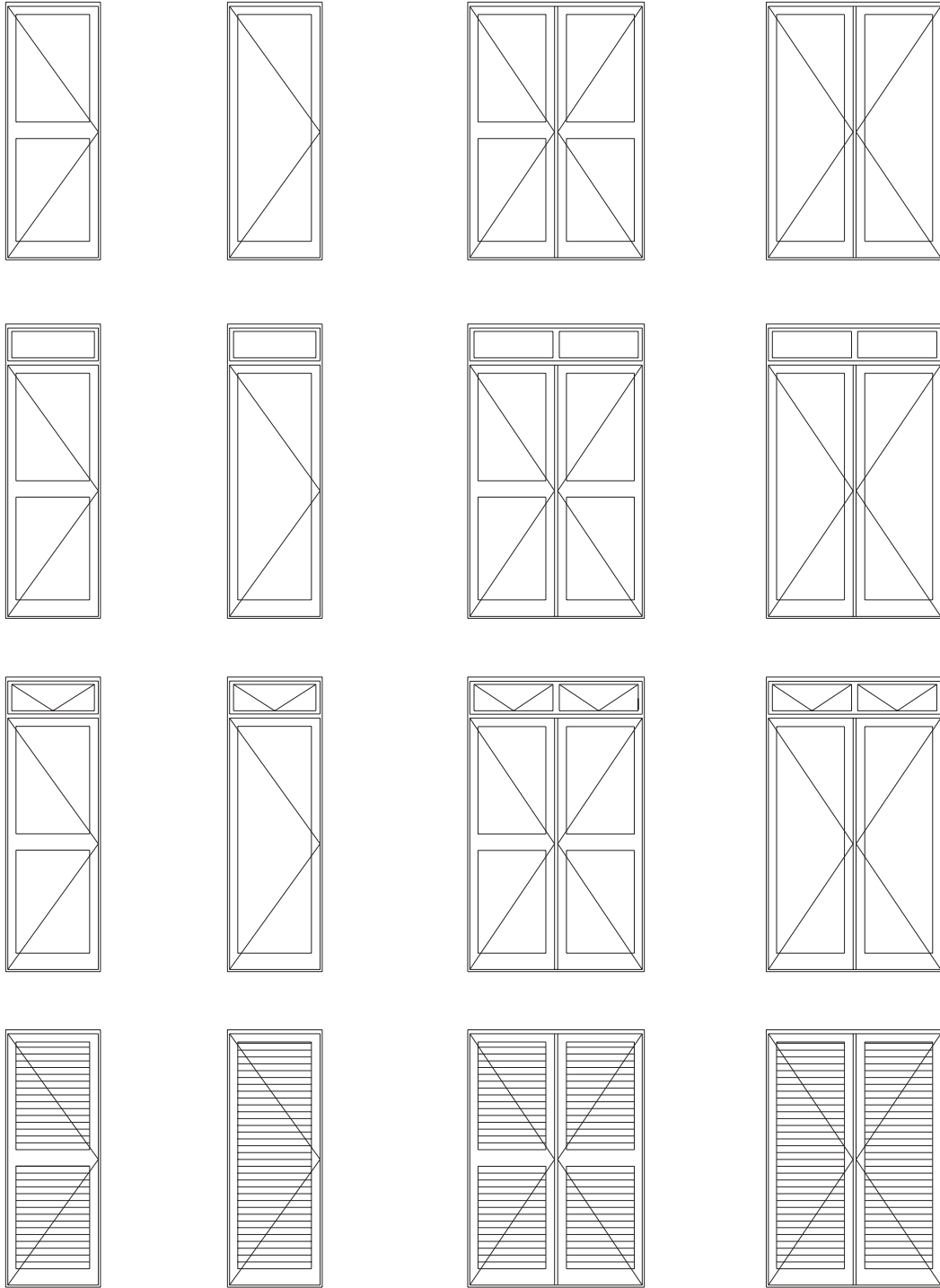
JC3FVZ



Dimensões máximas, ver Diagrama de Dimensões

# Tipologia

PGR2F

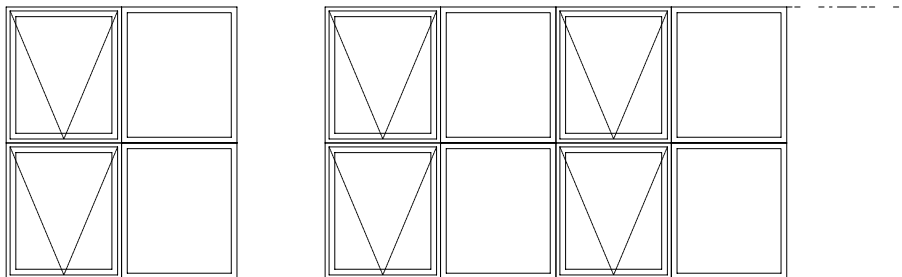
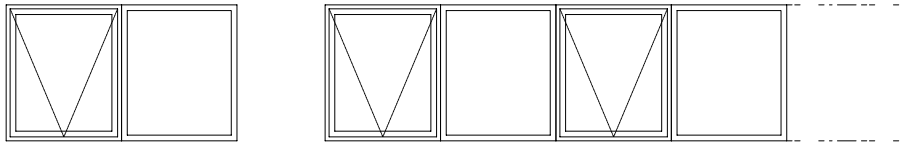
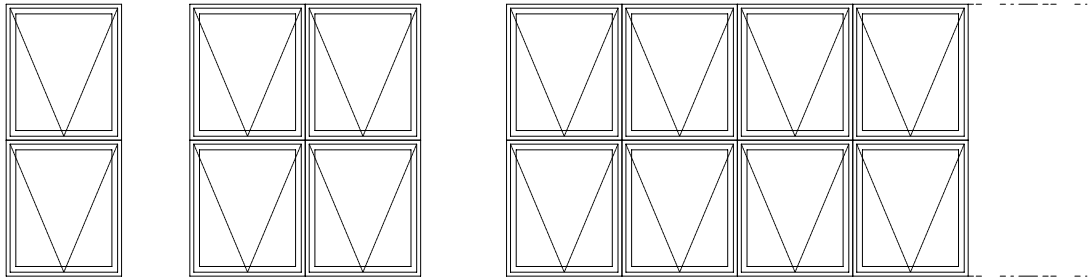
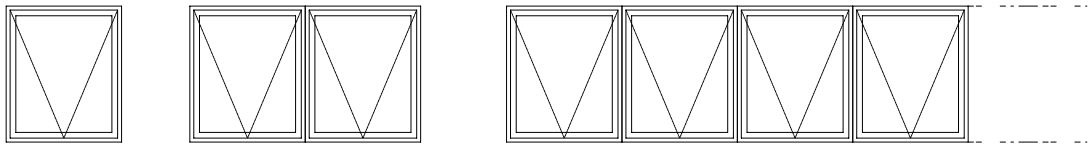


PGR 1FVZ

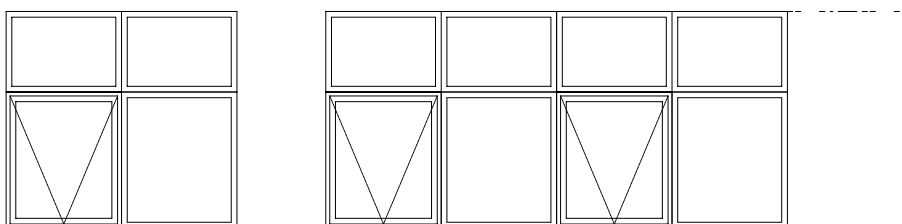
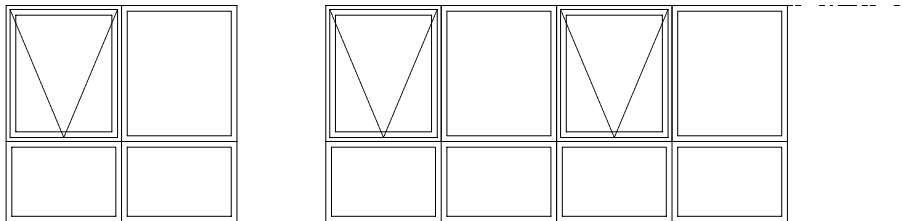


Dimensões máximas, ver Diagrama de Dimensões

# Tipologia



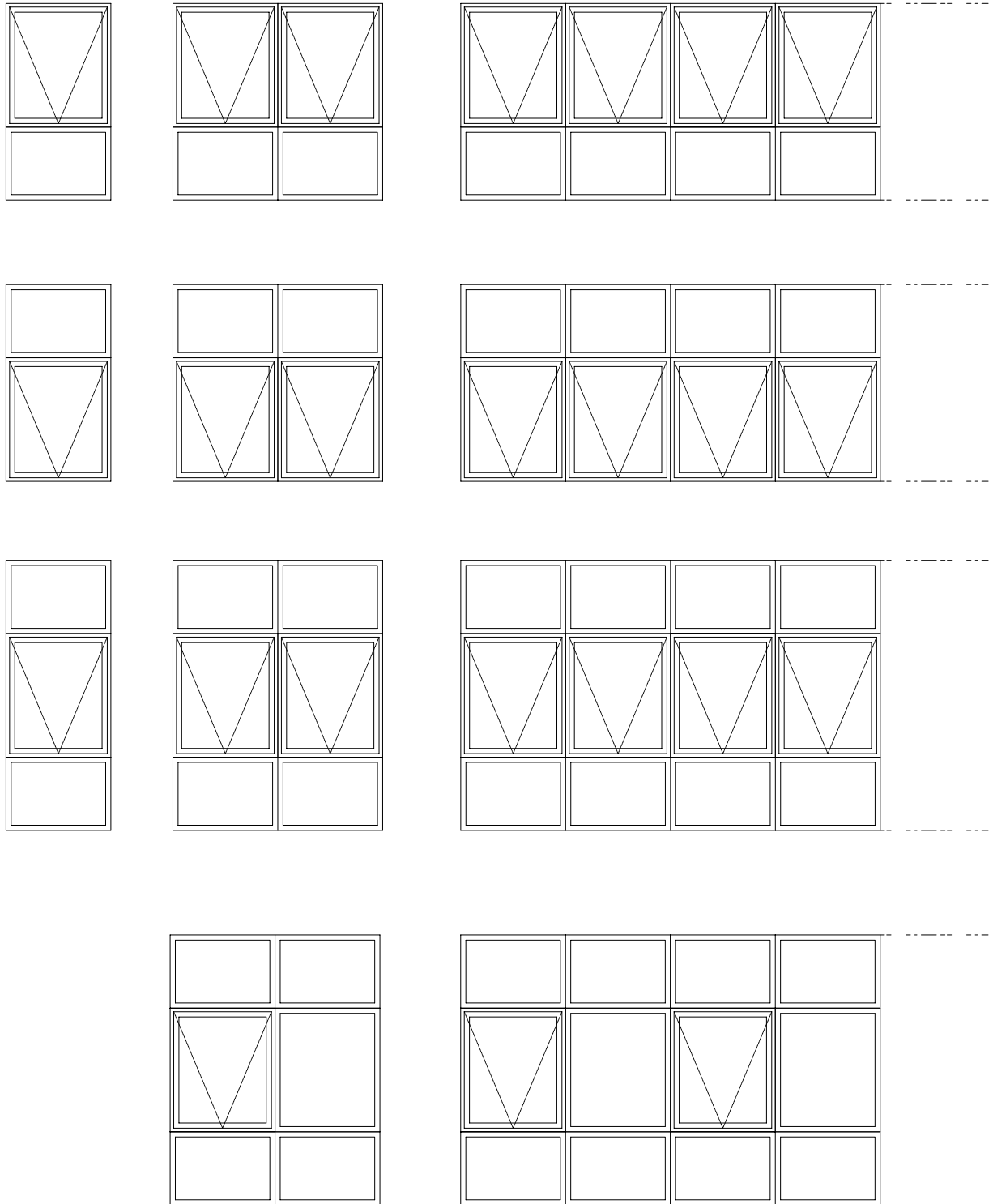
## MAX P FIXO CC-CD

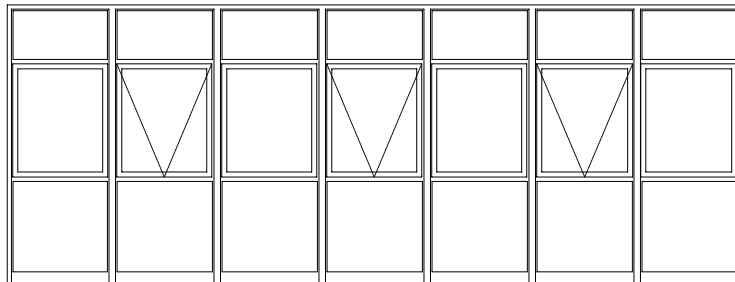
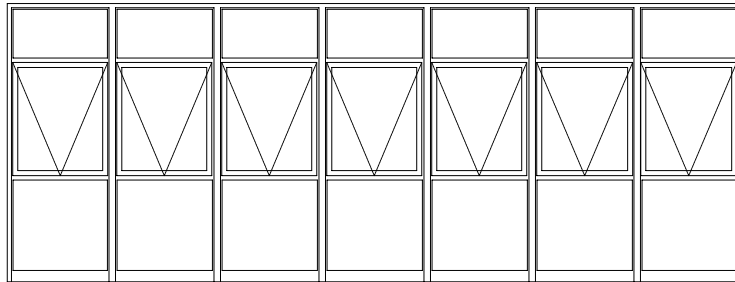


Dimensões máximas, ver Diagrama de Dimensões

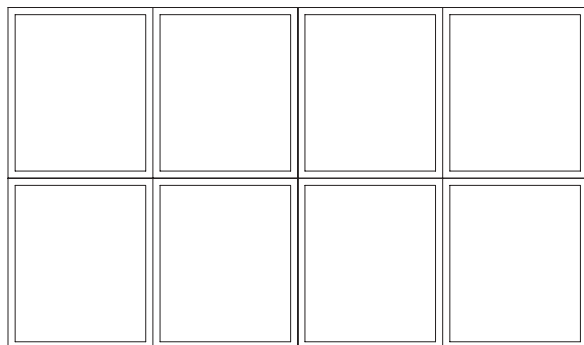
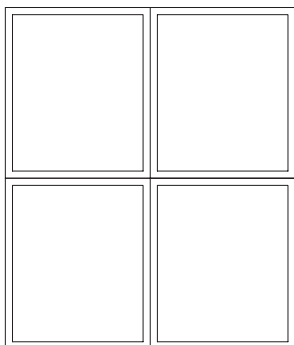
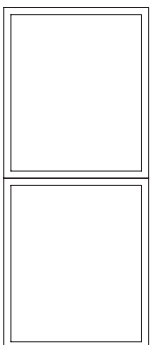
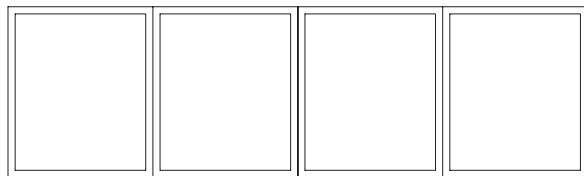
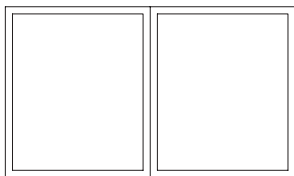
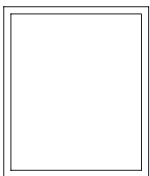
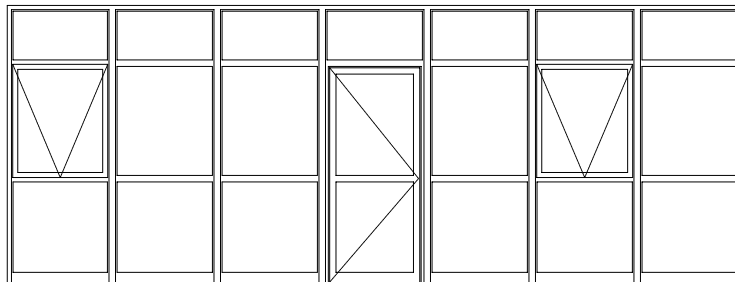


## MAX P FIXO CC-CD





CJ-P GIRO

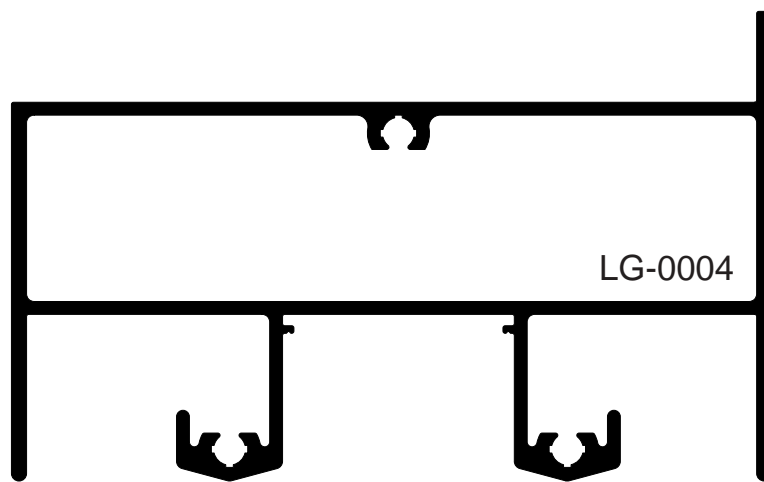
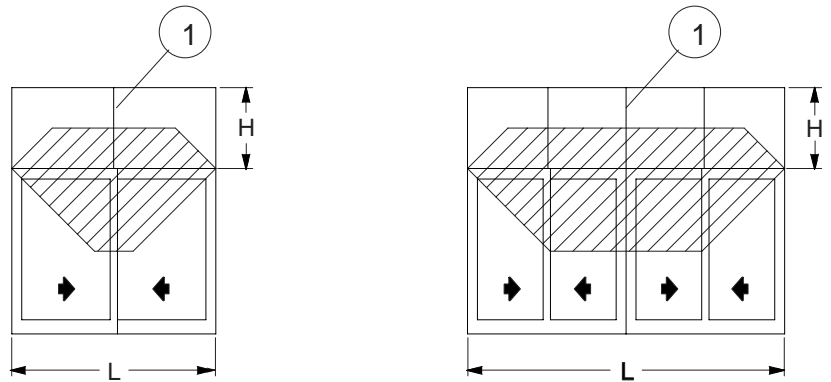




## Capítulo 4

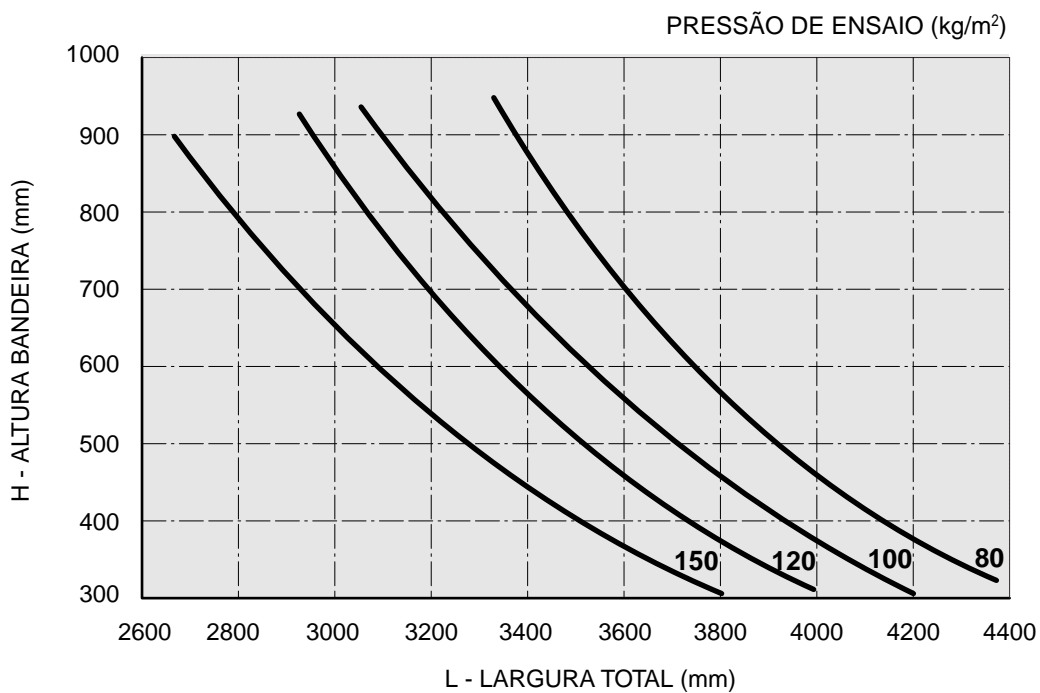
# Diagramas de dimensões

## Bandeira



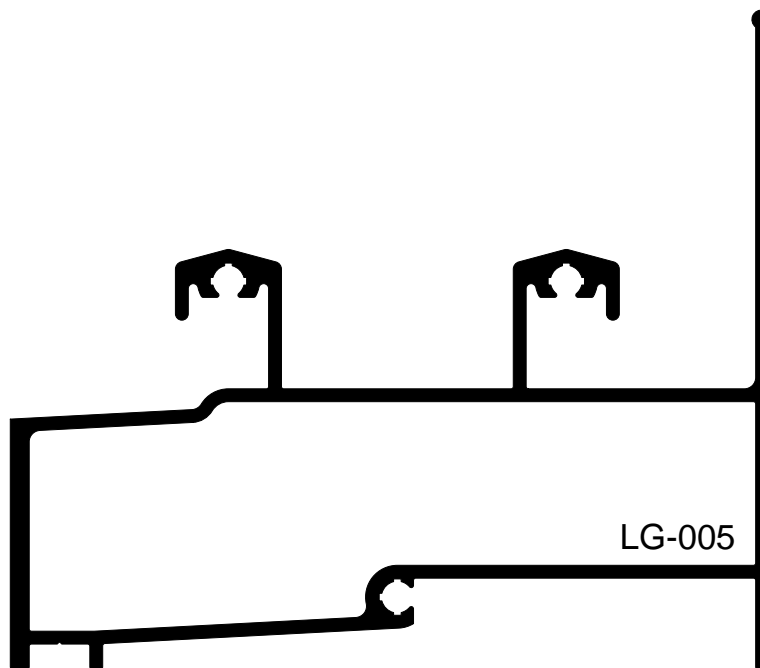
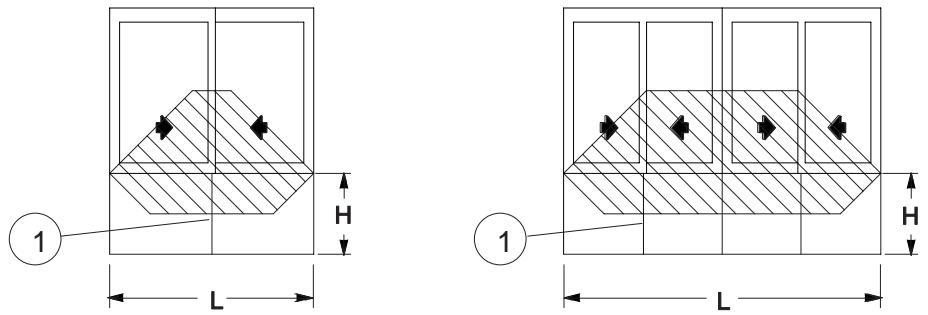
$$J_y = 873\,671 \text{ mm}^4$$

$$W_y = 16\,798 \text{ mm}^3$$



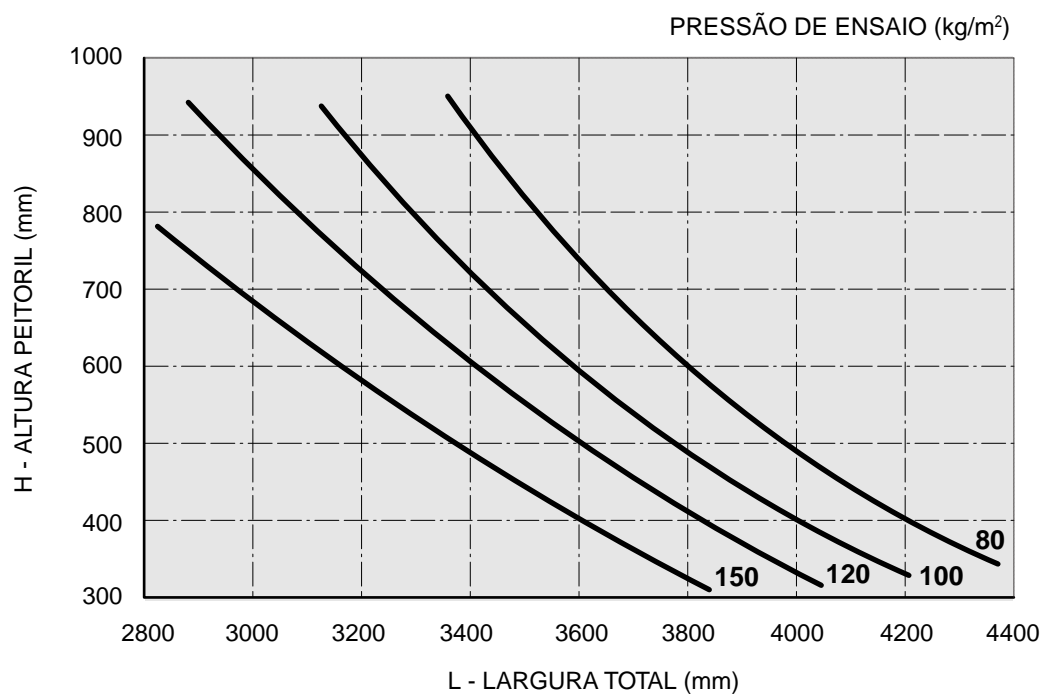
① É RECOMENDÁVEL O USO DE MONTANTES PARA L ACIMA DE 2400mm

## Peitoril



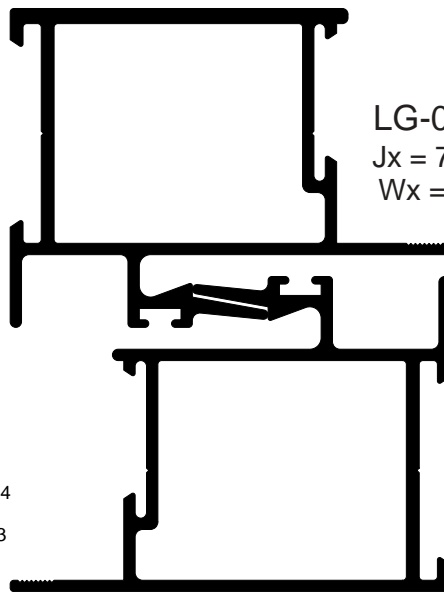
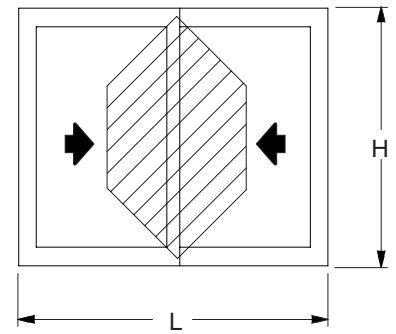
$$J_y = 931\,543 \text{ mm}^4$$

$$W_y = 16\,640 \text{ mm}^3$$



① É RECOMENDÁVEL O USO DE MONTANTES PARA L ACIMA DE 2400mm

## Mão de amigo



LG-0048

$Jx = 77\ 523\ \text{mm}^4$

$Wx = 3\ 592\ \text{mm}^3$

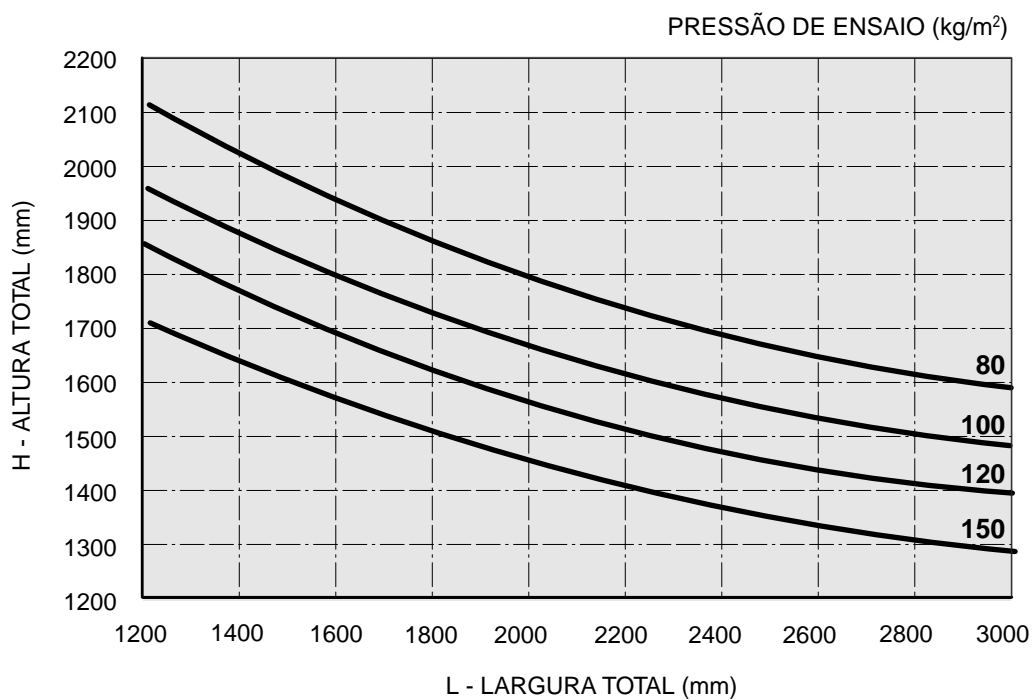
LG-0049

$Jx = 73\ 392\ \text{mm}^4$

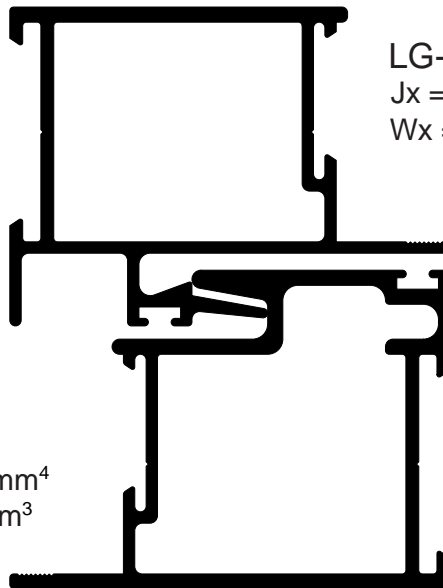
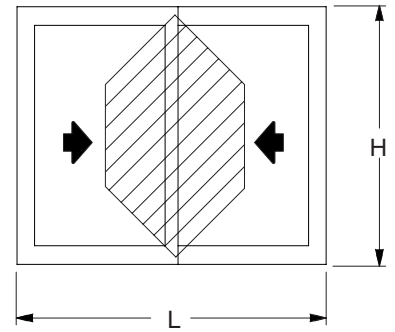
$Wx = 3\ 316\ \text{mm}^3$

$Jxt = 150\ 915\ \text{mm}^4$

$Wxt = 6\ 908\ \text{mm}^3$



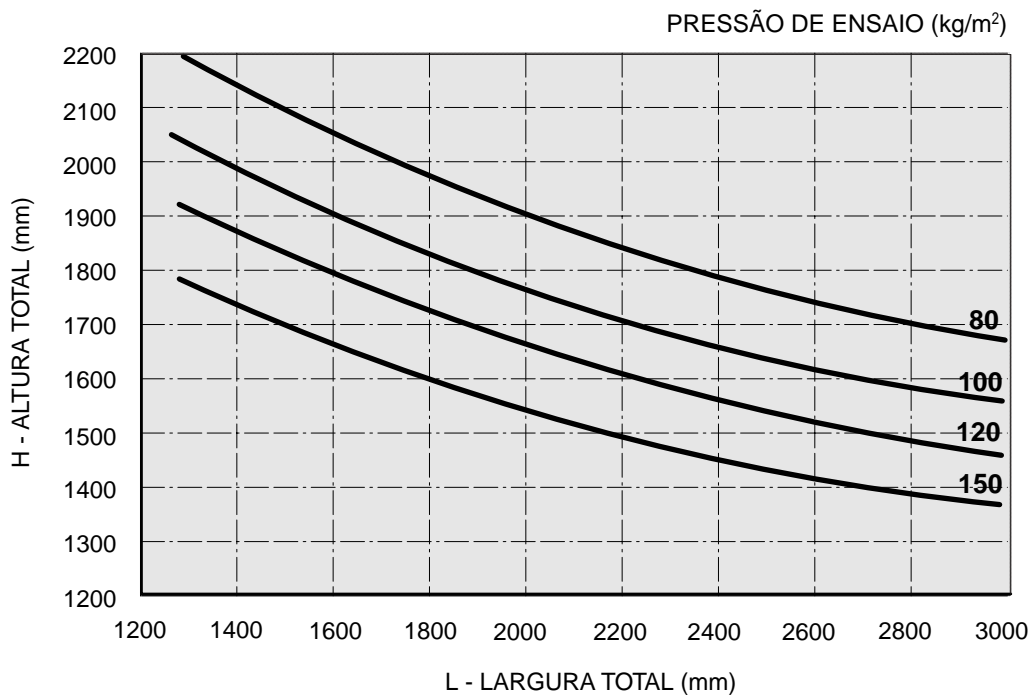
## Mão de amigo



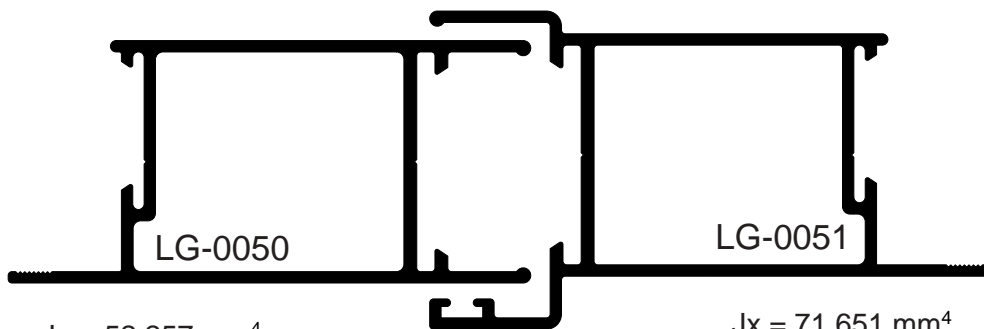
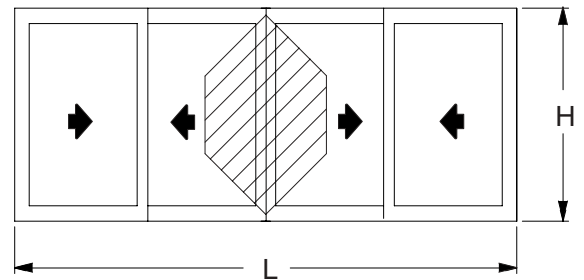
**LG-0048**  
 $Jx = 77\ 523\ \text{mm}^4$   
 $Wx = 3\ 592\ \text{mm}^3$

**LG-0019**  
 $Jx = 101\ 928\ \text{mm}^4$   
 $Wx = 4\ 847\ \text{mm}^3$

$Jxt = 179\ 451\ \text{mm}^4$   
 $Wxt = 8\ 439\ \text{mm}^3$



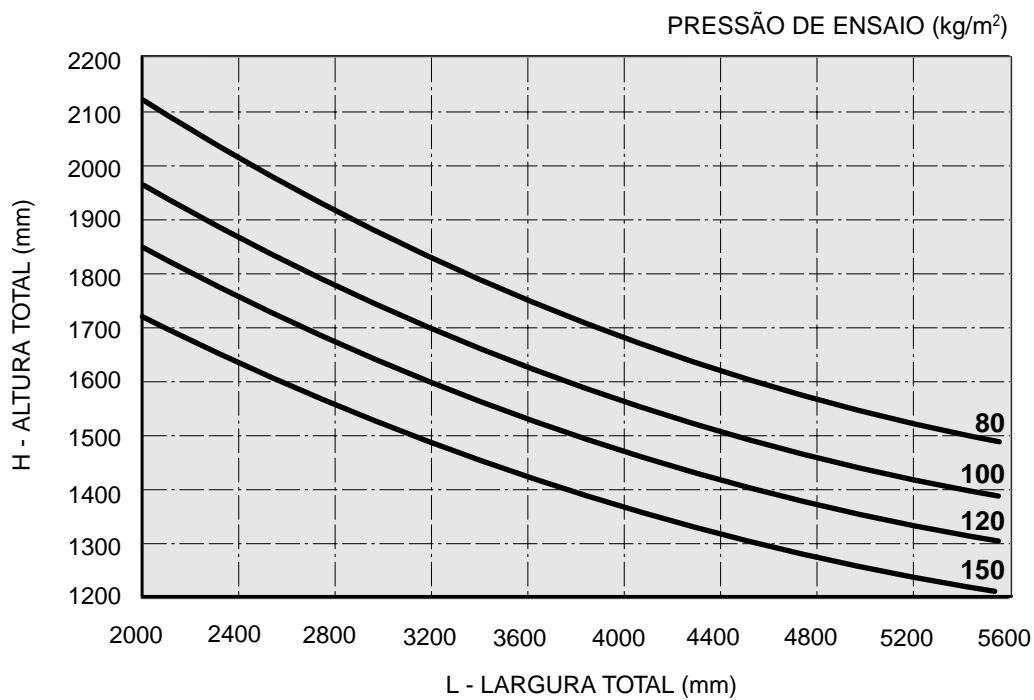
## Central 4 folhas



Jx = 52 257 mm<sup>4</sup>  
 Wx = 3 063 mm<sup>3</sup>

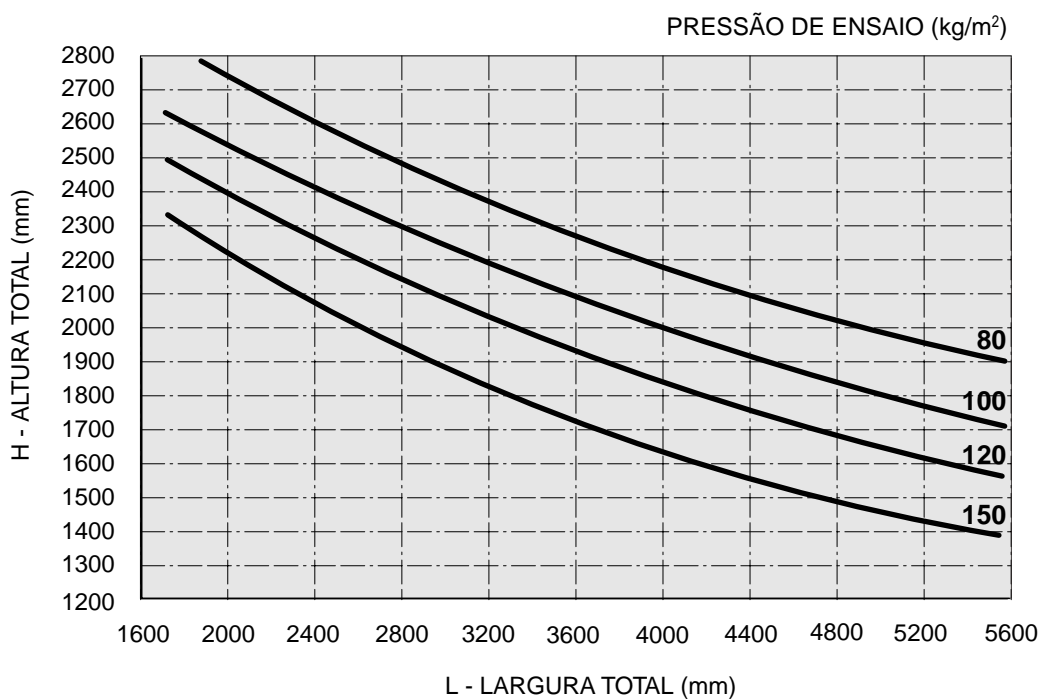
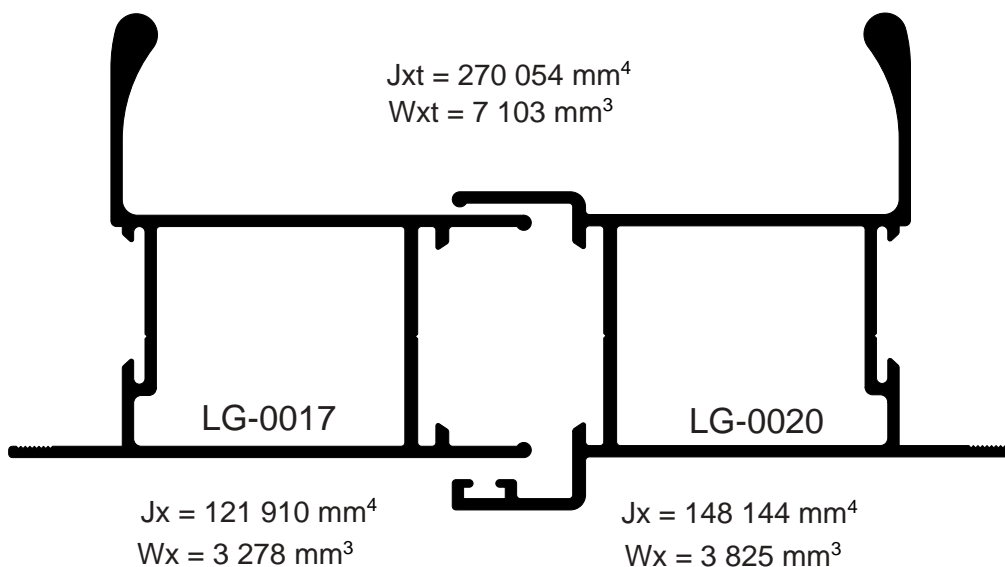
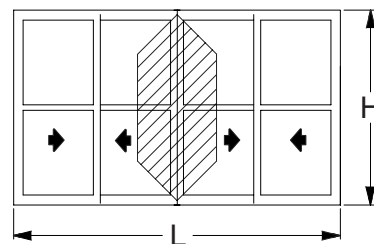
Jx = 71 651 mm<sup>4</sup>  
 Wx = 3 387 mm<sup>3</sup>

Jxt = 123 908 mm<sup>4</sup>  
 Wxt = 6 450 mm<sup>3</sup>



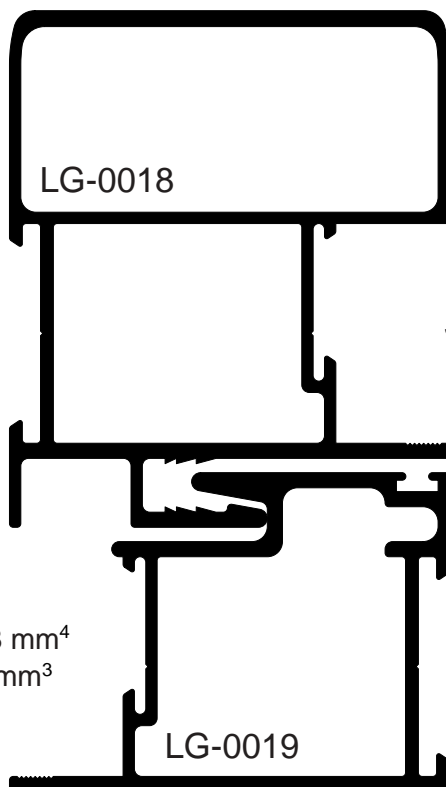
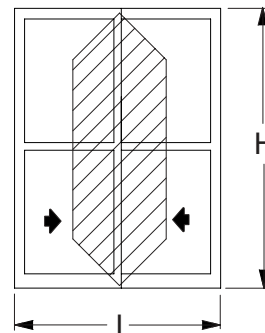


## Central 4 folhas



OBS : FOLHAS ACIMA DE 70 kg, USAR ROLDANA STRONG

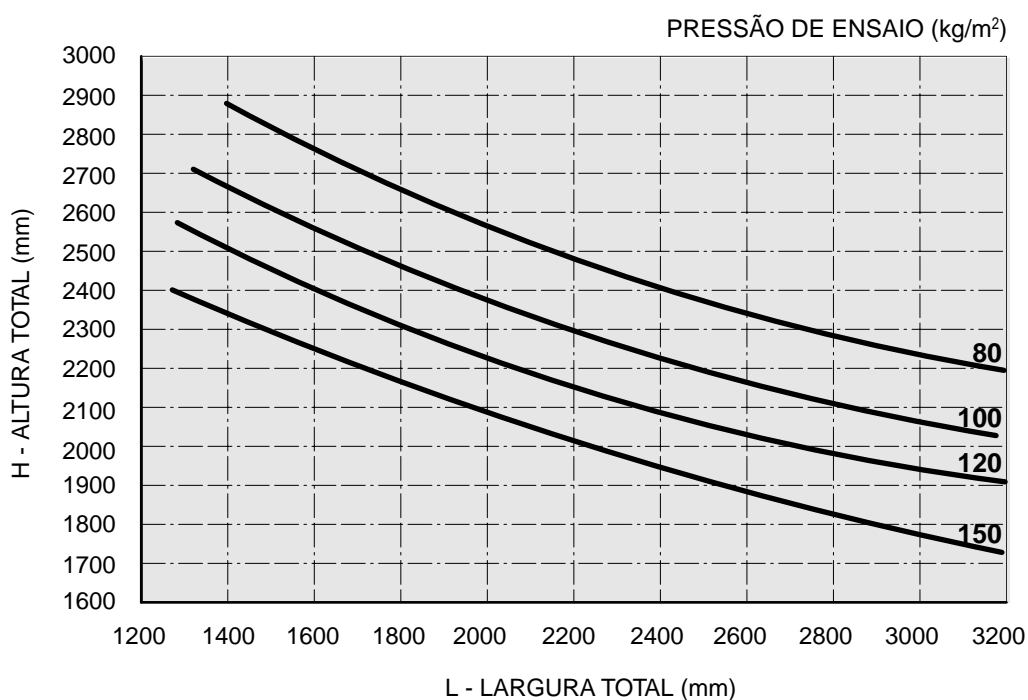
## Mão de amigo



**LG-0018**  
 $J_x = 317\,820\text{ mm}^4$   
 $W_x = 9\,284\text{ mm}^3$

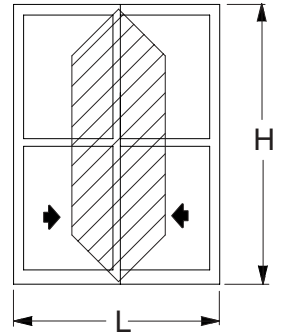
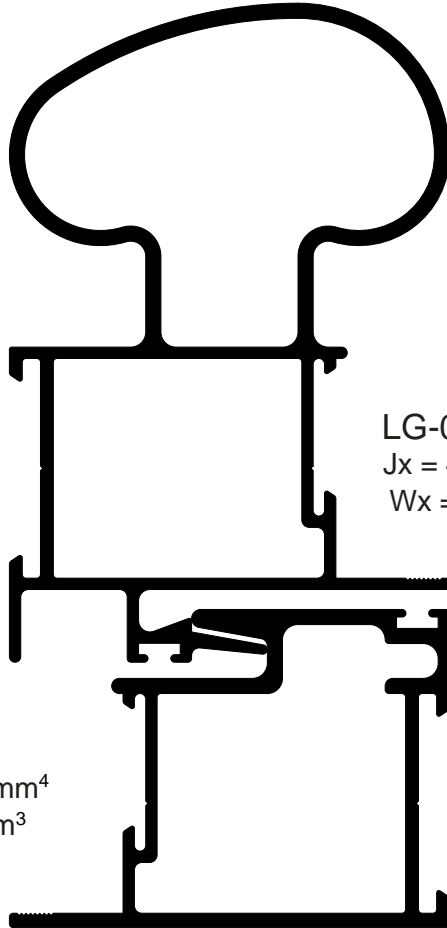
**LG-0019**  
 $J_x = 101\,928\text{ mm}^4$   
 $W_x = 4\,847\text{ mm}^3$

$J_{xt} = 419\,748\text{ mm}^4$   
 $W_{xt} = 14\,131\text{ mm}^3$



OBS : FOLHAS ACIMA DE 70 kg, USAR ROLDANA STRONG

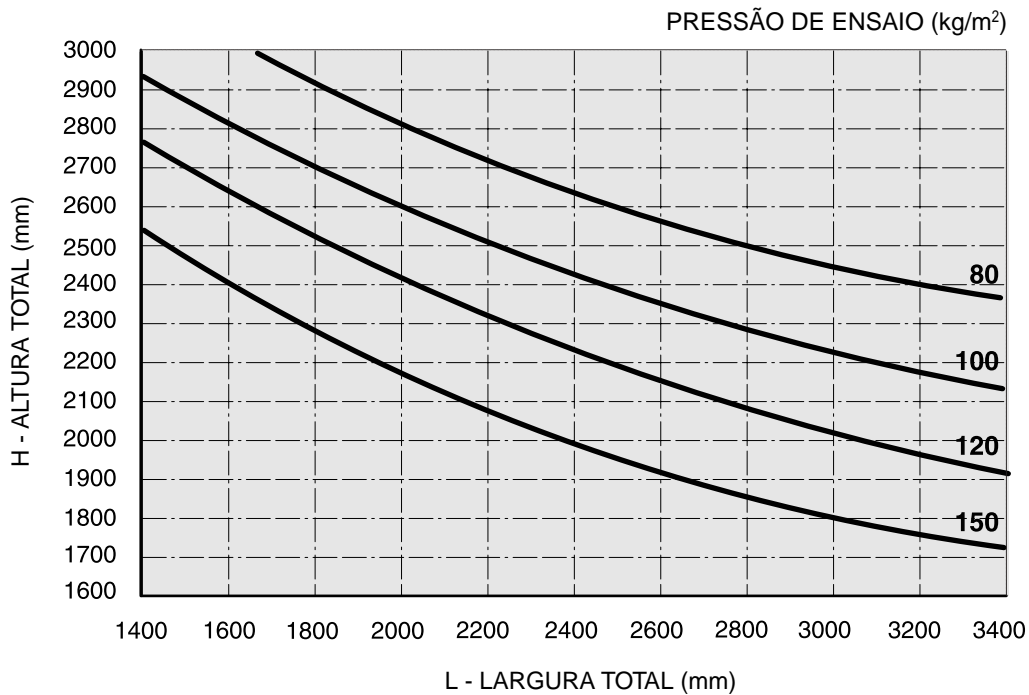
## Mão de amigo



**LG-0021**  
 $J_x = 475\,802\text{ mm}^4$   
 $W_x = 10\,704\text{ mm}^3$

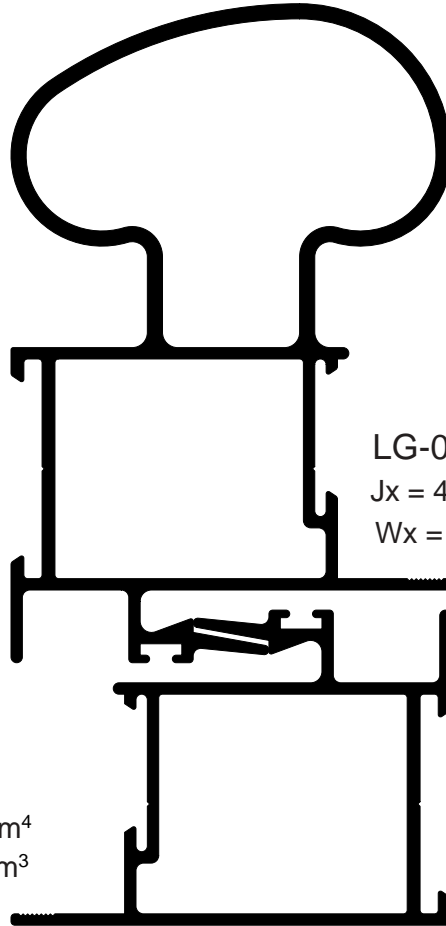
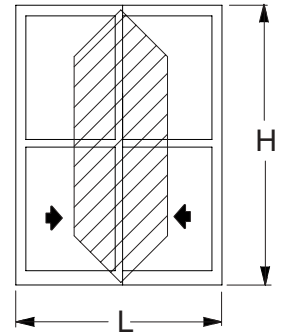
**LG-0019**  
 $J_x = 101\,928\text{ mm}^4$   
 $W_x = 4\,847\text{ mm}^3$

$J_{xt} = 577\,730\text{ mm}^4$   
 $W_{xt} = 15\,551\text{ mm}^3$



OBS : FOLHAS ACIMA DE 70 kg, USAR ROLDANA STRONG

## Mão de amigo



LG-0021

$J_x = 475\,802\text{ mm}^4$

$W_x = 10\,704\text{ mm}^3$

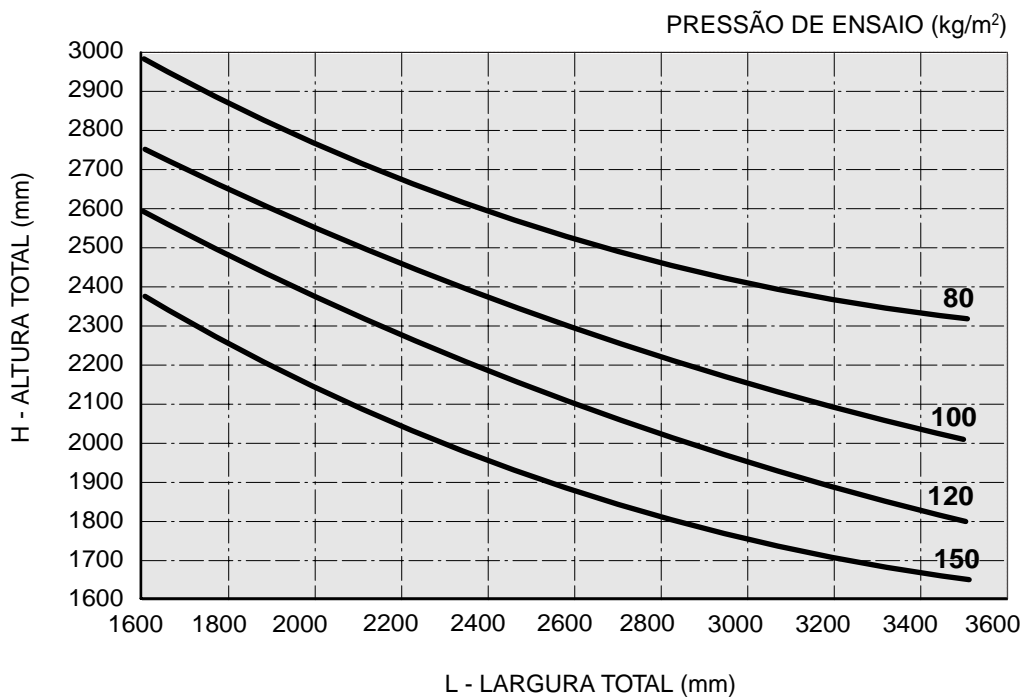
LG-0049

$J_x = 73\,392\text{ mm}^4$

$W_x = 3\,316\text{ mm}^3$

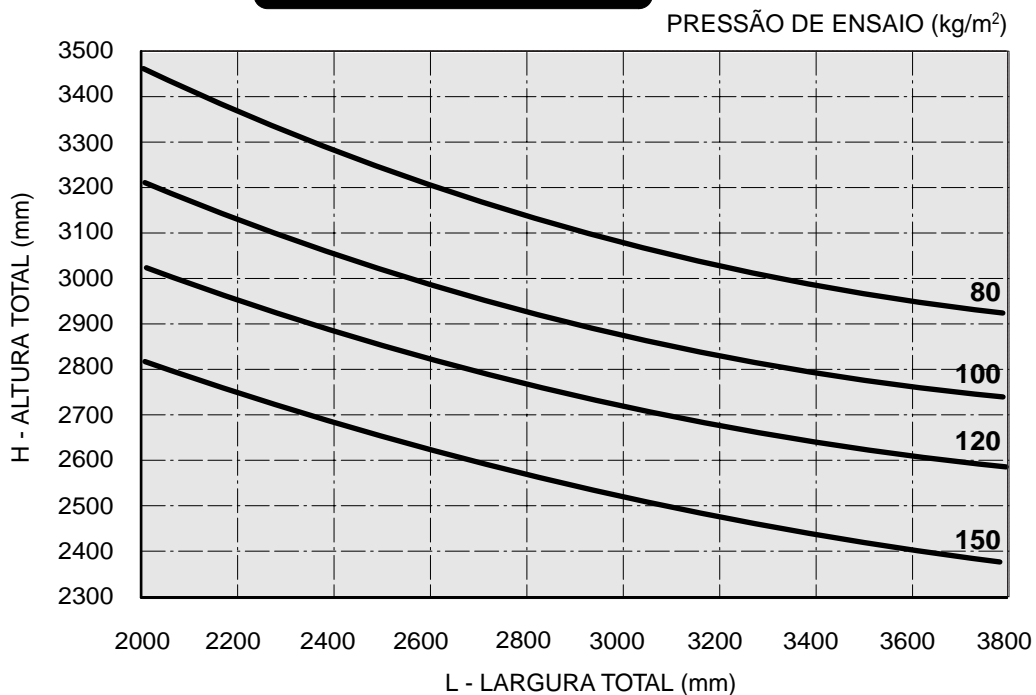
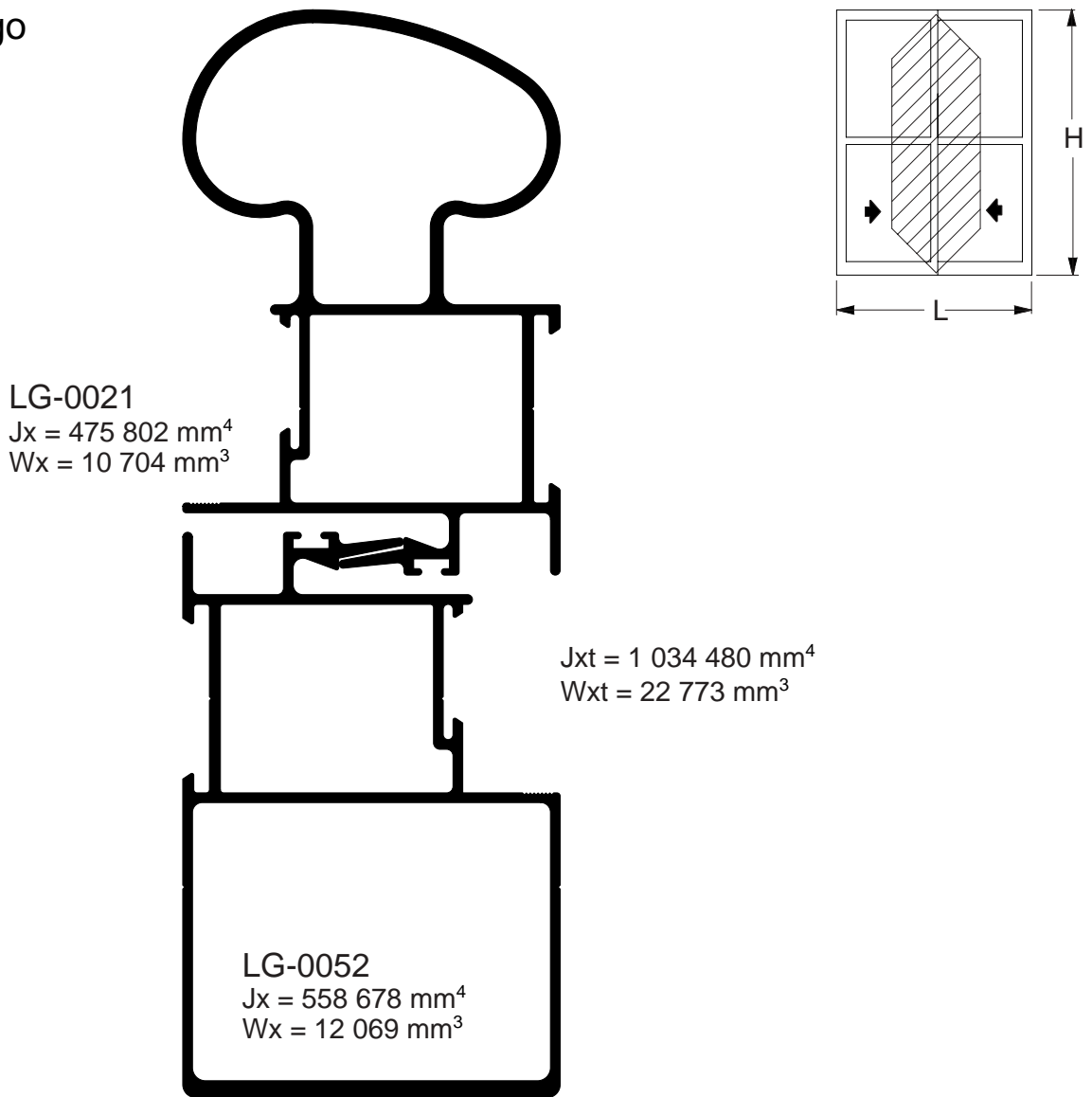
$J_{xt} = 549\,194\text{ mm}^4$

$W_{xt} = 14\,020\text{ mm}^3$



OBS : FOLHAS ACIMA DE 70 kg, USAR ROLDANA STRONG

## Mão de amigo



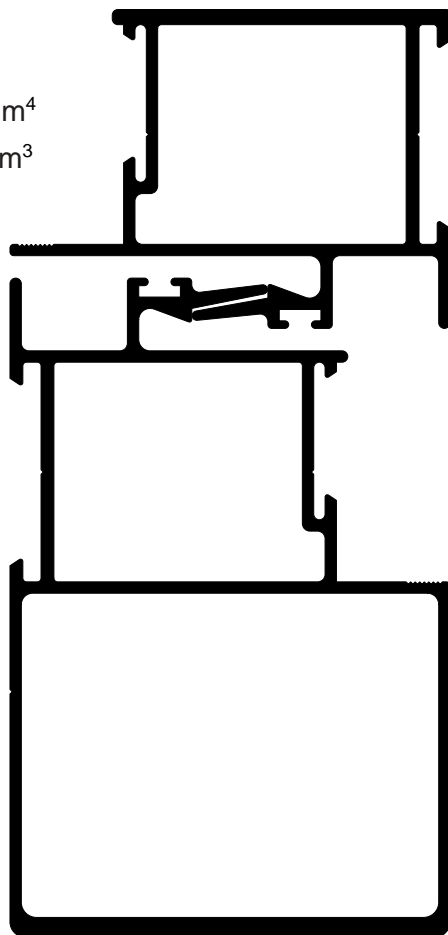
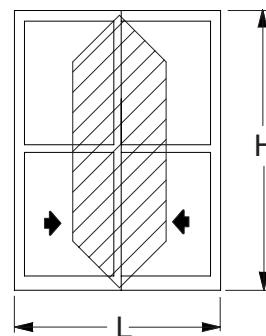
OBS : FOLHAS ACIMA DE 70 kg, USAR ROLDANA STRONG

## Mão de amigo

LG-0048

$Jx = 77\,523\text{ mm}^4$

$Wx = 3\,592\text{ mm}^3$



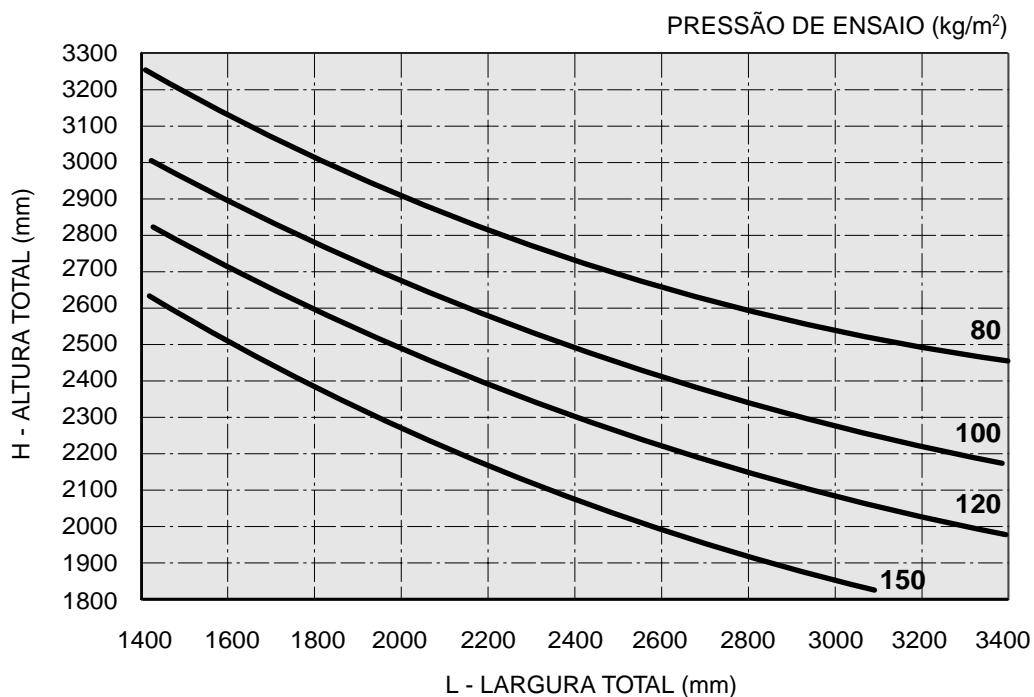
LG-0052

$Jx = 558\,678\text{ mm}^4$

$Wx = 12\,069\text{ mm}^3$

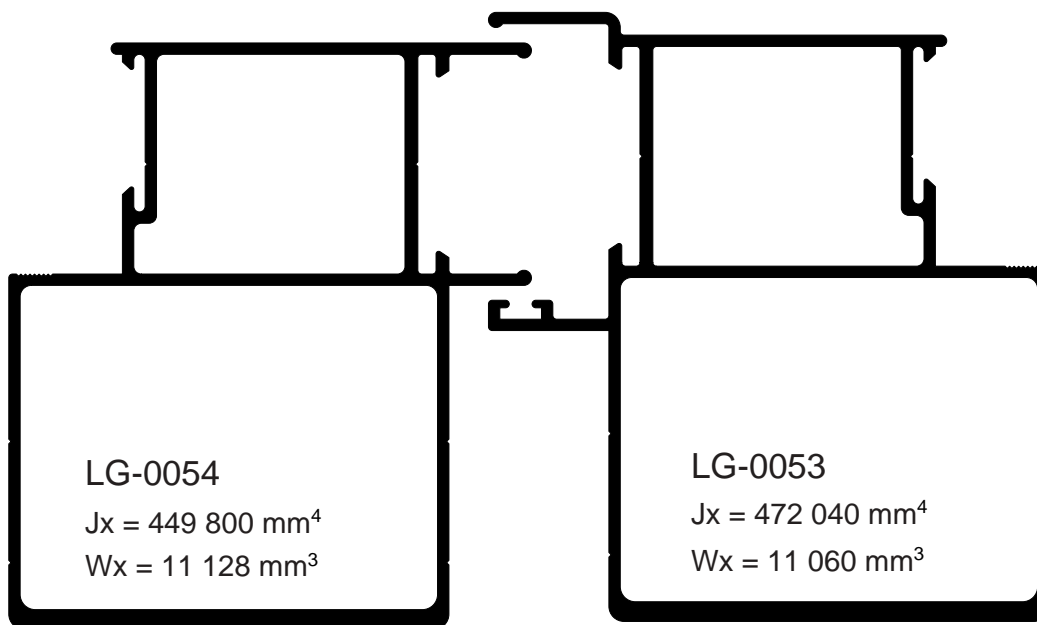
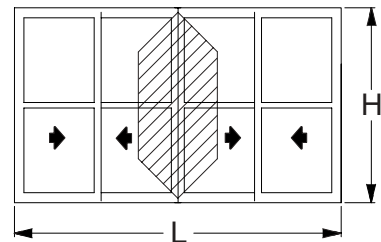
$Jxt = 636\,201\text{ mm}^4$

$Wxt = 15\,661\text{ mm}^3$

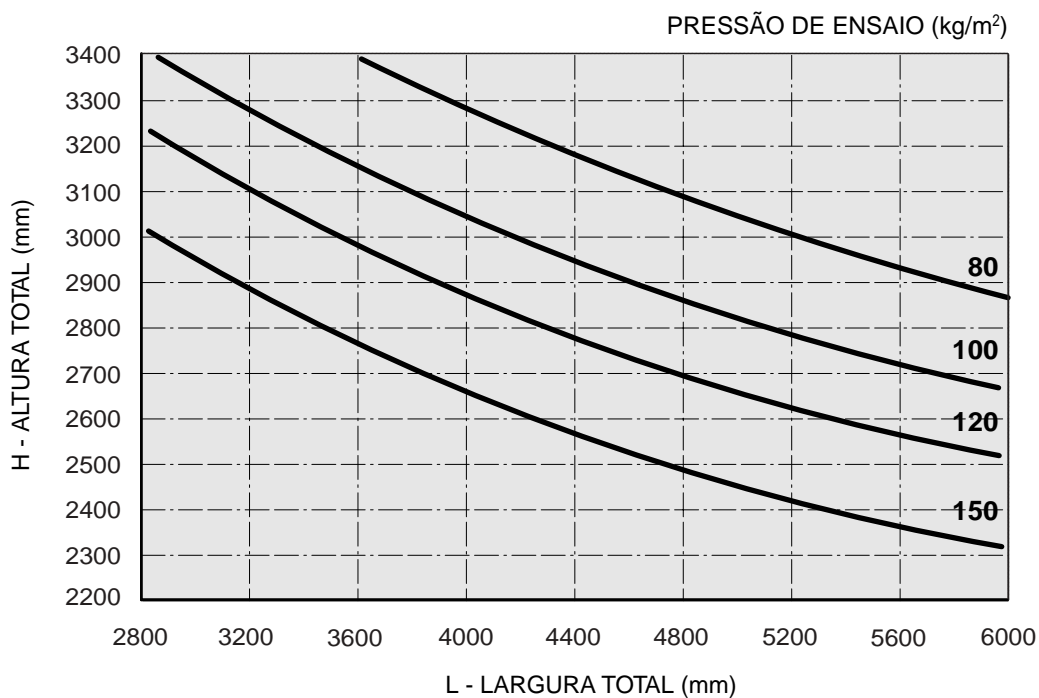


OBS : FOLHAS ACIMA DE 70 kg, USAR ROLDANA STRONG

## Central 4 folhas

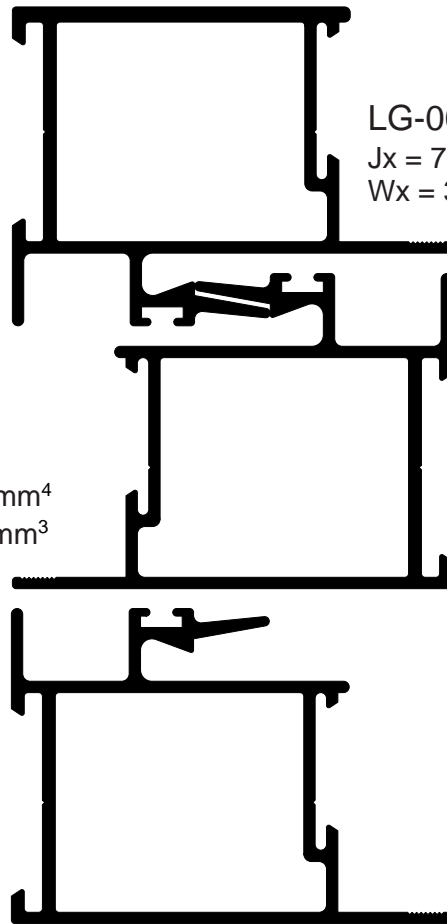


$Jxt = 921\ 840\ \text{mm}^4$   
 $Wxt = 22\ 188\ \text{mm}^3$



OBS : FOLHAS ACIMA DE 70 kg USAR ROLDANA STRONG

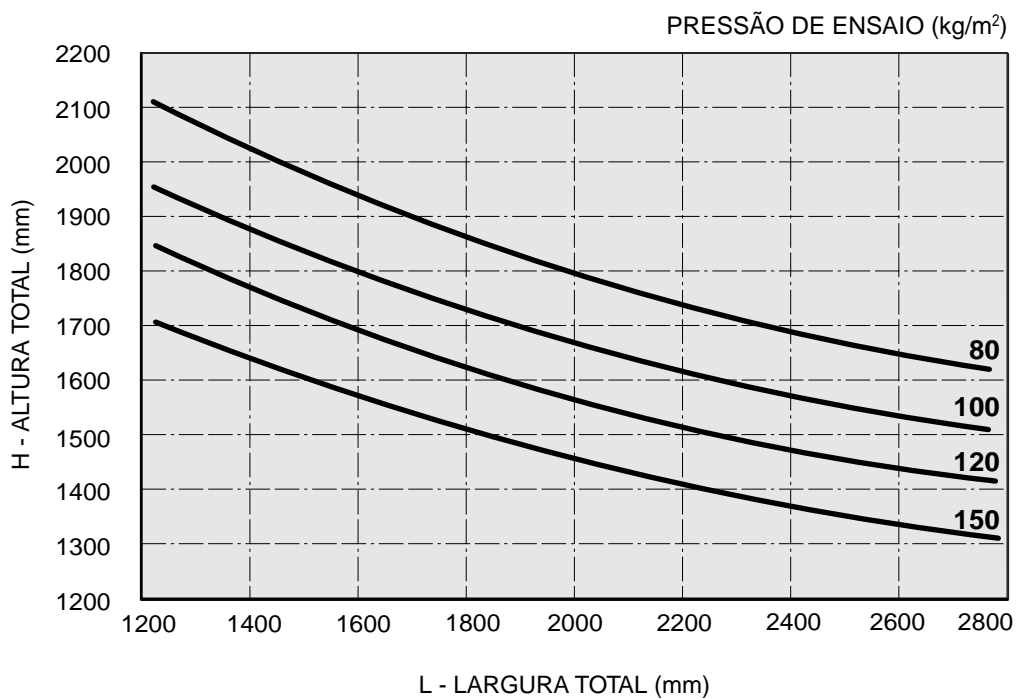
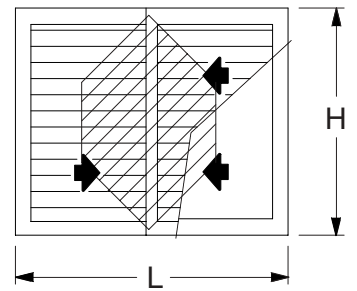
## Mão de amigo



**LG-0048**  
 $J_x = 77\,523\text{ mm}^4$   
 $W_x = 3\,592\text{ mm}^3$

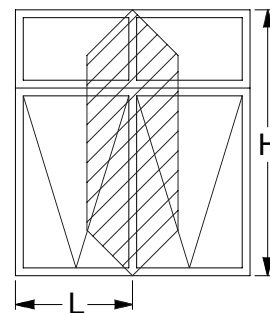
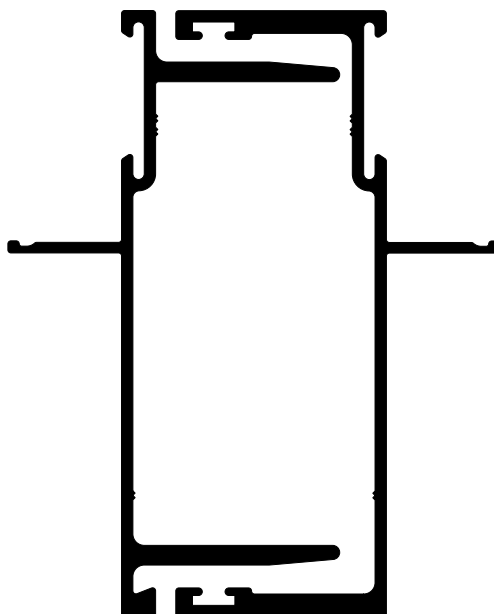
**LG-0049**  
 $J_x = 73\,392\text{ mm}^4$   
 $W_x = 3\,316\text{ mm}^3$

$J_{xt} = 224\,307\text{ mm}^4$   
 $W_{xt} = 10\,224\text{ mm}^3$





## Montante Maxim-ar



**LG-0086**

Jx = 211 435 mm<sup>4</sup>

Wx = 5 287 mm<sup>3</sup>

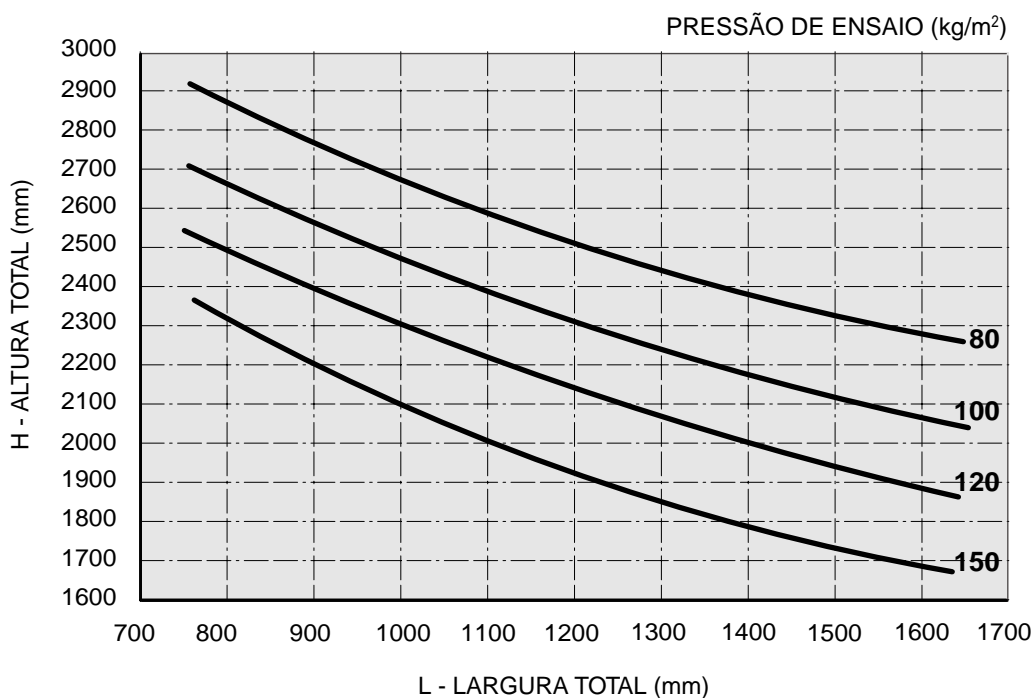
**LG-0087**

Jx = 281 902 mm<sup>4</sup>

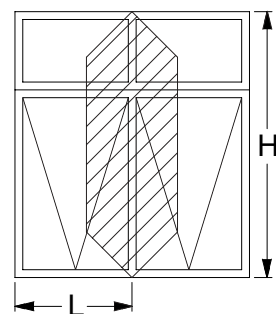
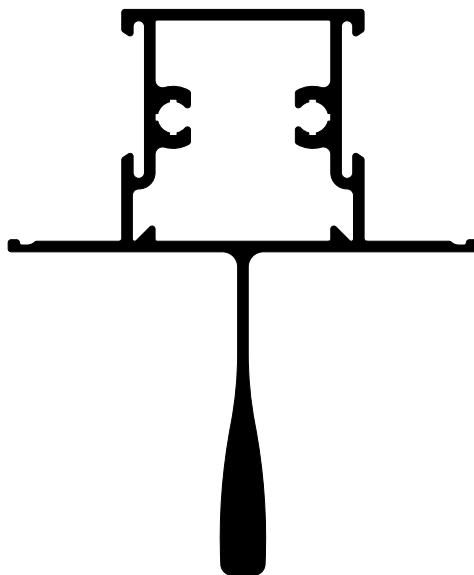
Wx = 6 877 mm<sup>3</sup>

Jxt = 493 338 mm<sup>4</sup>

Dimensão máxima da folha móvel 1200x1200mm



## Montante Maxim-ar

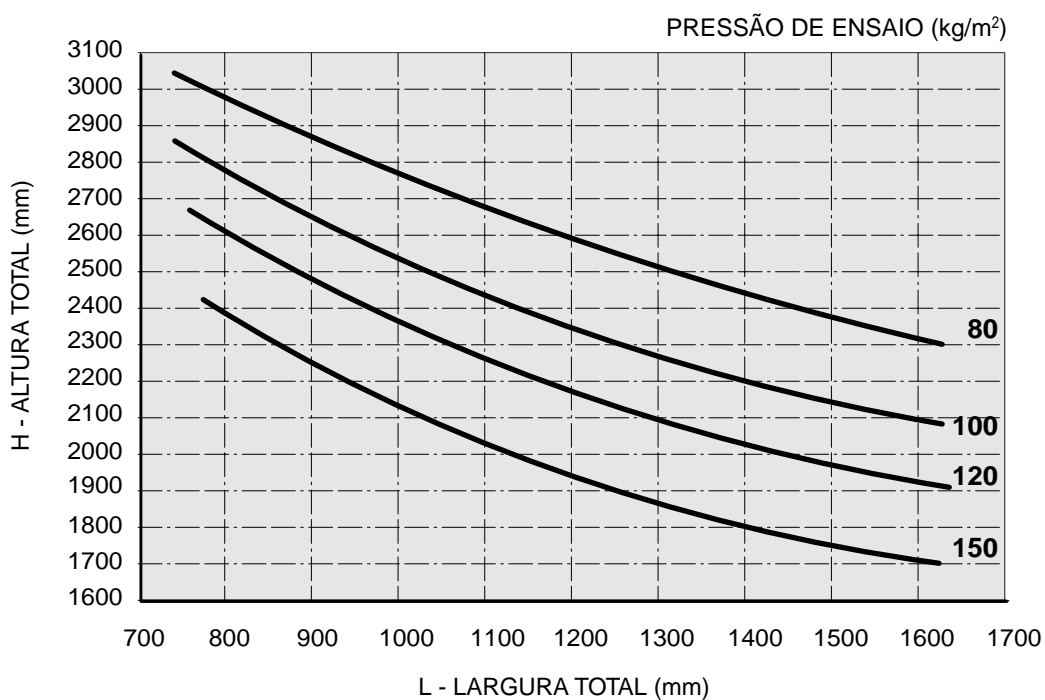


LG-0080

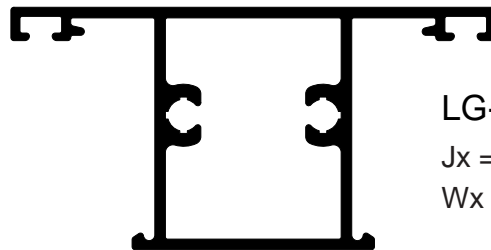
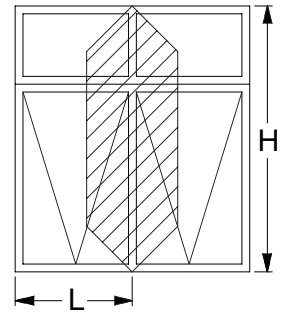
$J_x = 269\,390 \text{ mm}^4$

$W_x = 5\,780 \text{ mm}^3$

Dimensão máxima da folha móvel 1200x1200mm



## Montante Maxim-ar

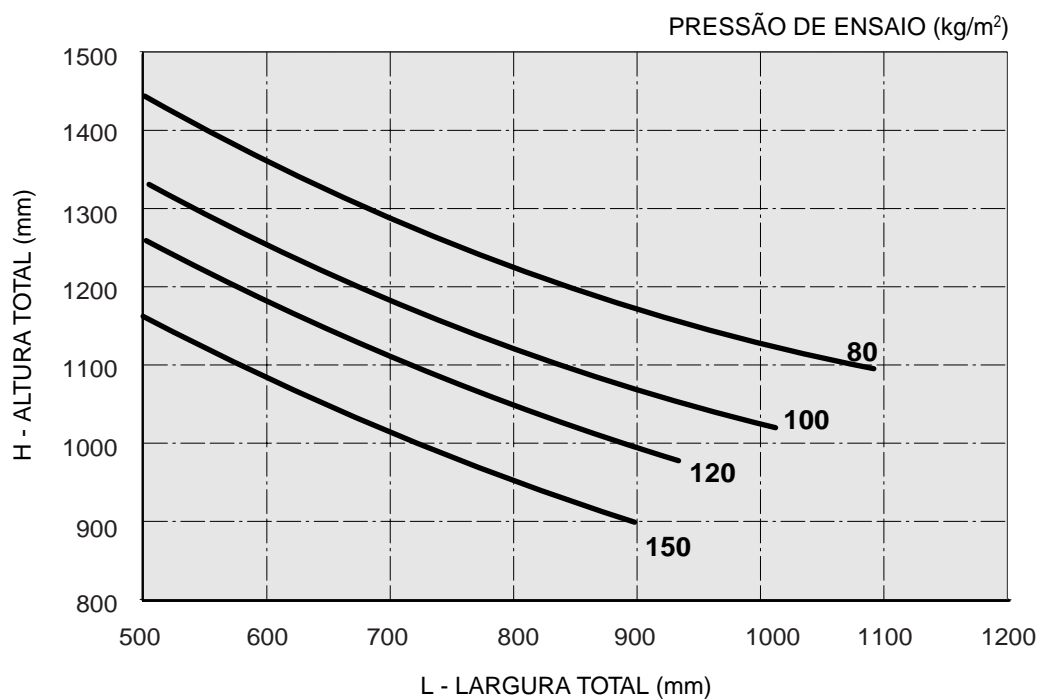


**LG-0074**

$J_x = 37\,986 \text{ mm}^4$

$W_x = 1\,939 \text{ mm}^3$

Dimensão máxima da folha móvel 1200x1200mm



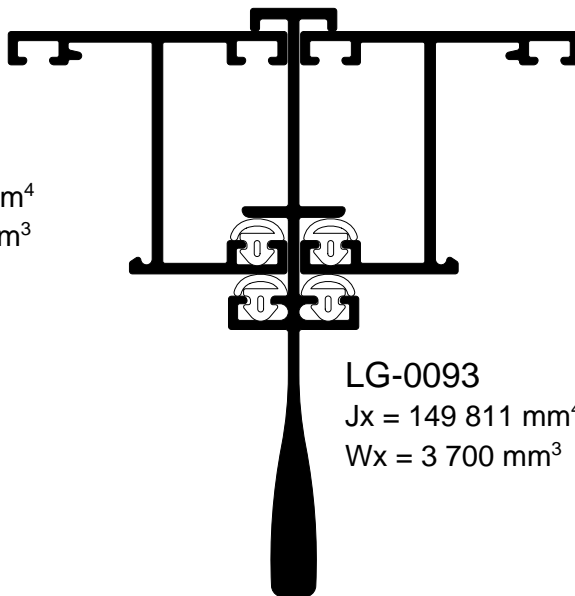
# Diagrama de dimensões

## Montante Maxim-ar

LG-0068

$J_x = 24\ 853\ \text{mm}^4$

$W_x = 1\ 301\ \text{mm}^3$



LG-0093

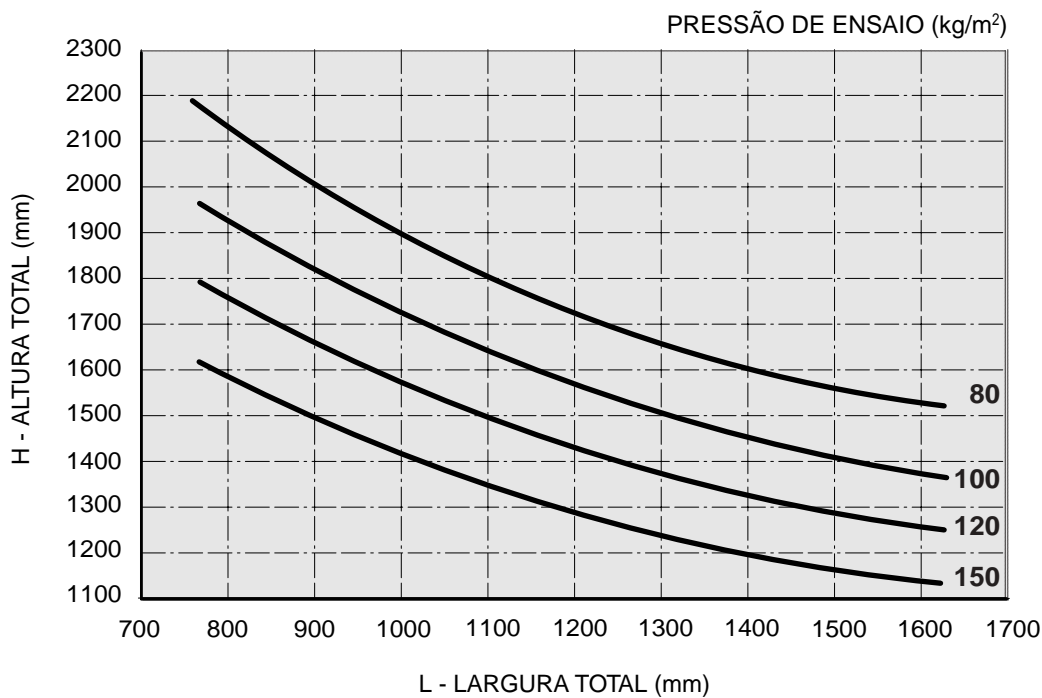
$J_x = 149\ 811\ \text{mm}^4$

$W_x = 3\ 700\ \text{mm}^3$

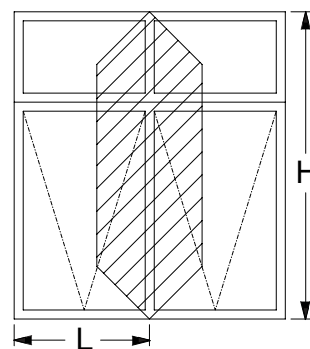
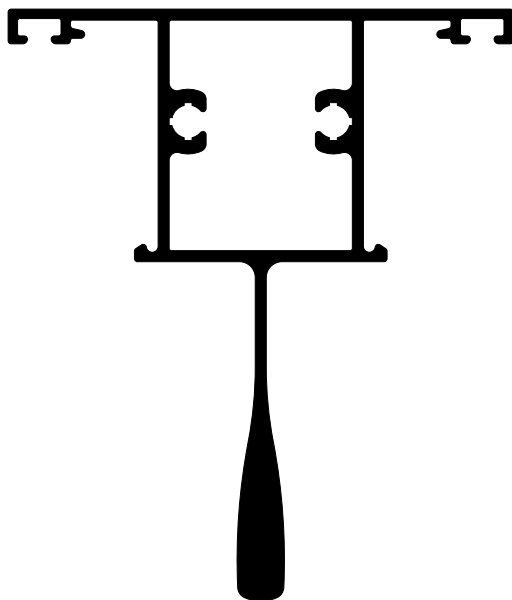
$J_{xt} = 199\ 517\ \text{mm}^4$

$W_{xt} = 6\ 302\ \text{mm}^3$

Dimensão máxima da folha móvel 1200x1200mm



## Montante Maxim-ar

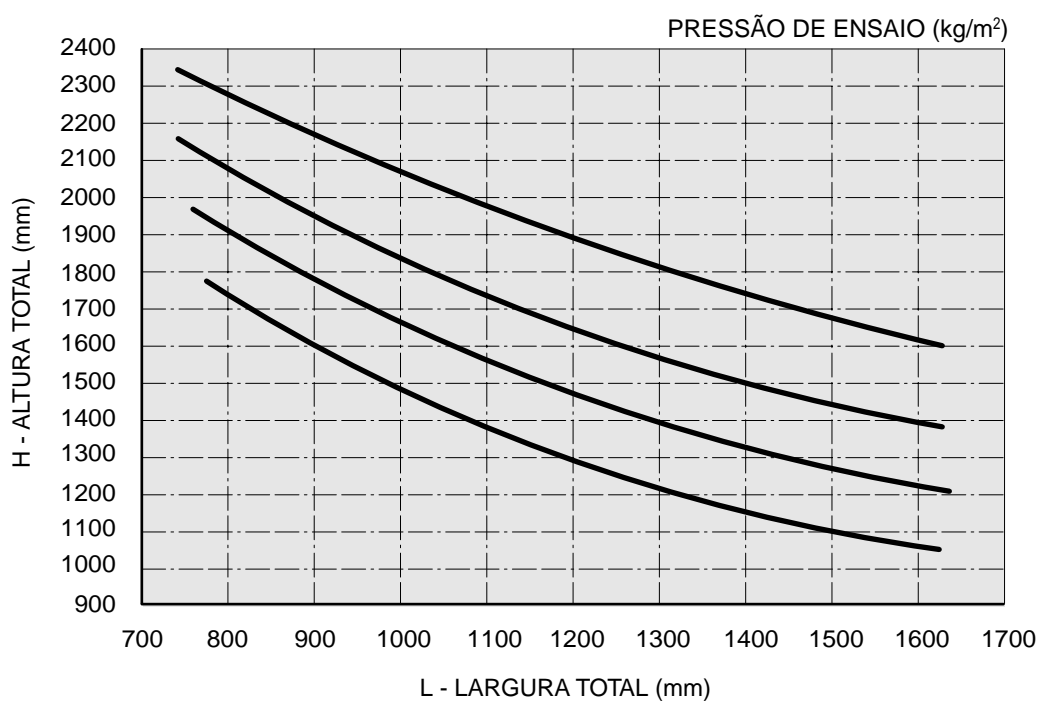


LG-0075

$J_x = 269\,390 \text{ mm}^4$

$W_x = 5\,780 \text{ mm}^3$

Dimensão máxima da folha móvel 1200x1200mm



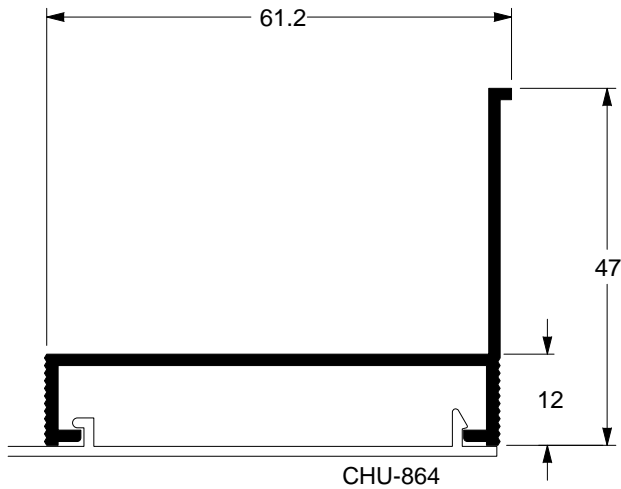


## Capítulo 5

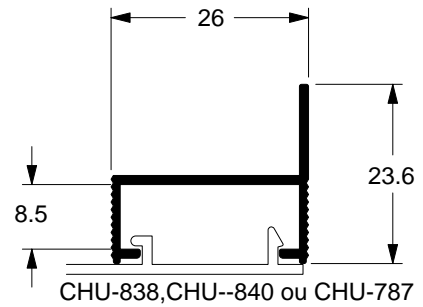
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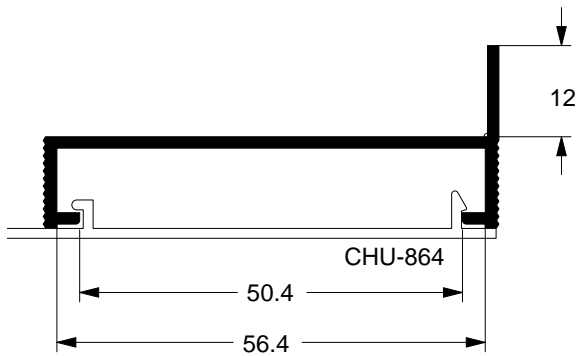
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UN-0036	63
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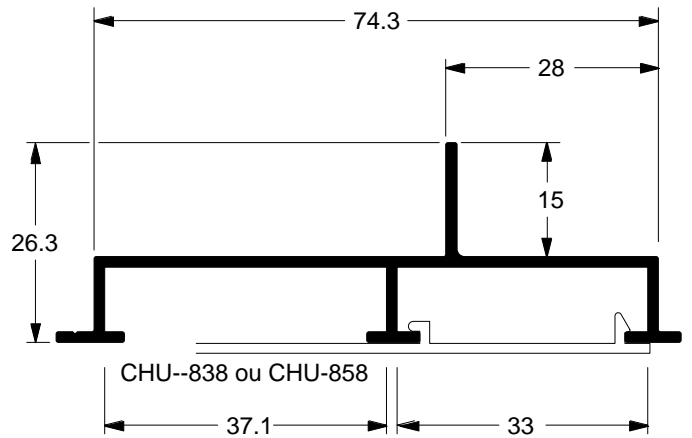
● **CM-173**  
 0,509 kg/m



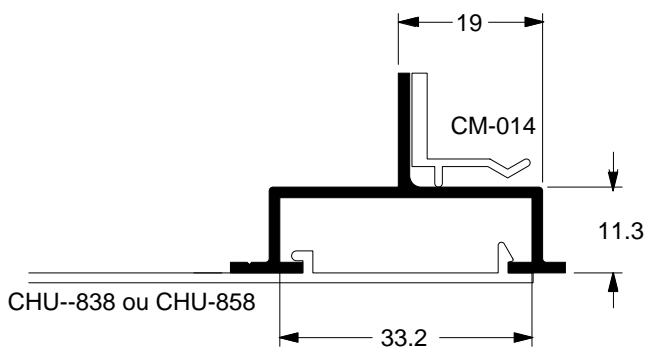
● **CM-200**  
 0,198 kg/m



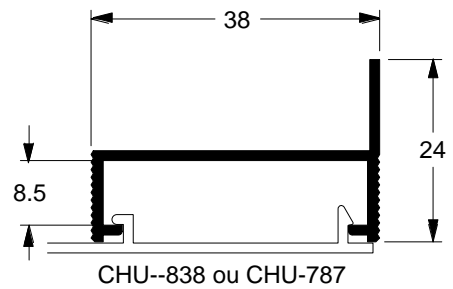
● **CM-174**  
 0,409 kg/m



● **CM-125**  
 0,528 kg/m

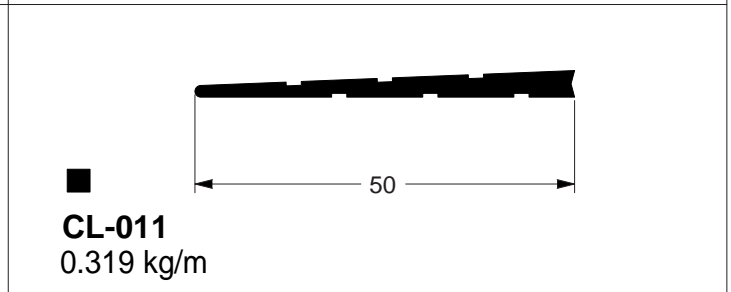
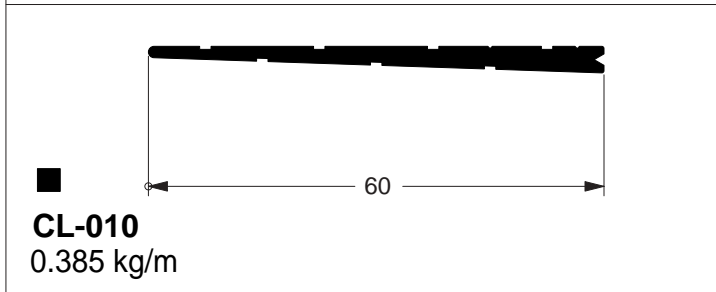
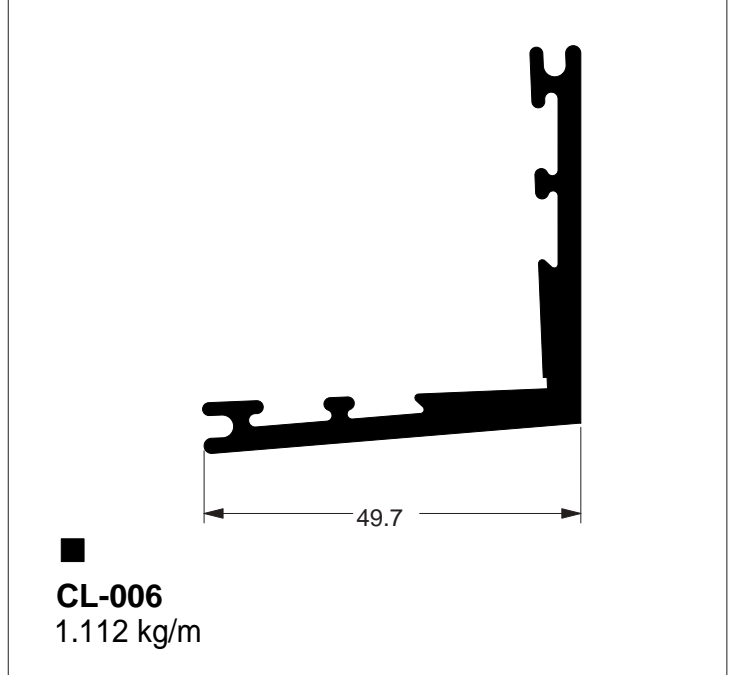
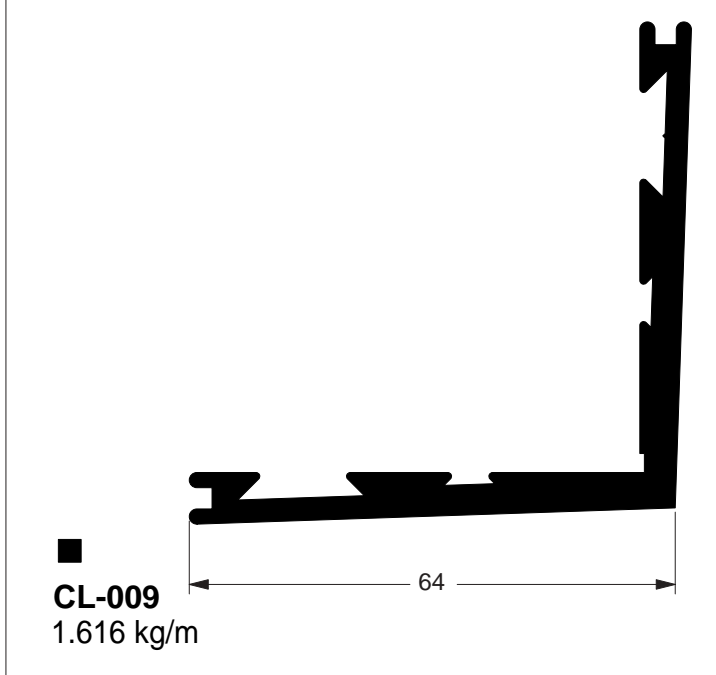
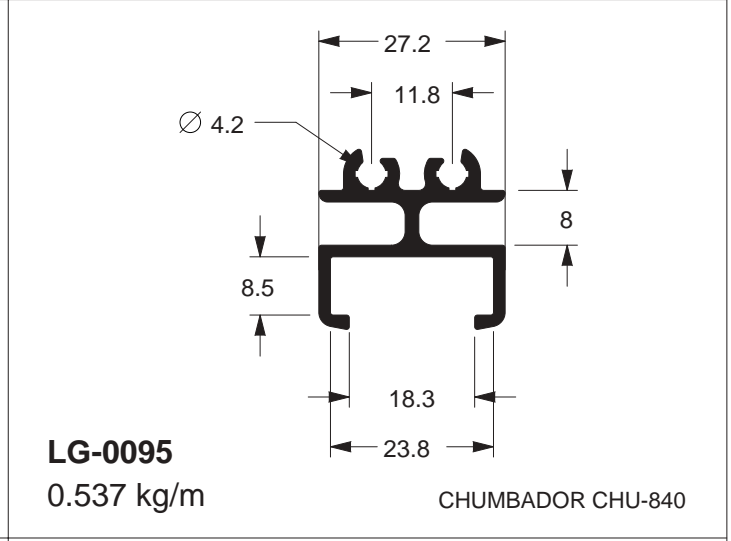
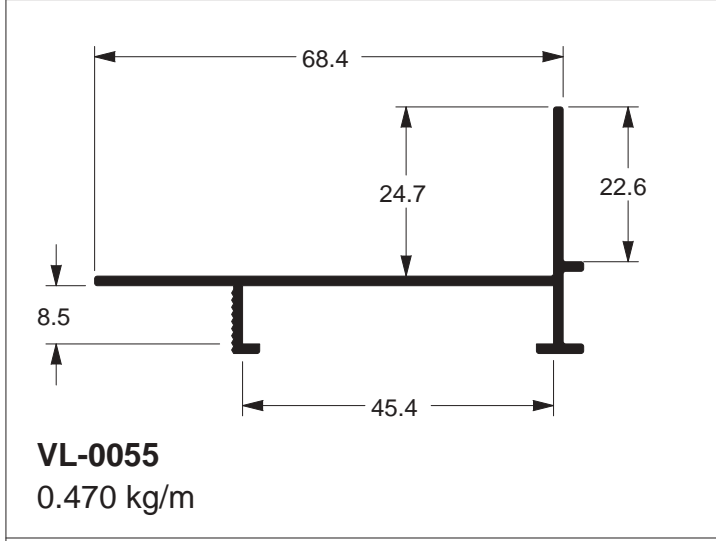
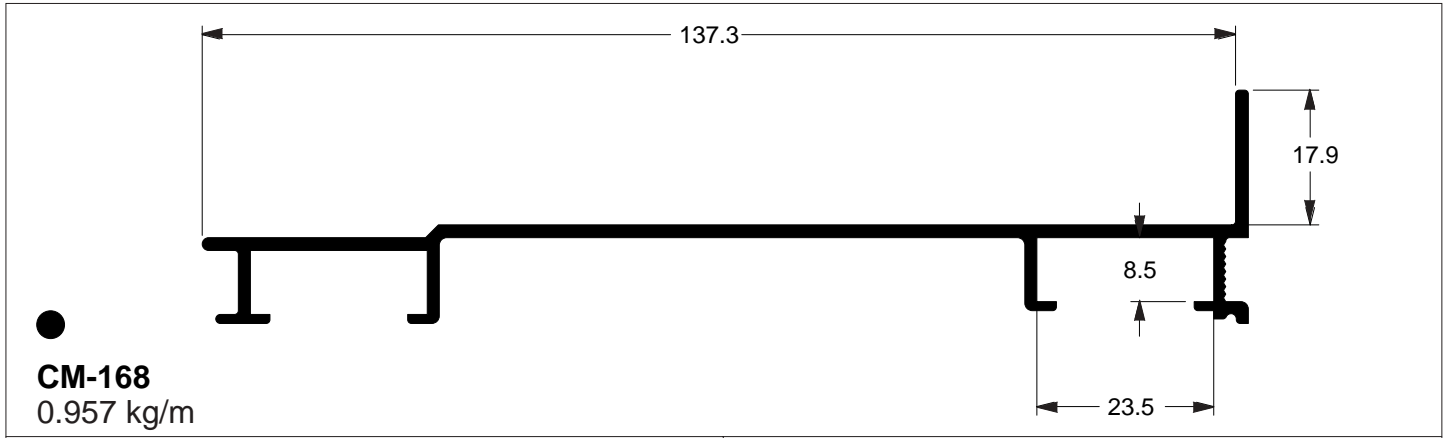


● **CM-004**  
 0,304 kg/m

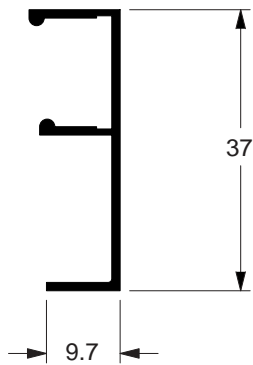


● **CM-060**  
 0,276 kg/m

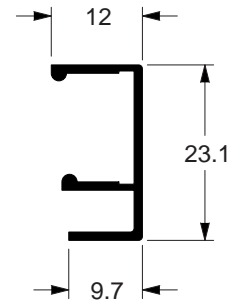




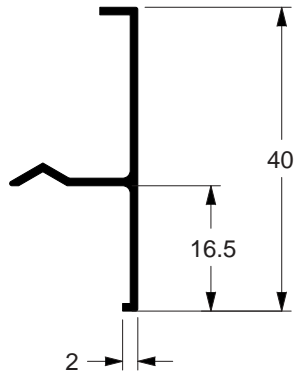
●  
**MP-347**  
 0,202 kg/m



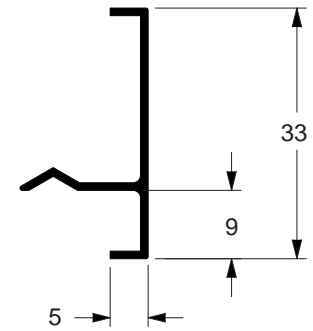
●  
**ME-092**  
 0,160 kg/m



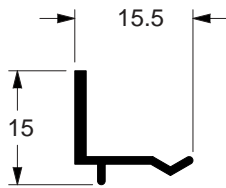
●  
**CM-006**  
 0,168 kg/m



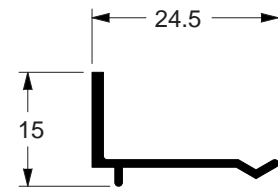
●  
**CM-007**  
 0,156 kg/m



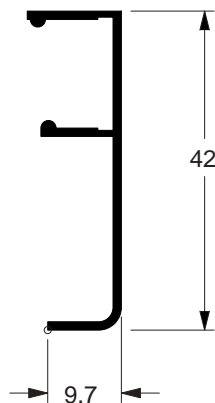
●  
**CM-014**  
 0,097 kg/m



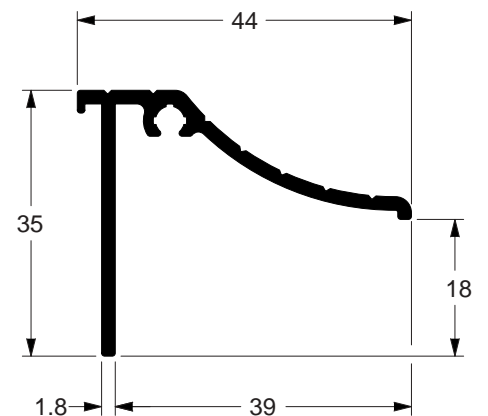
●  
**CM-013**  
 0,121 kg/m

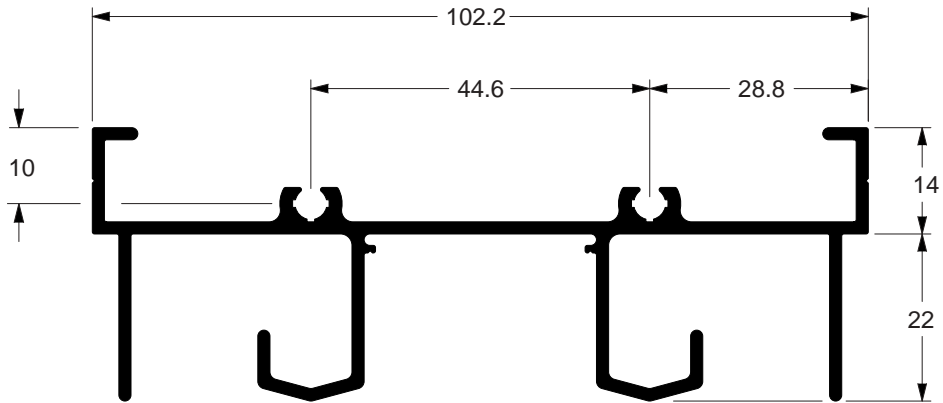


●  
**MN-014**  
 0,214 kg/m

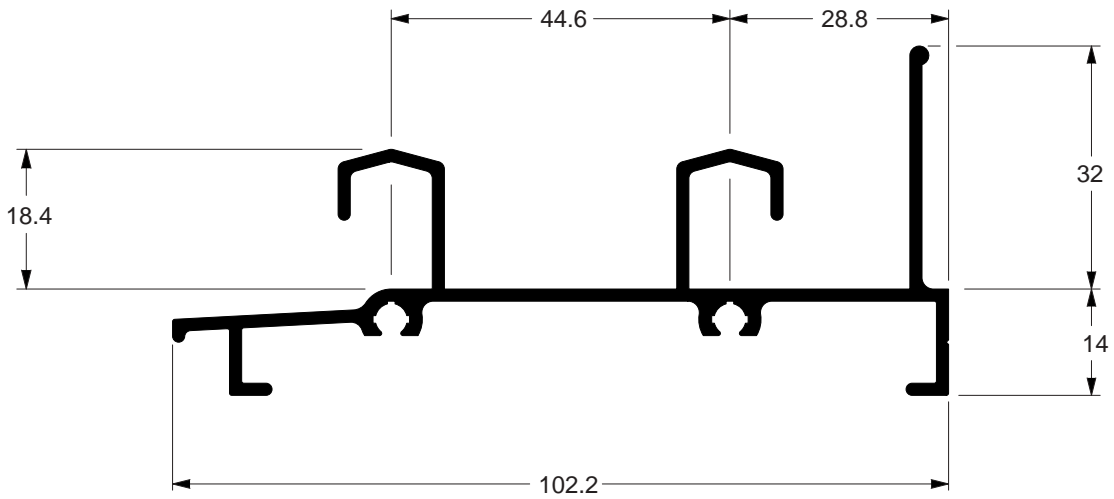


●  
**CM-169**  
 0,431 kg/m

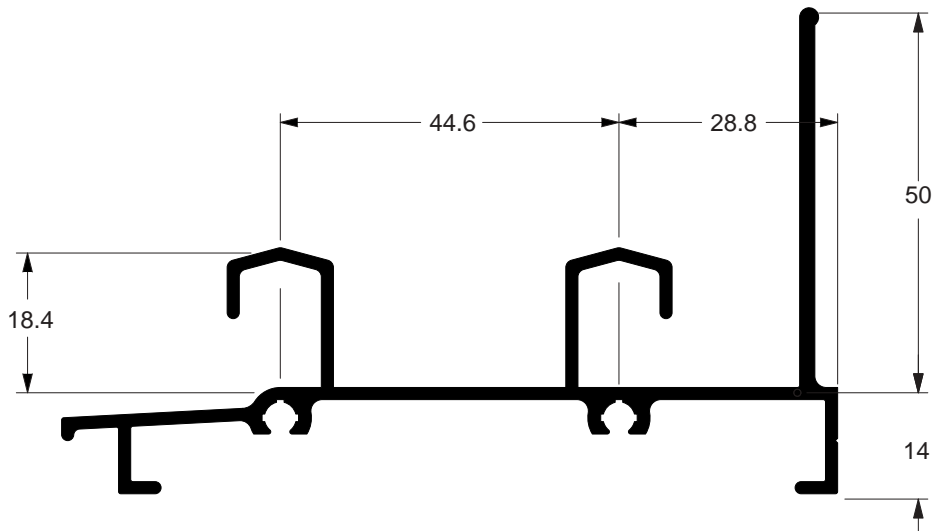




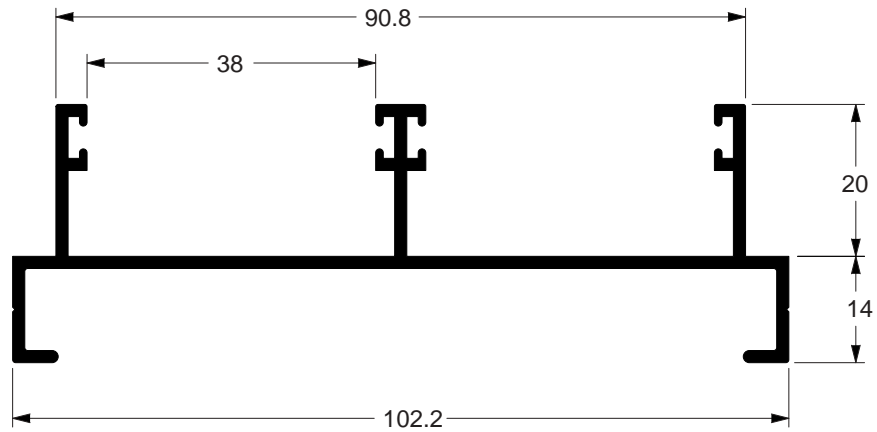
● **LG-044**  
 1.247 kg/m



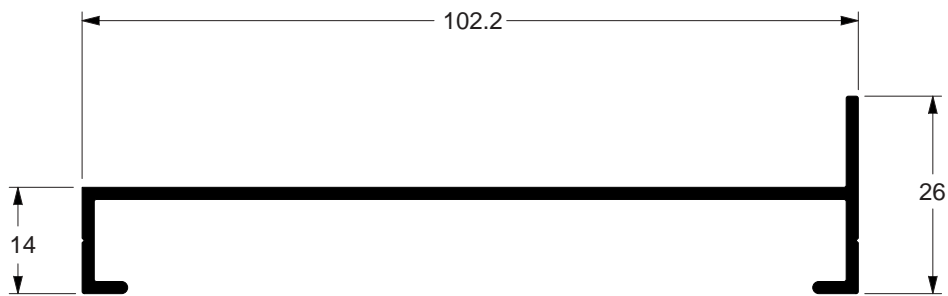
● **LG-047**  
 1.133 kg/m



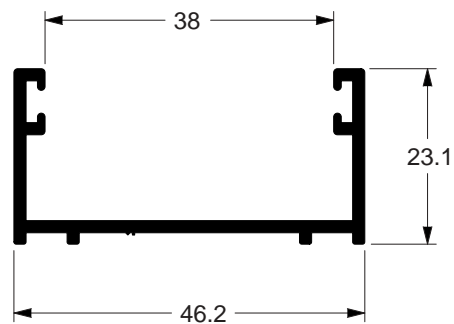
● **LG-024**  
 1.264 kg/m



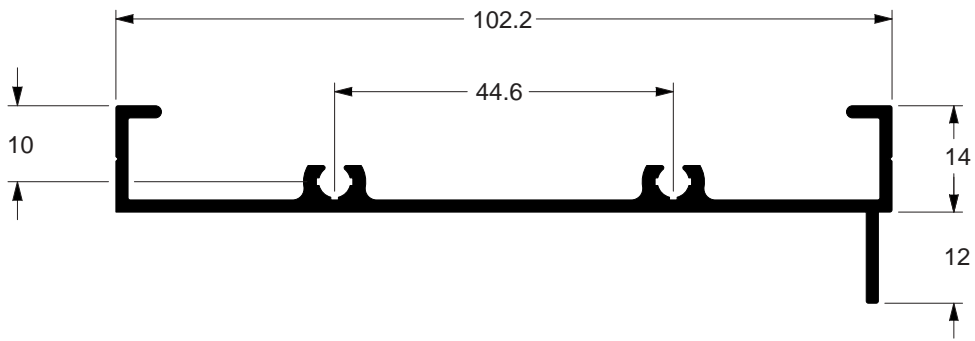
●  
**LG-045**  
 0.957 kg/m



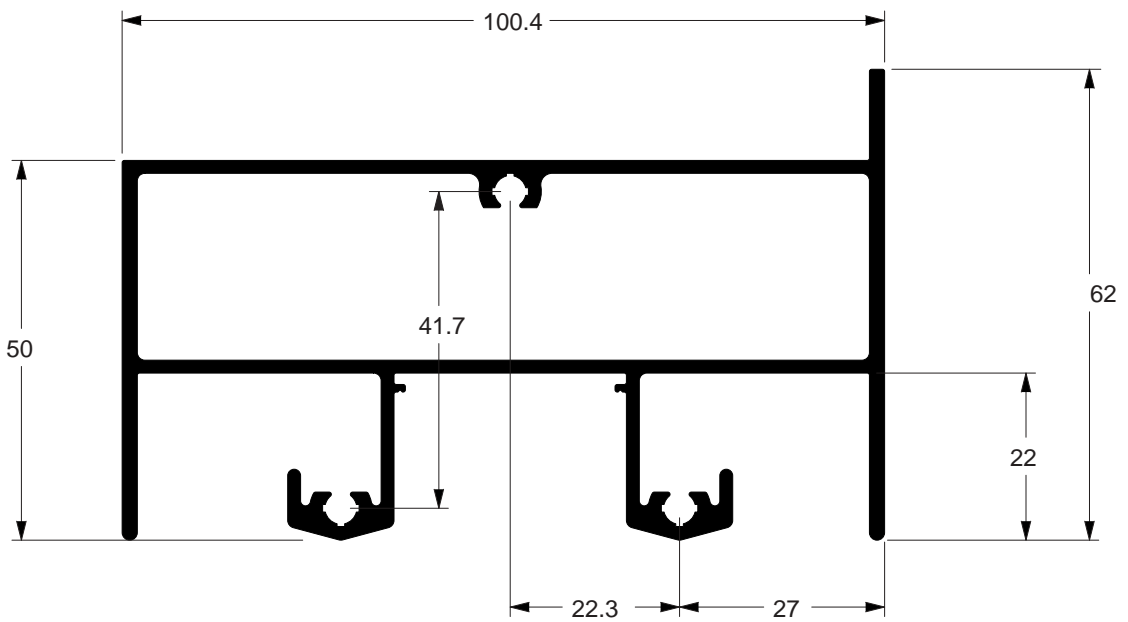
●  
**LG-002**  
 0.639 kg/m



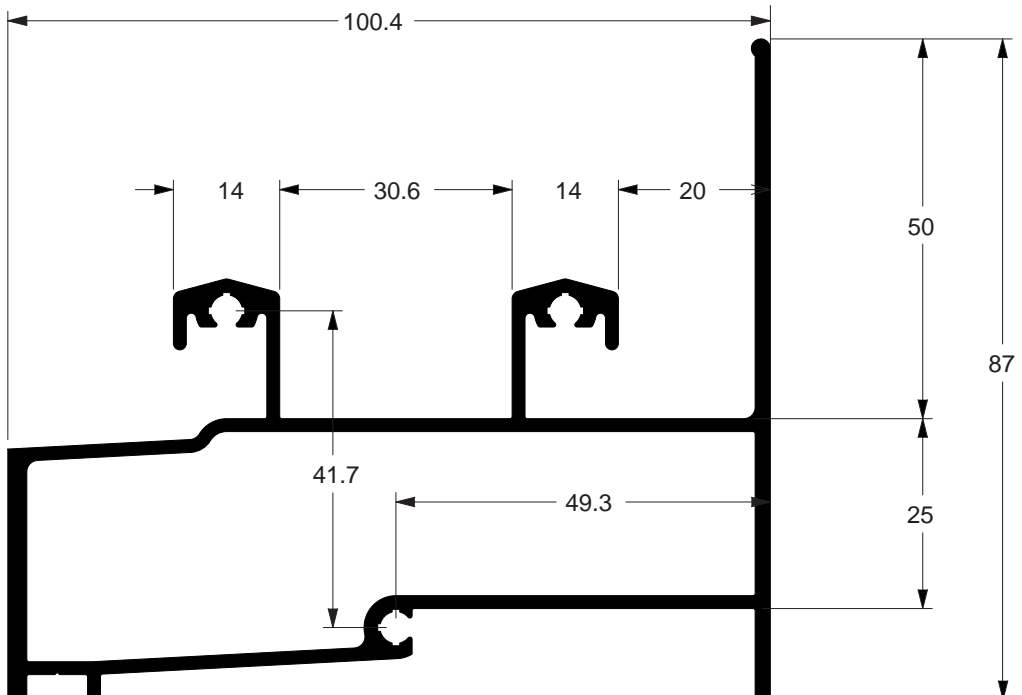
●  
**LG-028**  
 0.455 kg/m



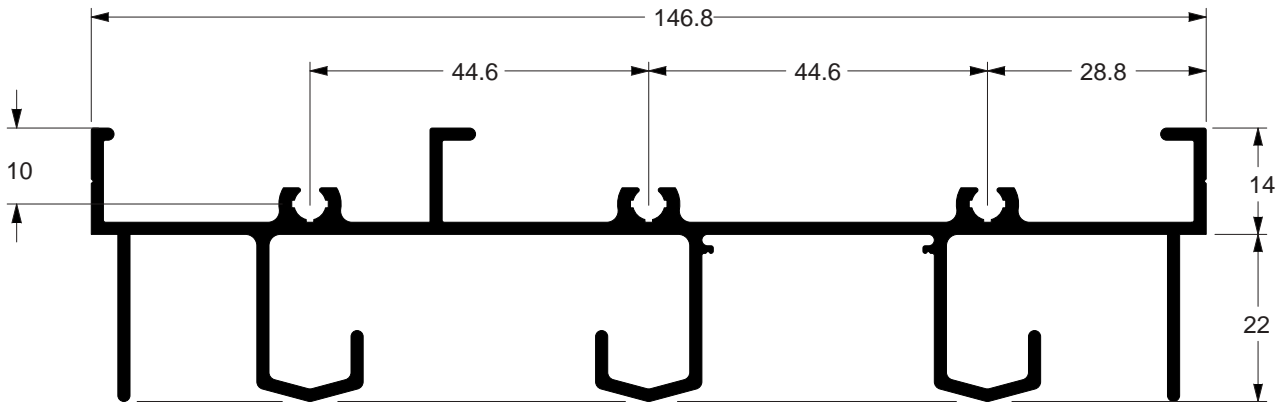
●  
**LG-003**  
 0,757 kg/m



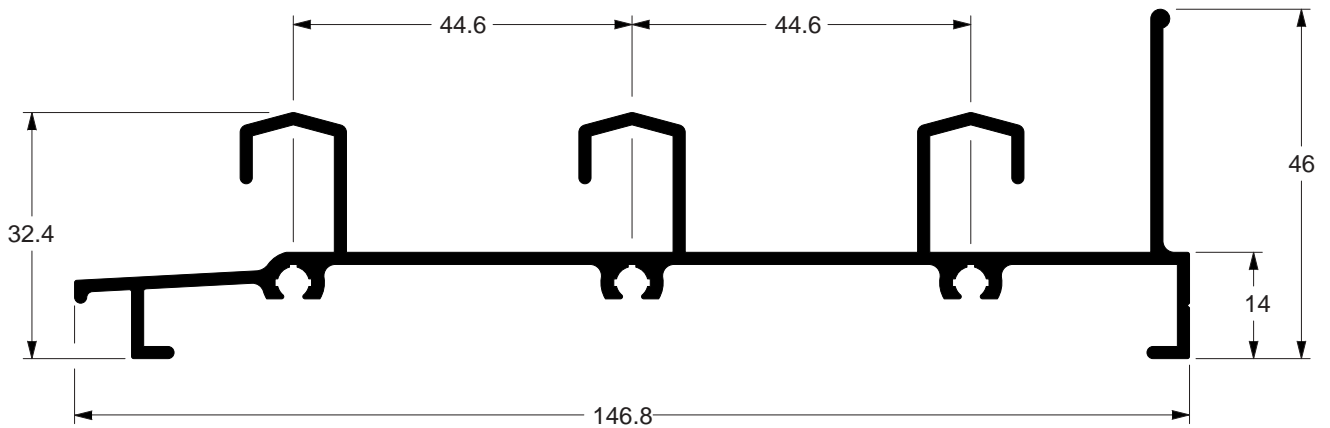
●  
**LG-004**  
 2.035 kg/m



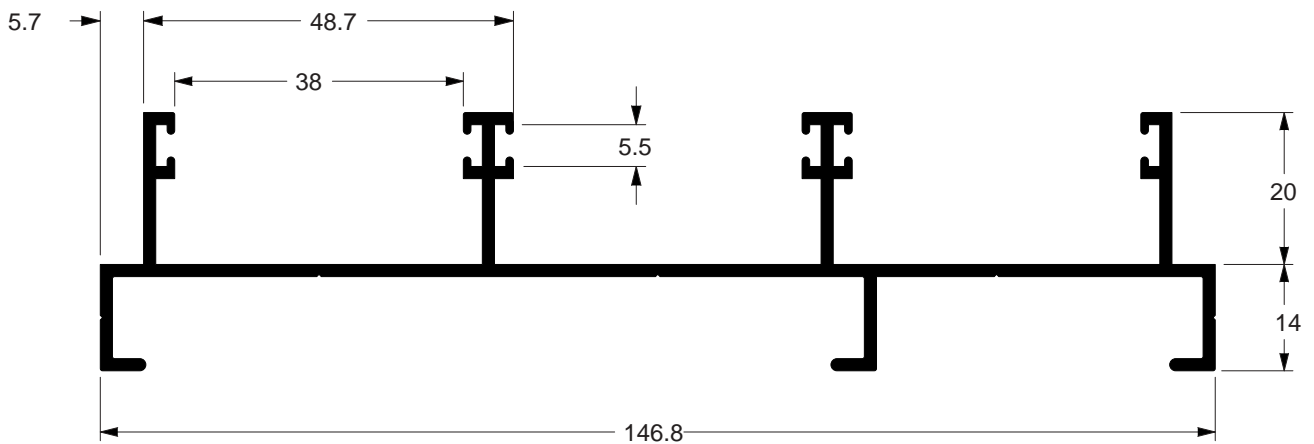
●  
**LG-005**  
 2.104 kg/m



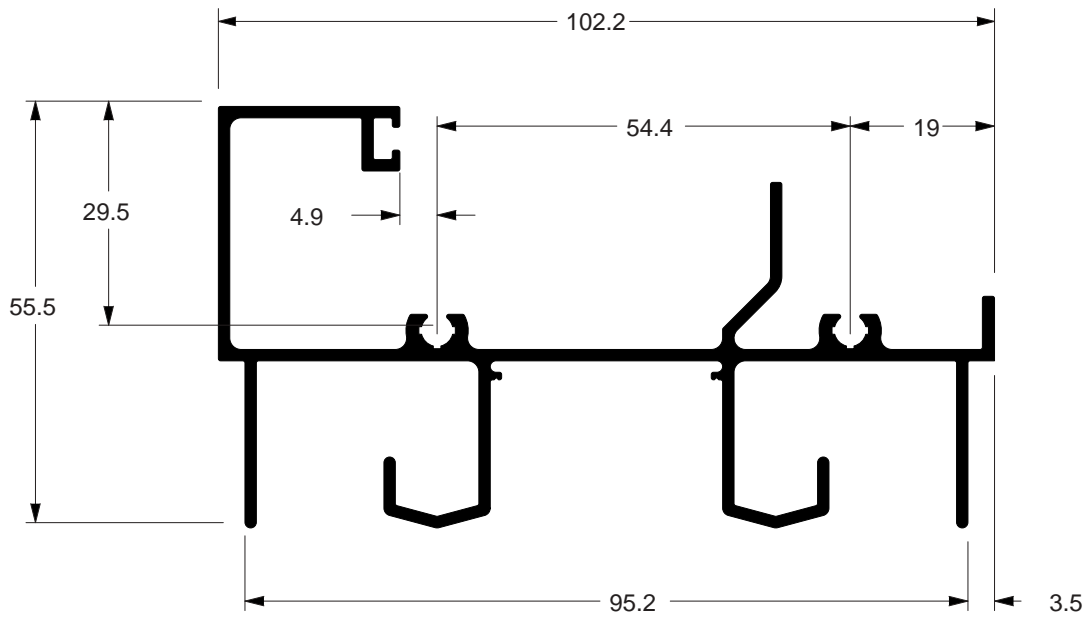
● **LG-062**  
 1,728 kg/m



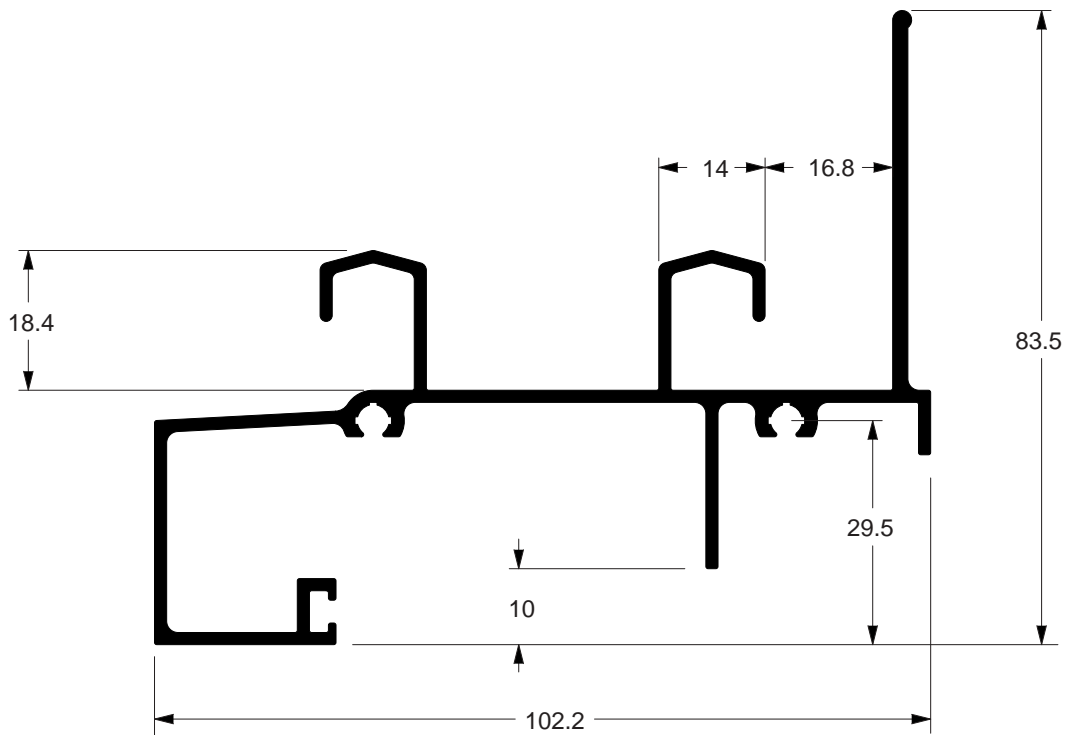
● **LG-066**  
 1.539 kg/m



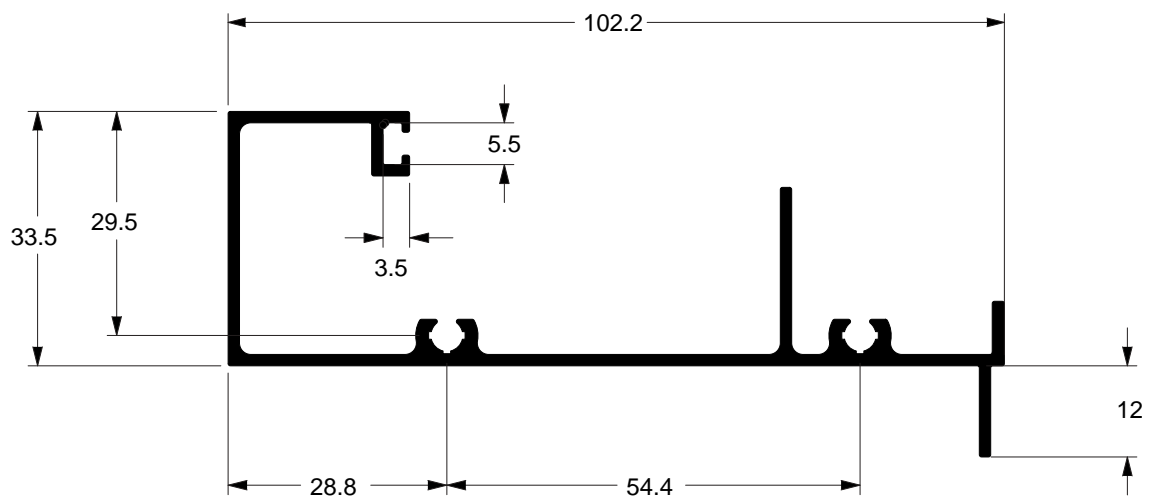
● **LG-064**  
 1.358 kg/m



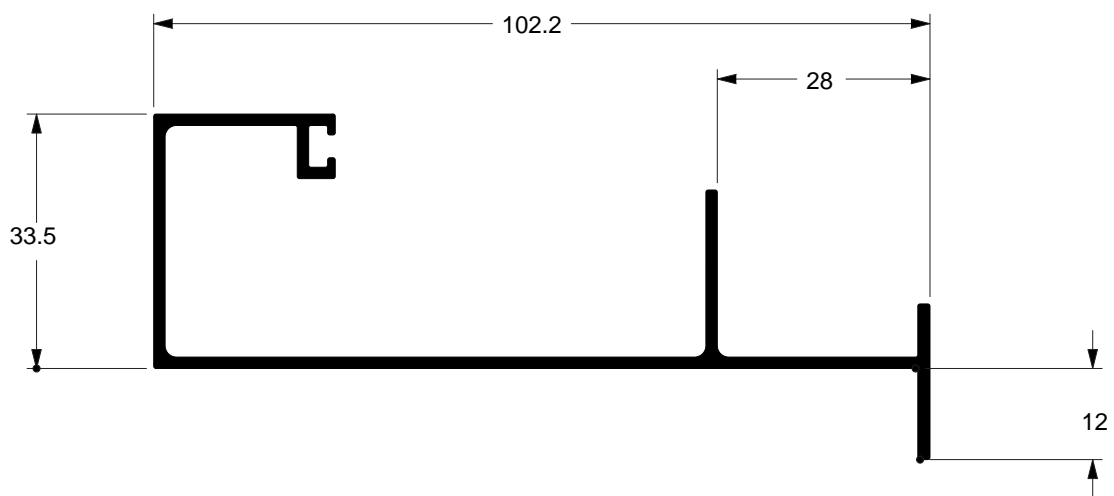
●  
**LG-008**  
 1.450 kg/m



●  
**LG-025**  
 1.533 kg/m

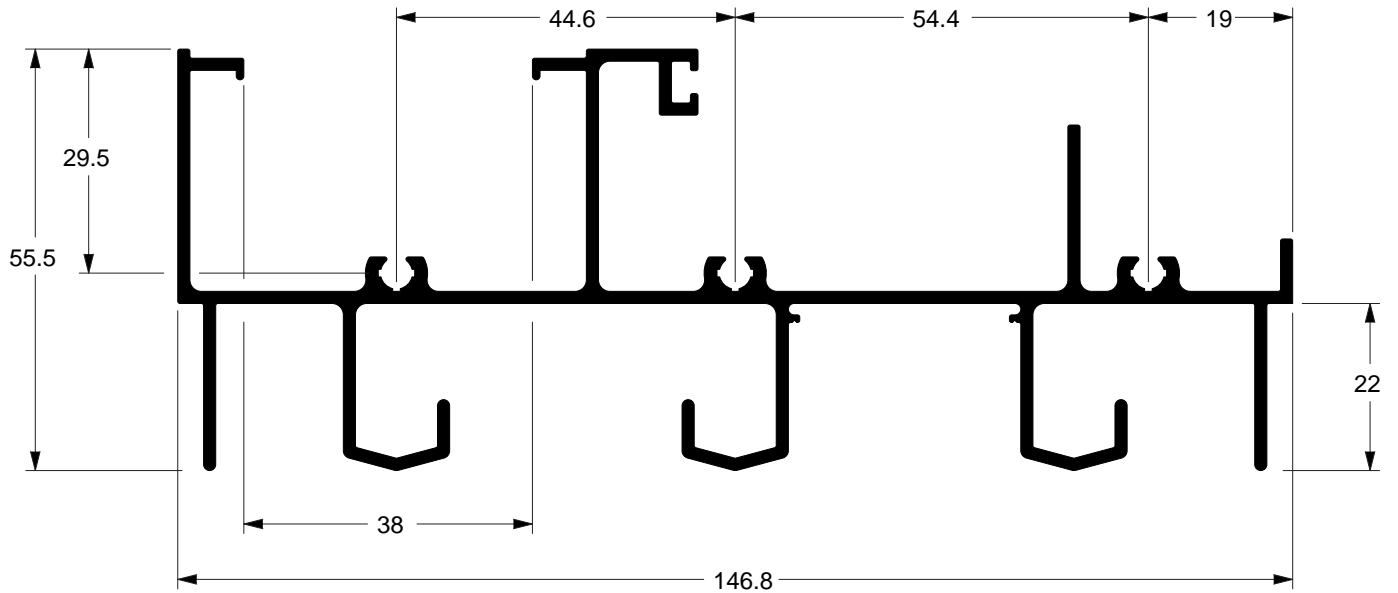


●  
**LG-009**  
 0.981 kg/m

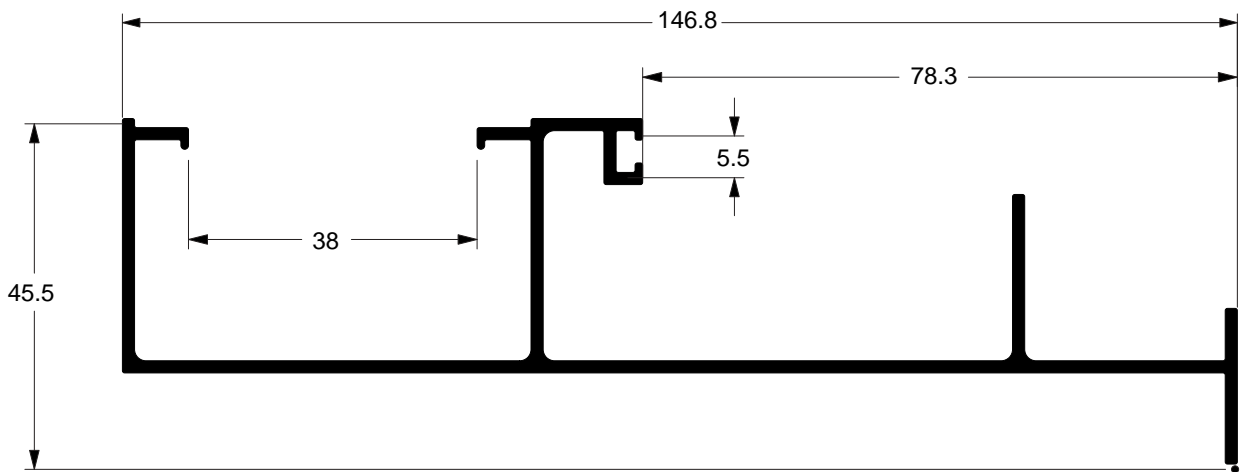


●  
**LG-010**  
 0.863 kg/m

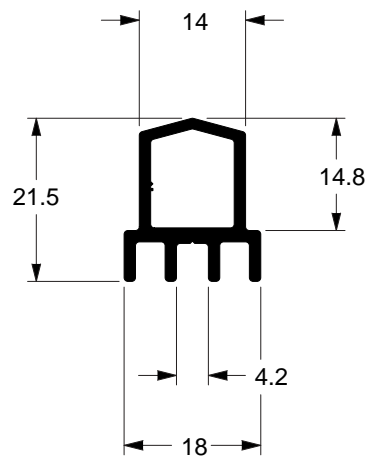




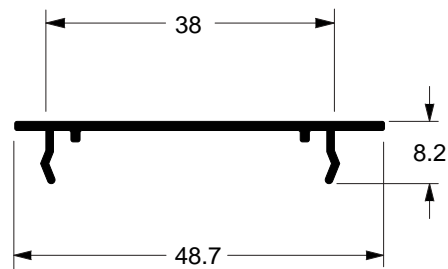
●  
**LG-011**  
 2.110 kg/m



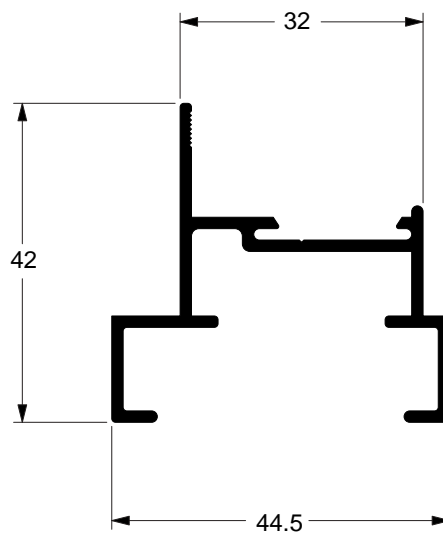
●  
**LG-014**  
 1.275 kg/m



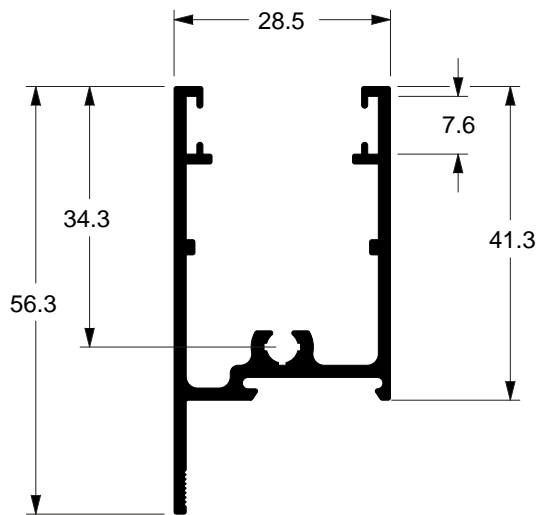
**LG-061**  
0.320 kg/m



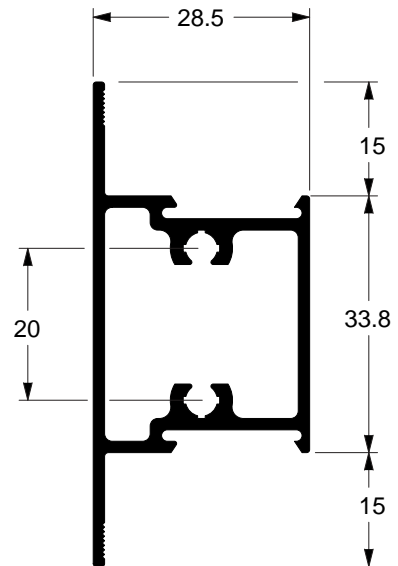
**LG-046**  
0,206 kg/m



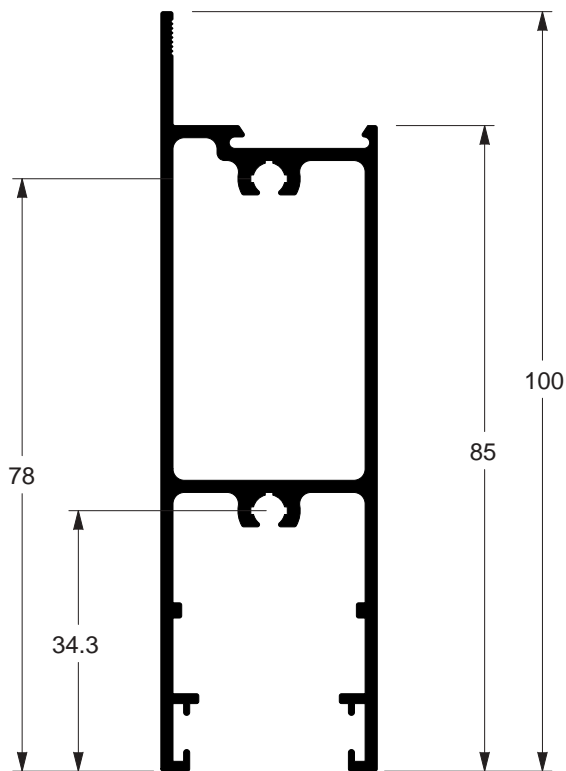
**LG-063**  
0,545 kg/m



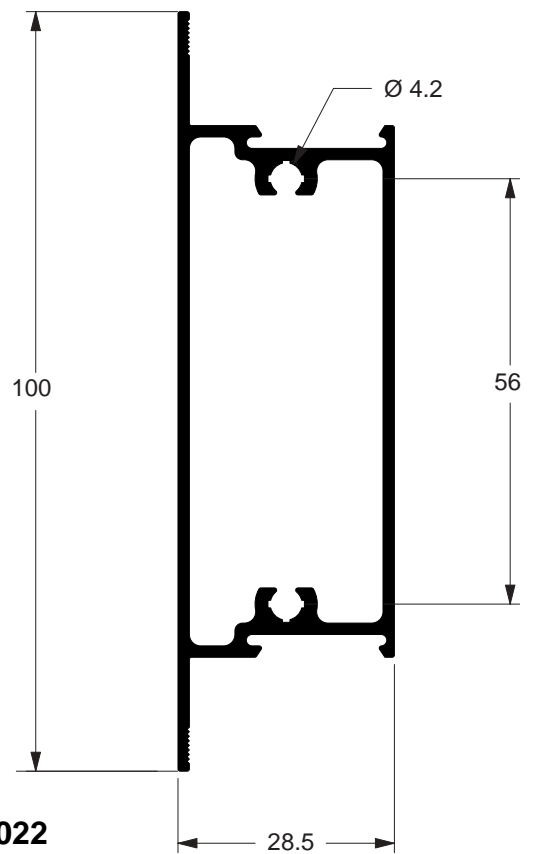
●  
**LG-006**  
 0,677 kg/m



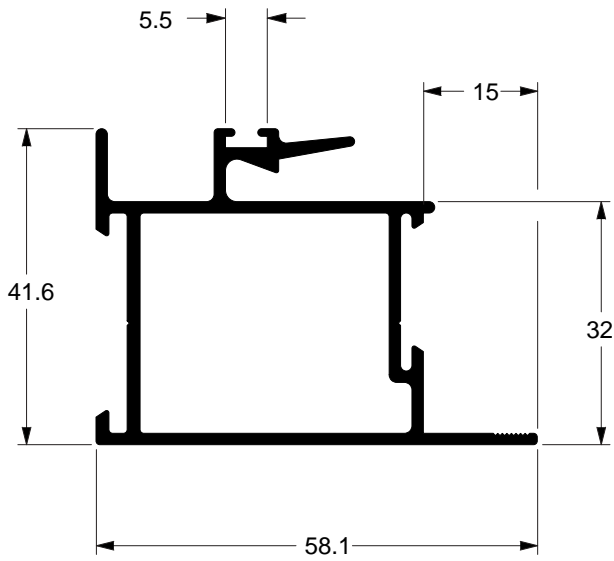
●  
**LG-055**  
 0,759 kg/m



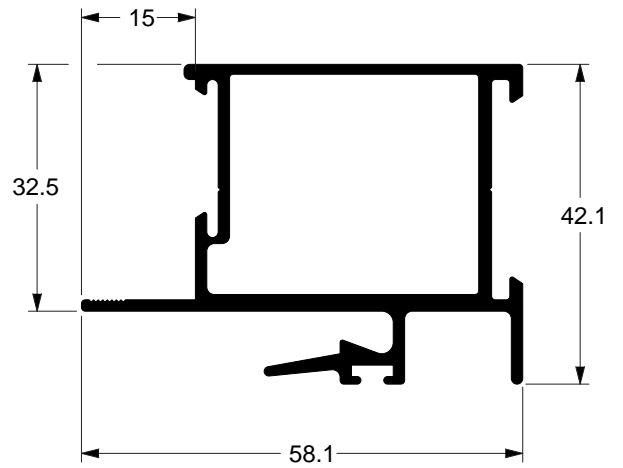
●  
**LG-007**  
 1.229 kg/m



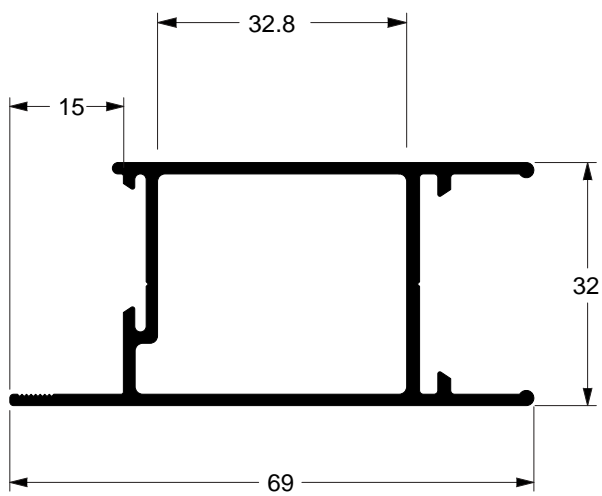
●  
**LG-022**  
 1.064 kg/m



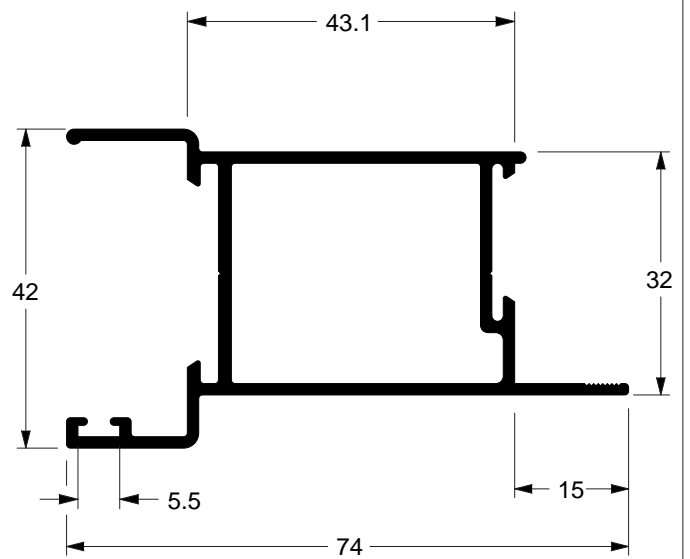
●  
**LG-049**  
 0,905 kg/m



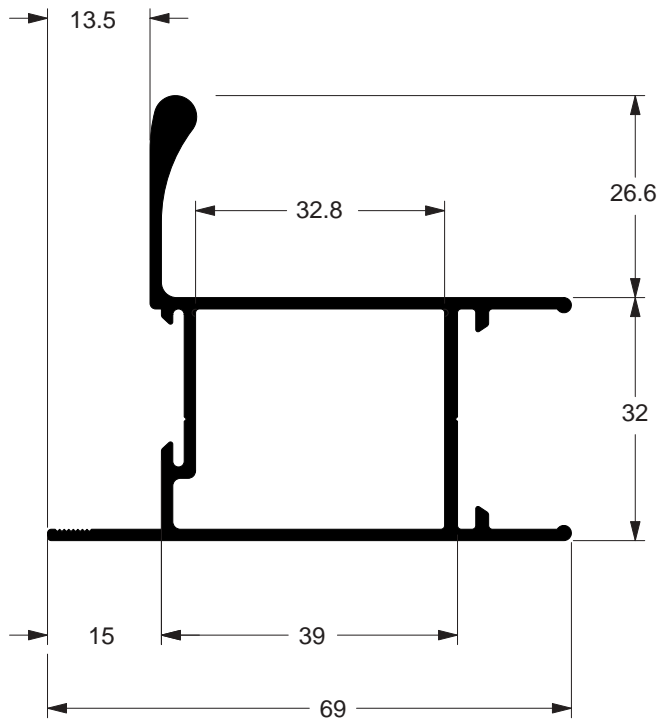
●  
**LG-048**  
 0,967 kg/m



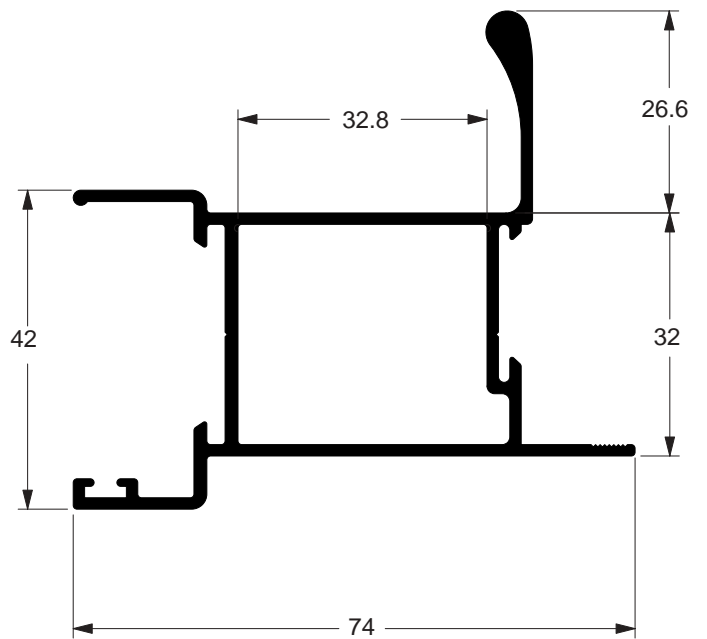
●  
**LG-050**  
 0,816 kg/m



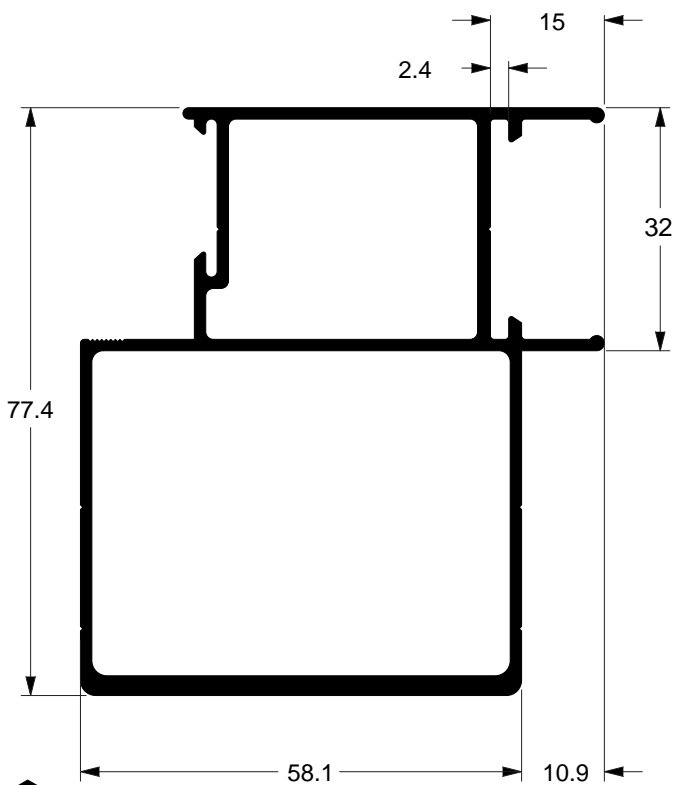
●  
**LG-051**  
 0,916 kg/m



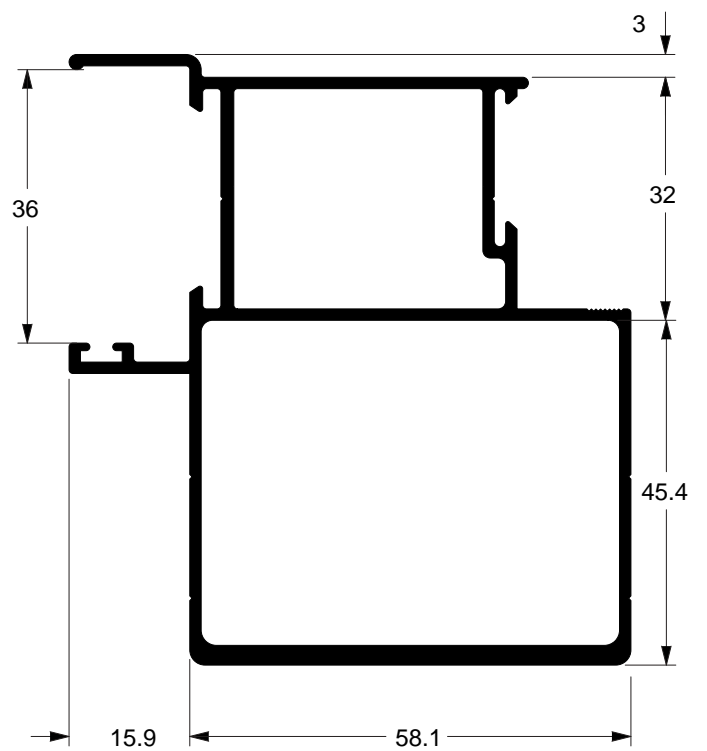
● **LG-017**  
 1.010 kg/m



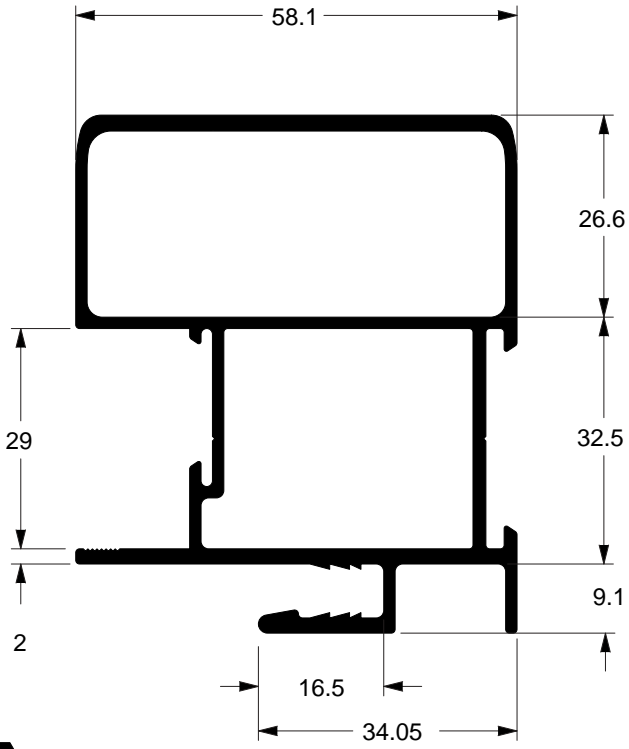
● **LG-020**  
 1.016 kg/m



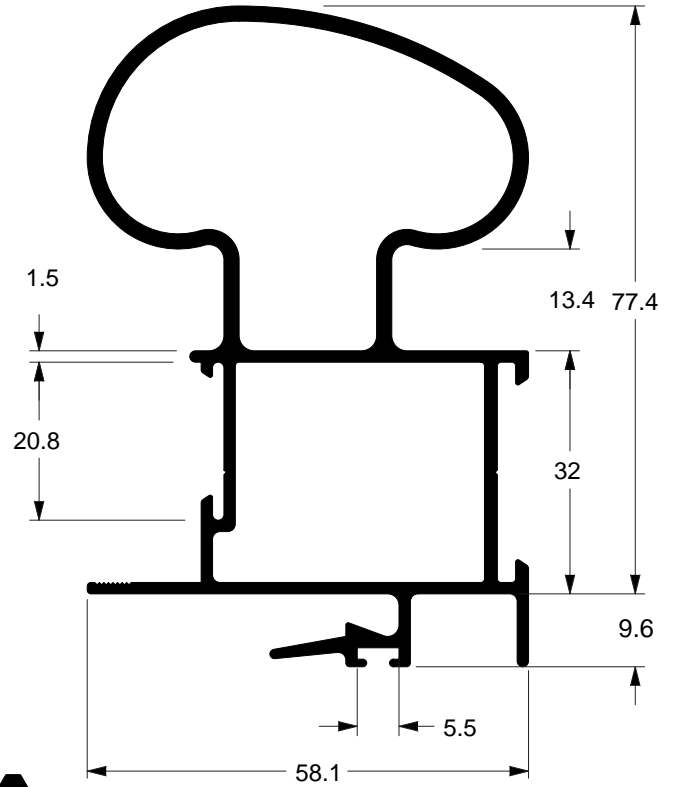
● **LG-054**  
 1.575 kg/m



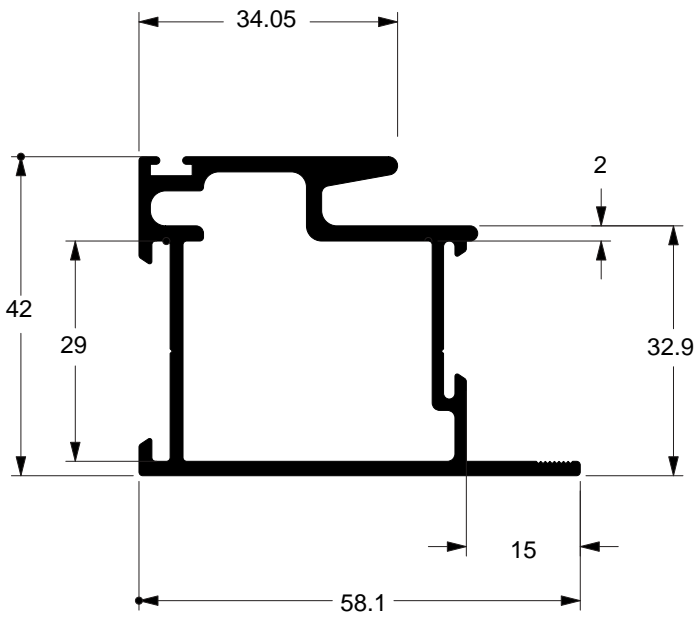
● **LG-053**  
 1.650 kg/m



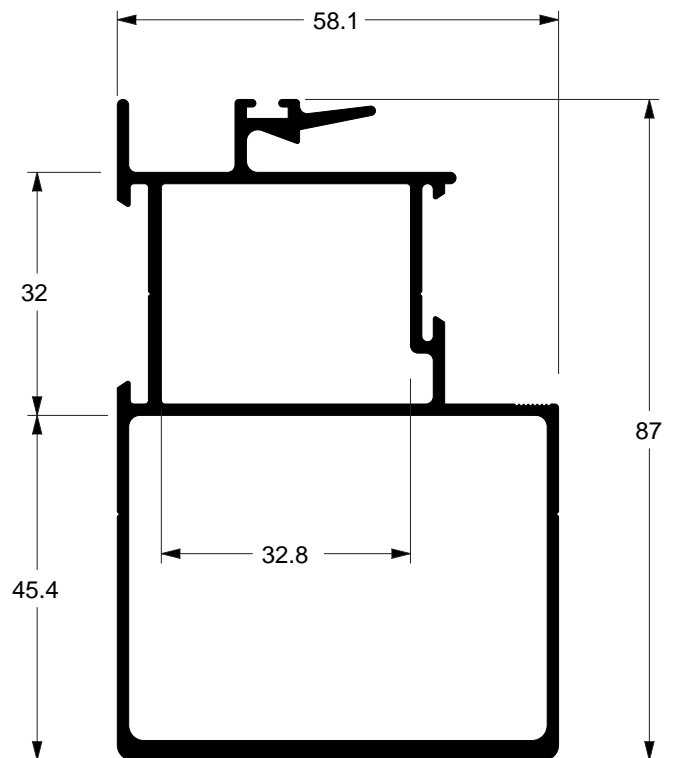
**LG-018**  
 1.572 kg/m



**LG-021**  
 1.733 kg/m

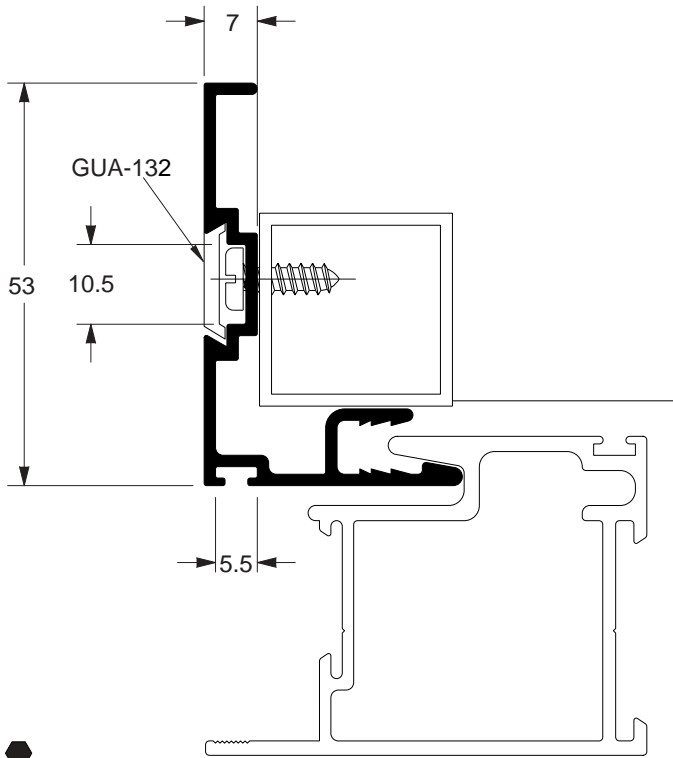


**LG-019**  
 1.080 kg/m

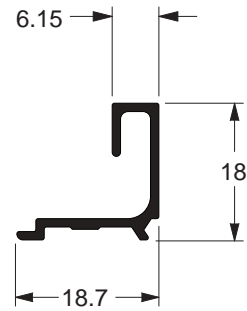


**LG-052**  
 1.669 kg/m

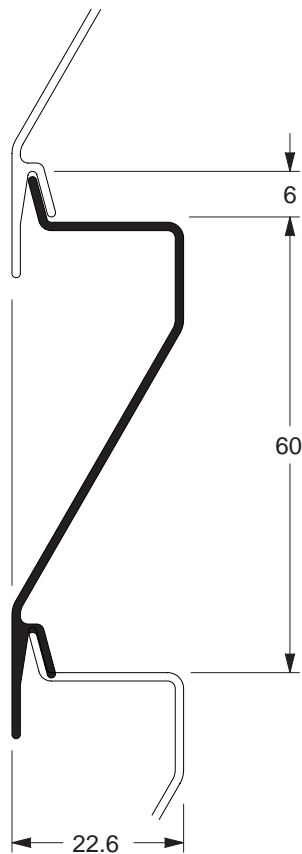
Observação: Porta palheta VZ-006 / US-258



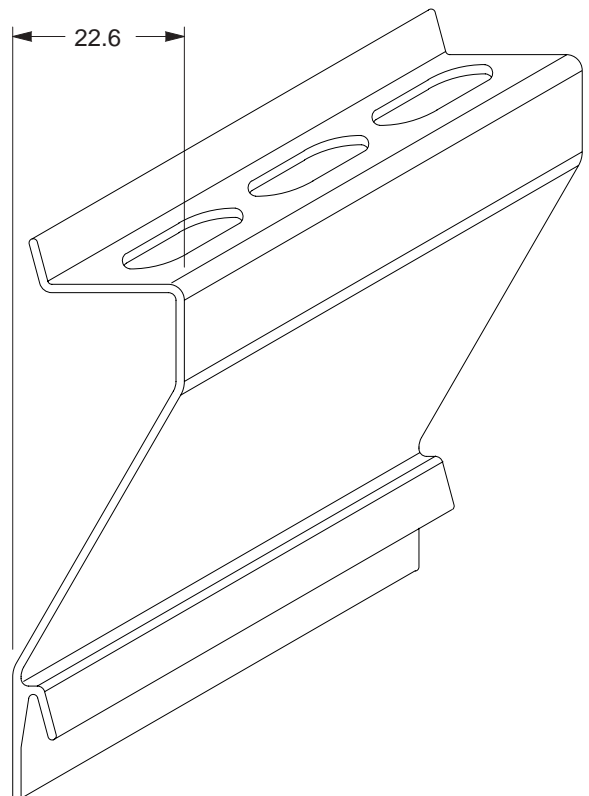
● **LG-023**  
0.551 kg/m



● **LG-027**  
0.149 kg/m

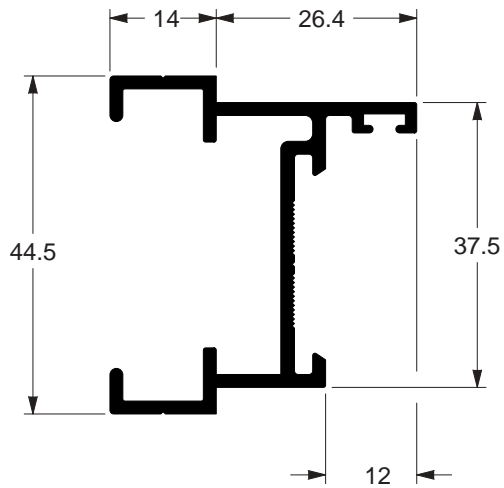


● **VZ-006**  
0.326 kg/m

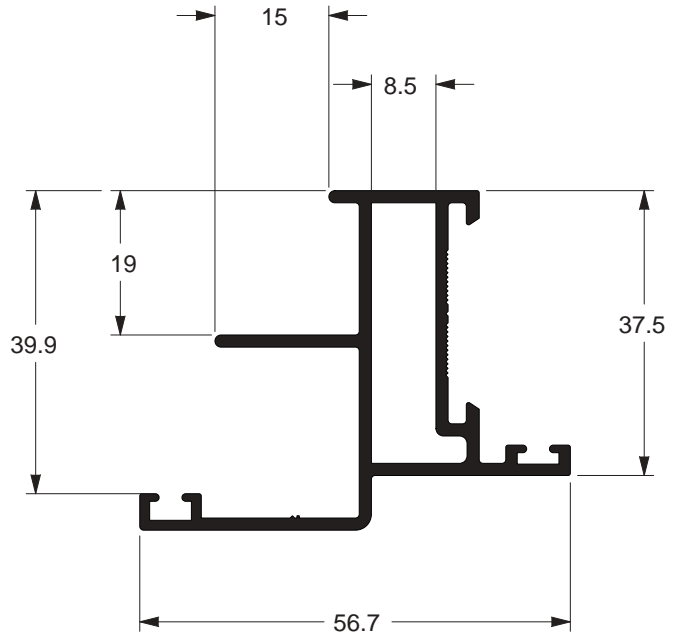


● **US-285**  
0.326 kg/m

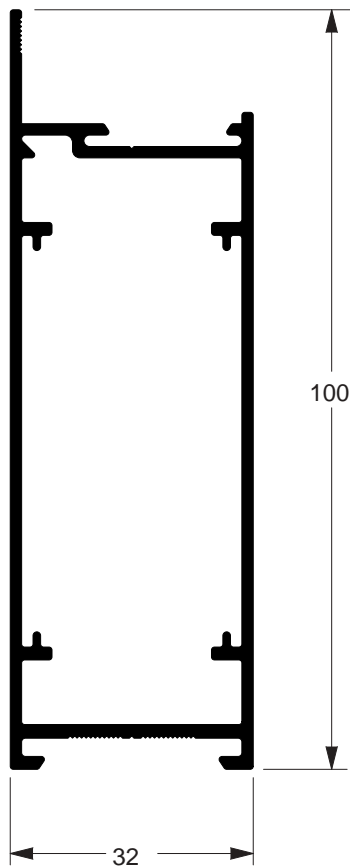
Ventilada



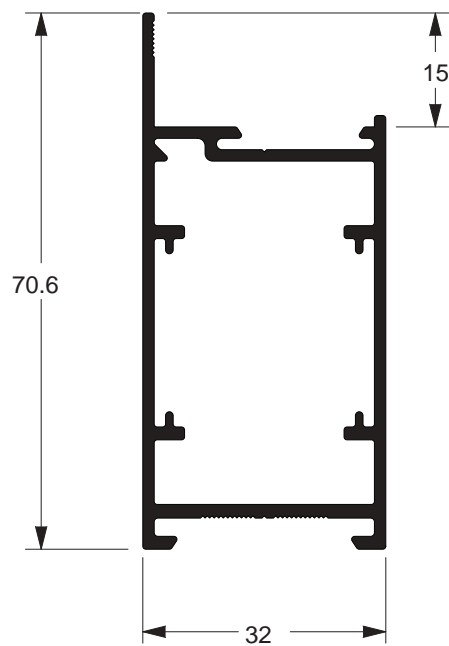
● **LG-056**  
 0,664 kg/m



● **30-298**  
 0,824 kg/m

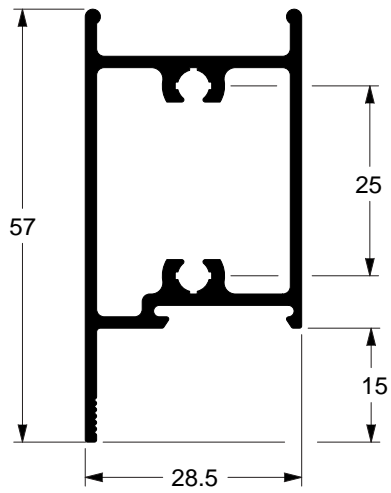


● **LG-042**  
 1.169 kg/m

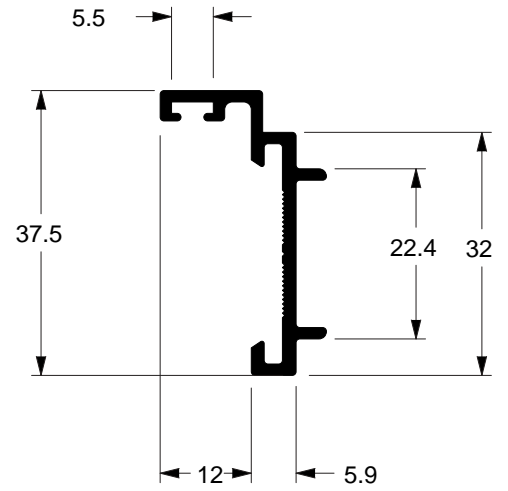


● **LG-043**  
 0,930 kg/m

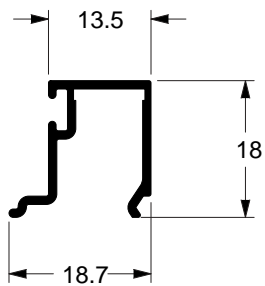




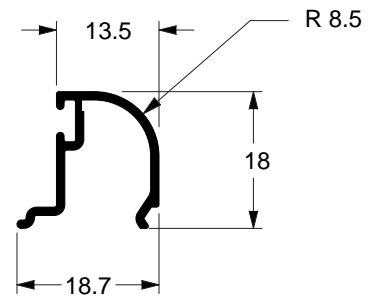
● **LG-058**  
 0,759 kg/m



● **LG-016**  
 0,338 kg/m

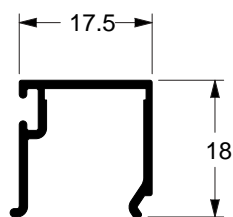


● **BG-057**  
 0,170 kg/m

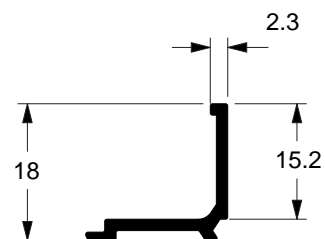


● **LG-026**  
 0,158 kg/m

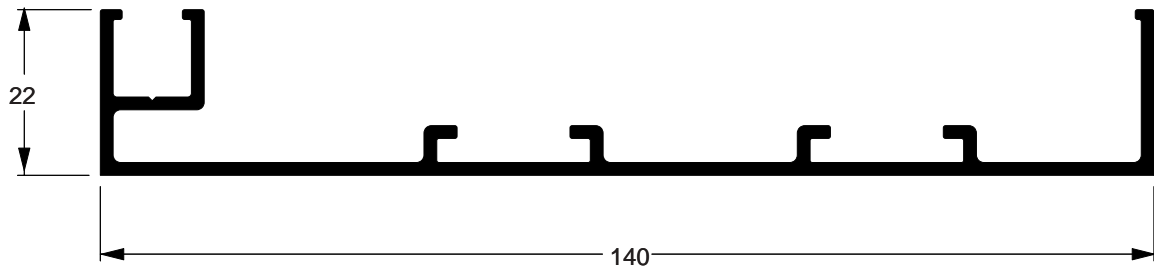
Observação: para vidro duplo termo-acústico



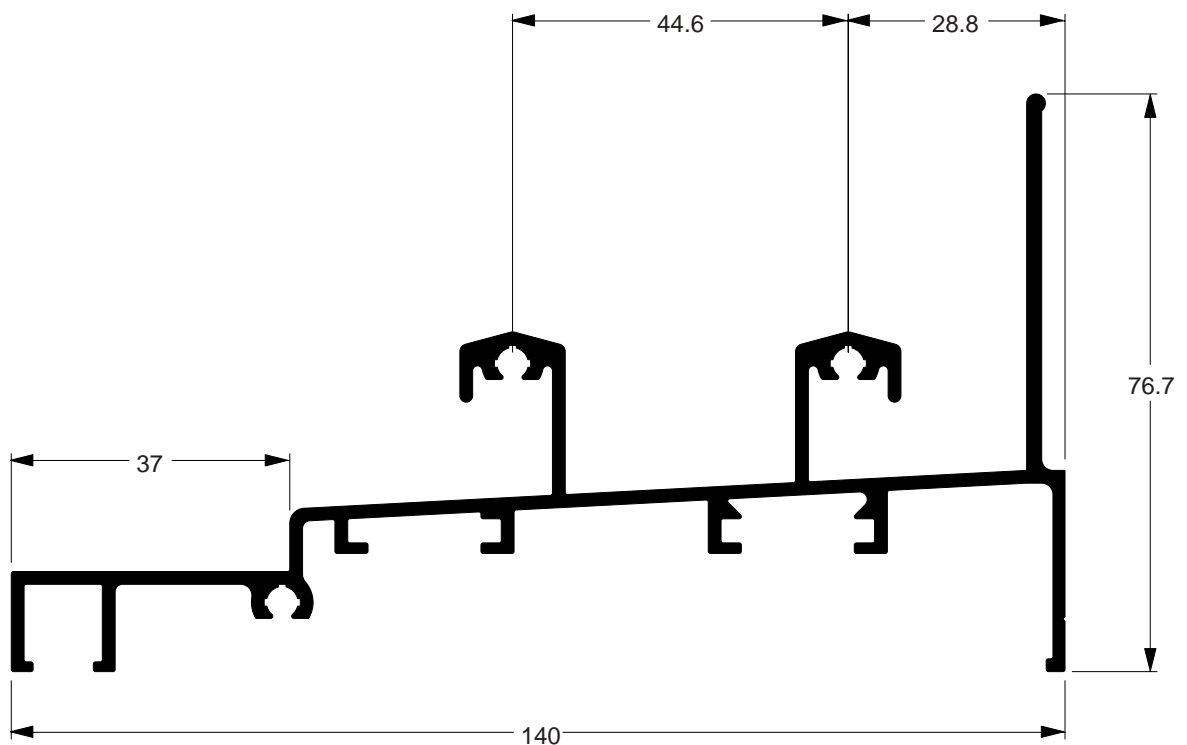
● **LG-059**  
 0,169 kg/m



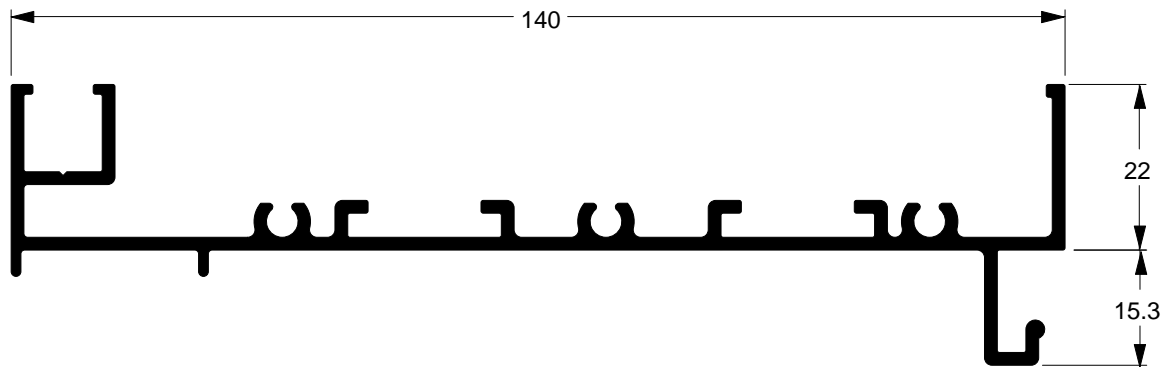
● **LG-015**  
 0,147 kg/m



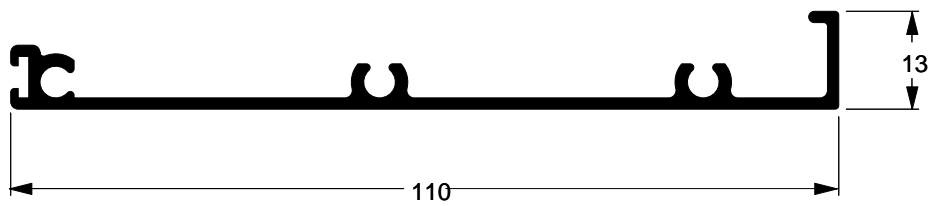
●  
**MN-003**  
 1,093 kg/m



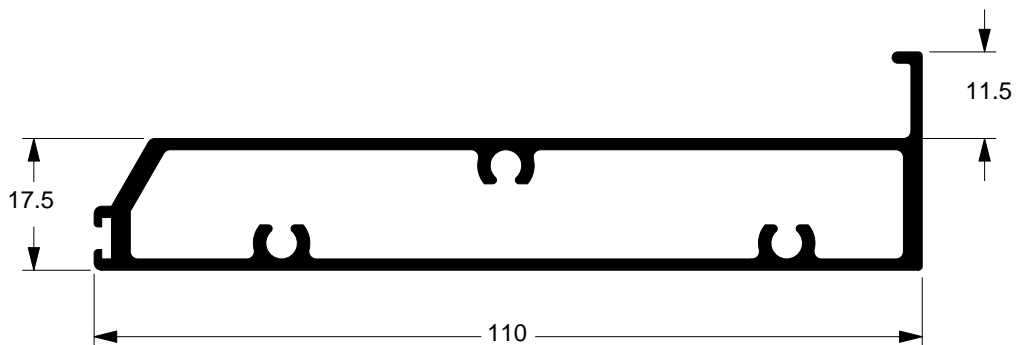
●  
**MN-030**  
 1,900 kg/m



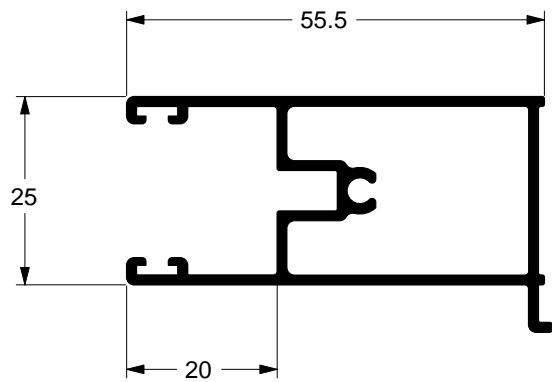
●  
**MN-001**  
 1,377 kg/m



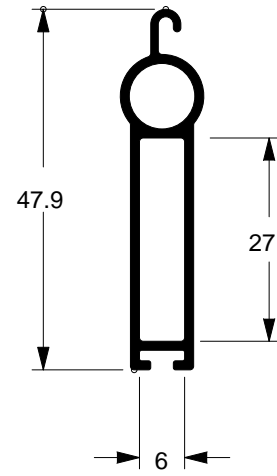
●  
**MN-002**  
 0,669 kg/m



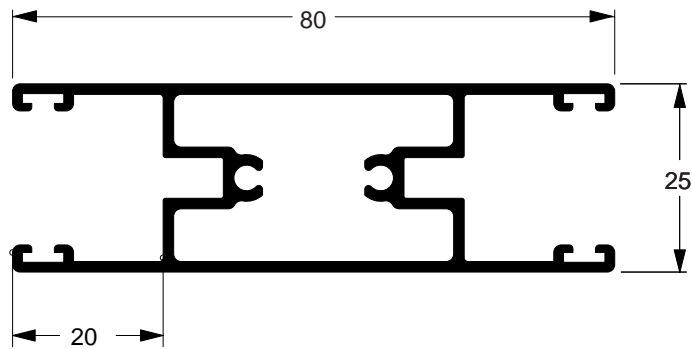
●  
**MN-041**  
 0,545 kg/m



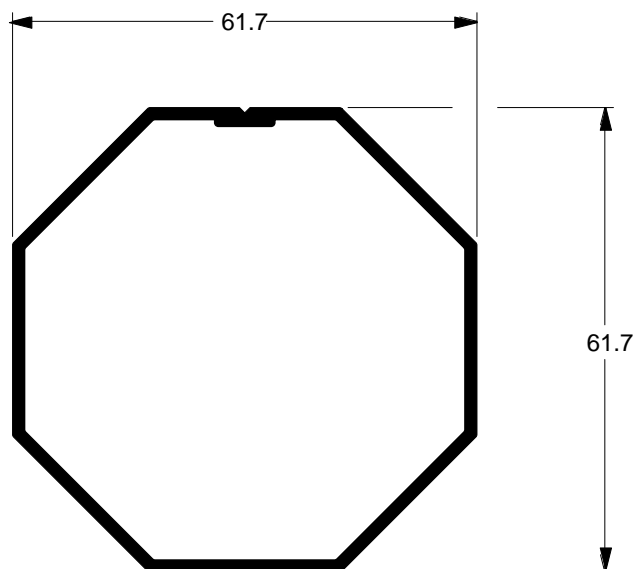
● **MN-007**  
 0,710 kg/m



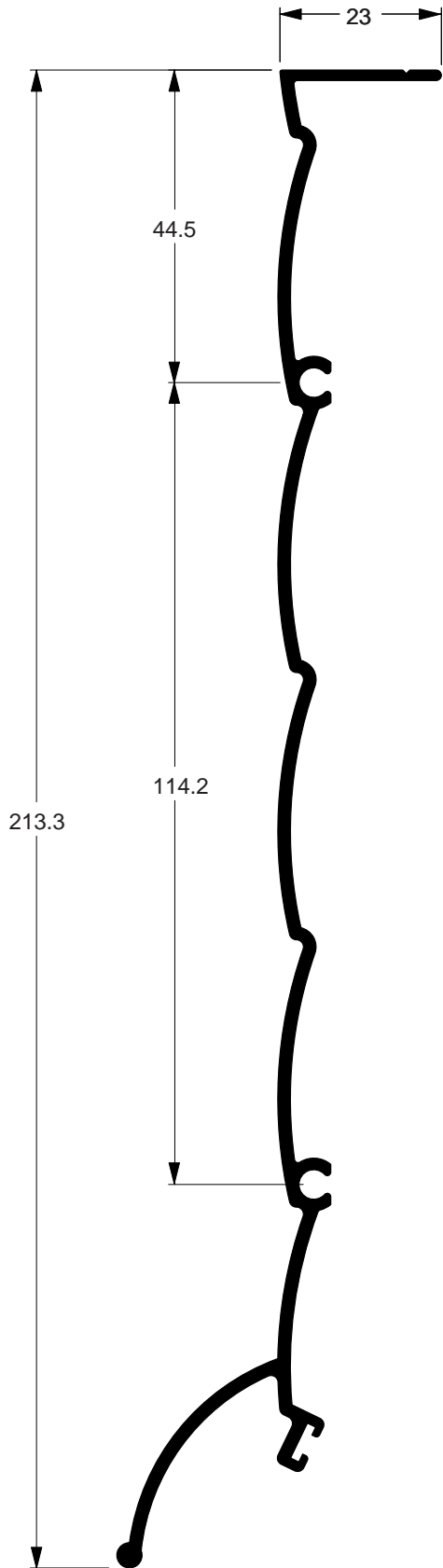
● **MN-0055**  
 0.371 kg/m



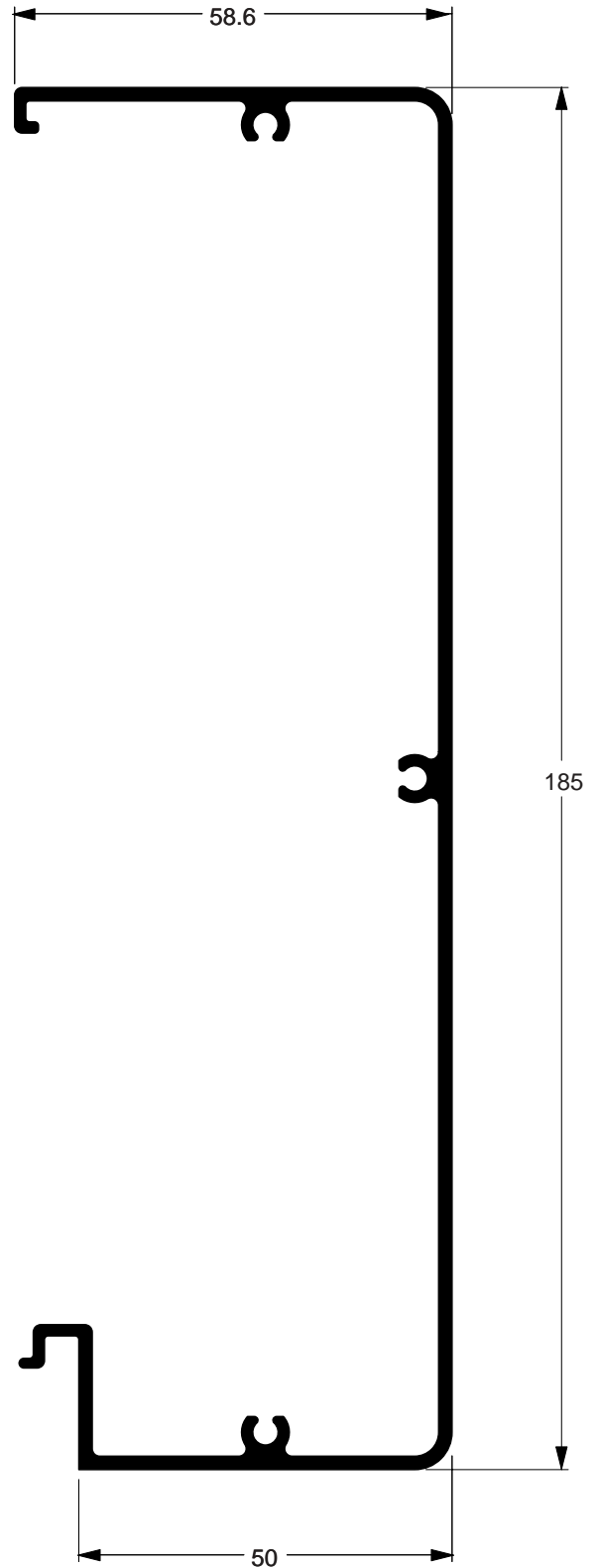
● **MN-027**  
 1,043 kg/m



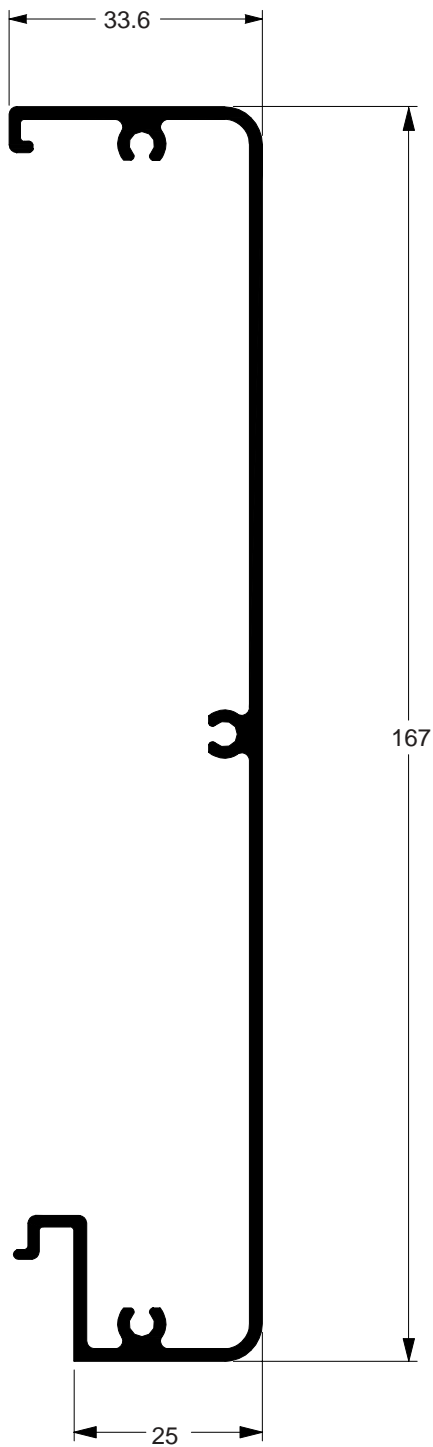
● **MN-015**  
 0,881 kg/m



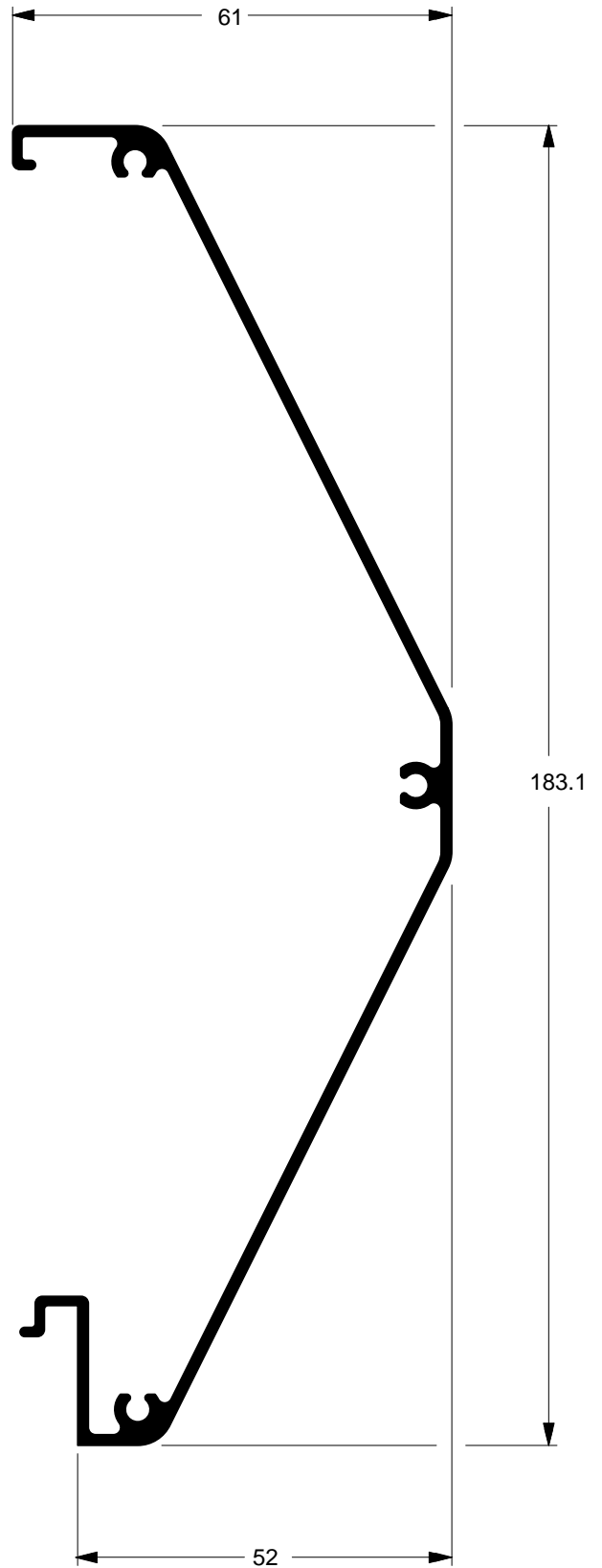
●  
**MN-039**  
1,400 kg/m



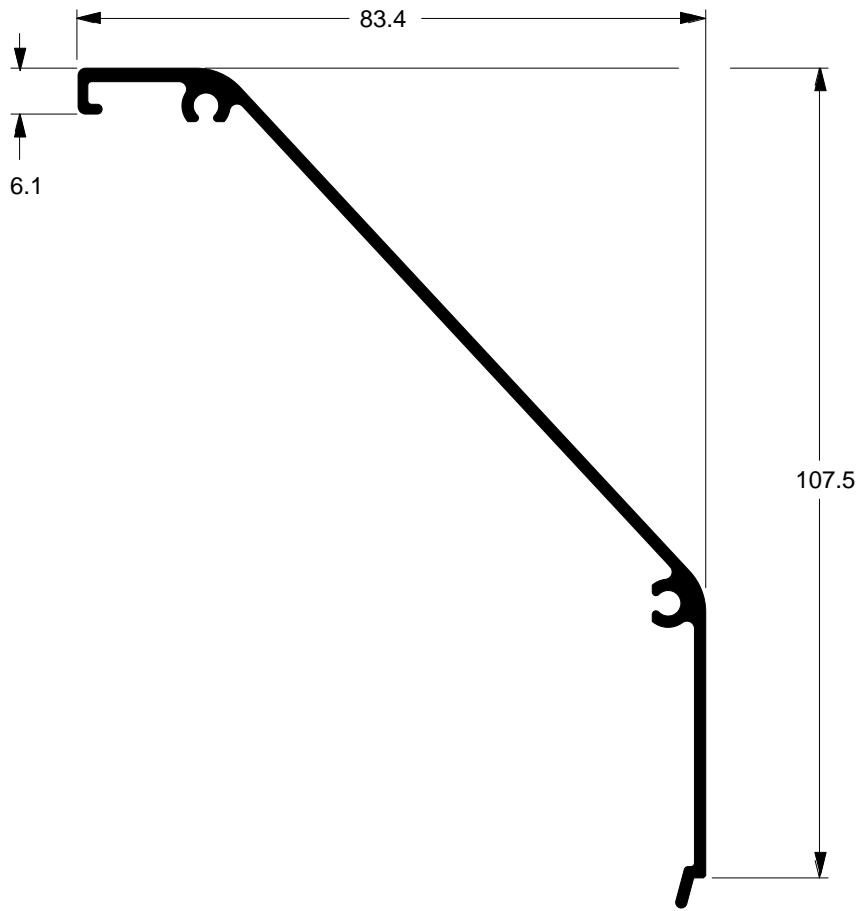
●  
**MN-032**  
1,723 kg/m



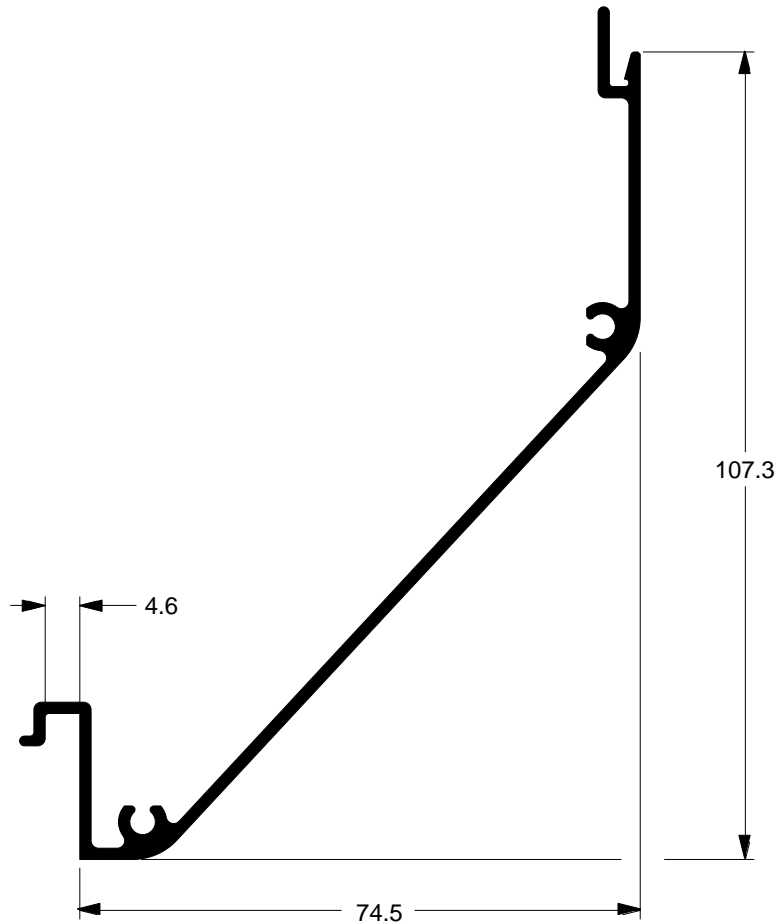
●  
**MN-031**  
1,331 kg/m



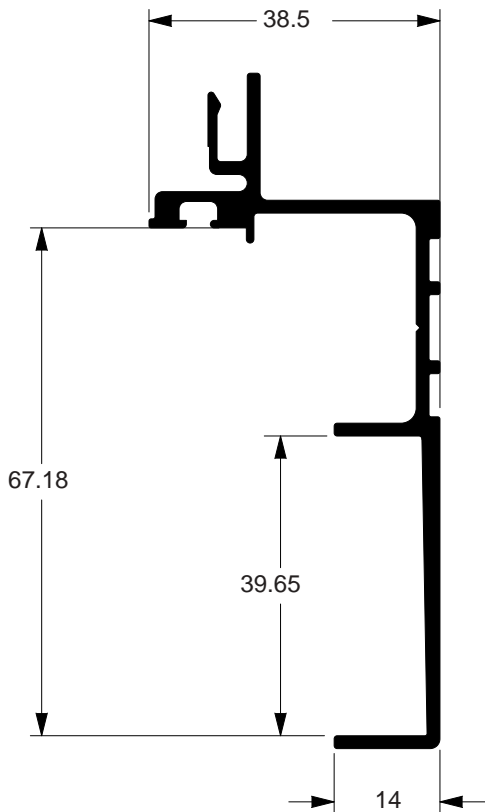
●  
**MN-008**  
1,385 kg/m



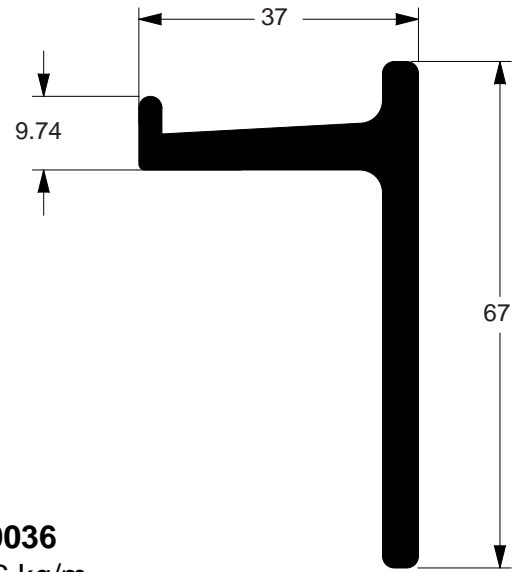
●  
**MN-005**  
0,783 kg/m



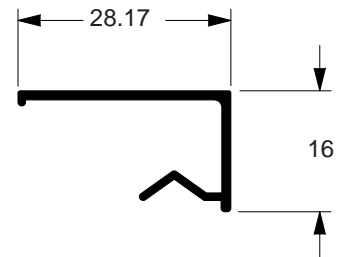
●  
**MN-006**  
0,878 kg/m



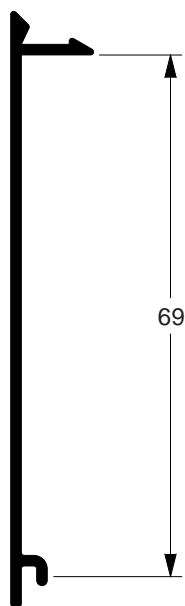
● **UN-0002**  
 0.887 kg/m



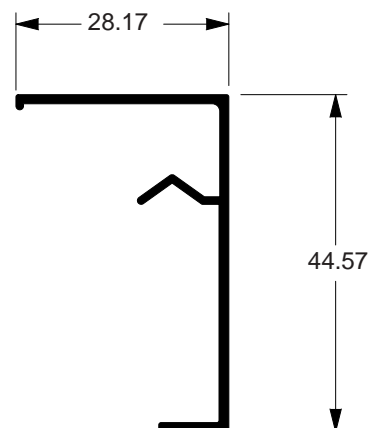
● **UN-0036**  
 1.386 kg/m



● **UN-0018**  
 0.176 kg/m

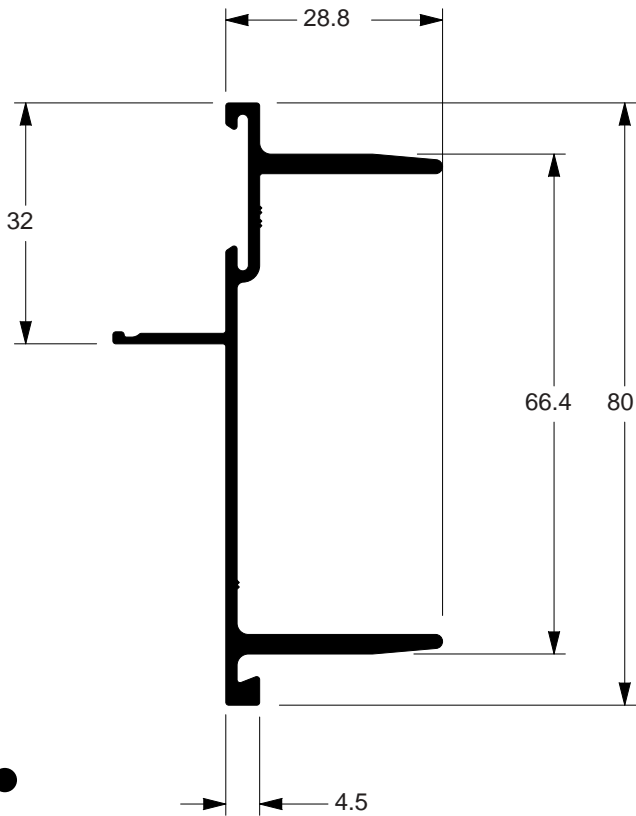


● **LG-0090**  
 0.361 kg/m



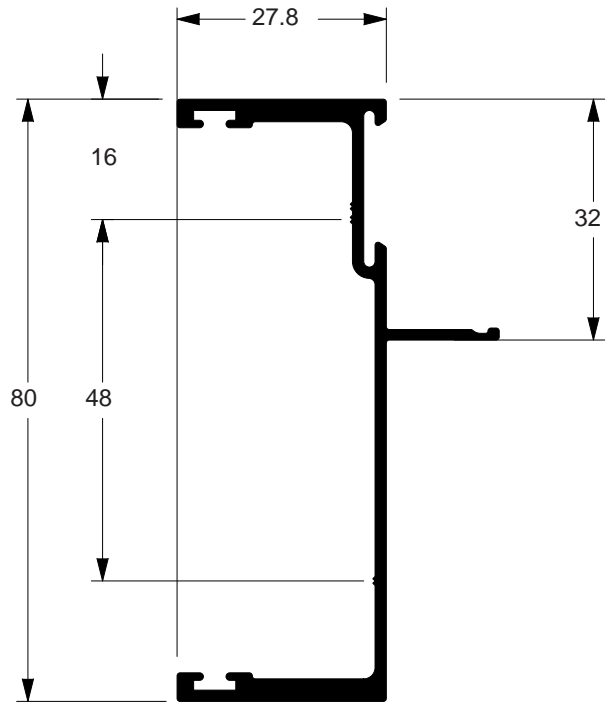
● **UN-0004**  
 0.303 kg/m





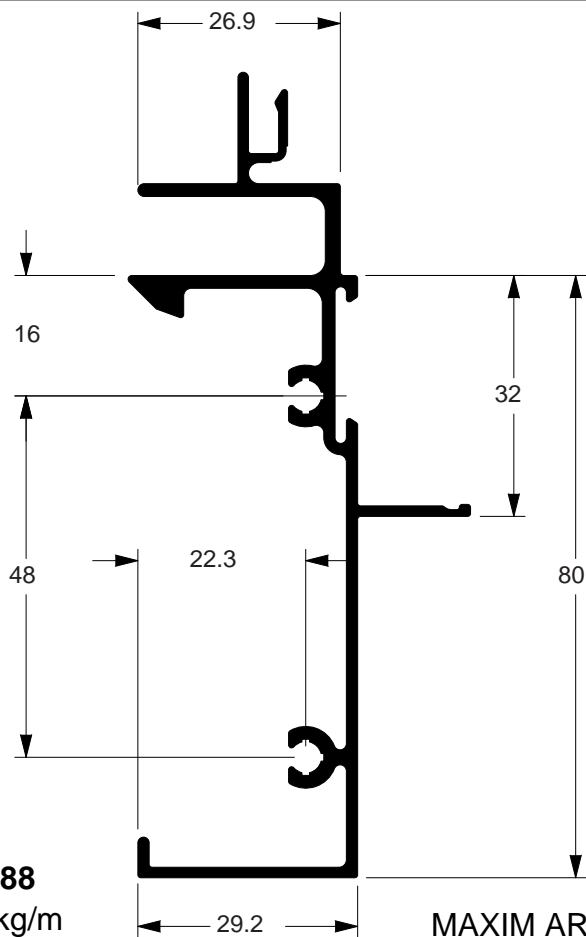
● **LG-0086**  
 0.797 kg/m

MAXIM AR



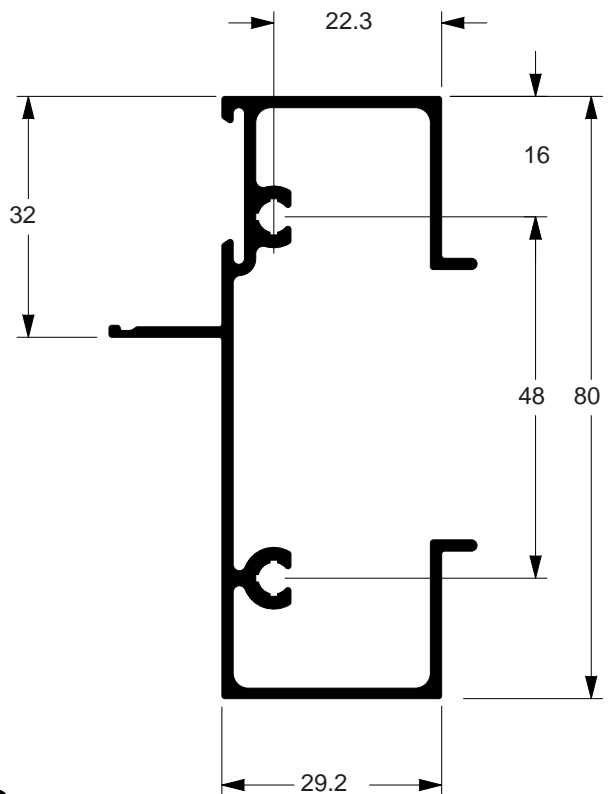
● **LG-0087**  
 0.833 kg/m

MAXIM AR



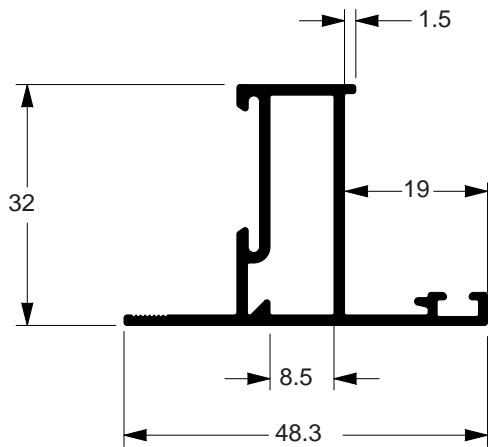
● **LG-0088**  
 1.143 kg/m

MAXIM AR

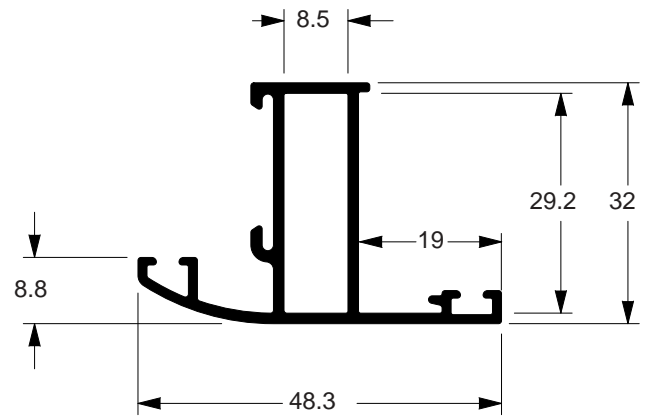


● **LG-0089**  
 0.986 kg/m

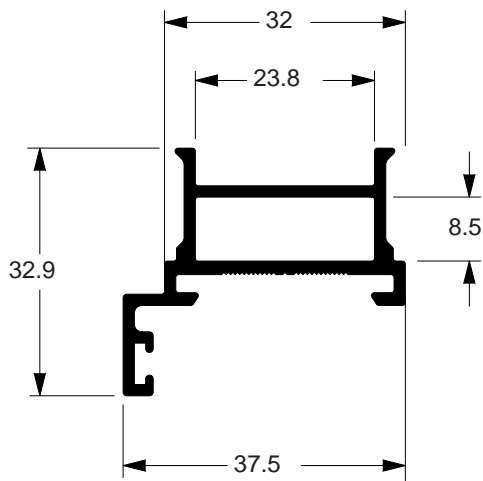
MAXIM AR



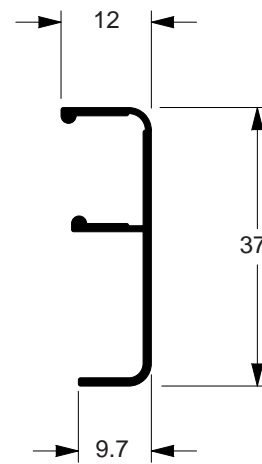
● **LG-0085**  
0.529 kg/m



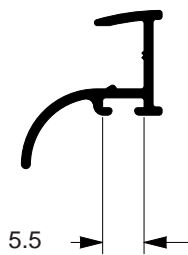
● **LG-0096**  
0.555 kg/m



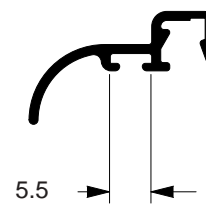
● **LG-0094**  
0.546 kg/m



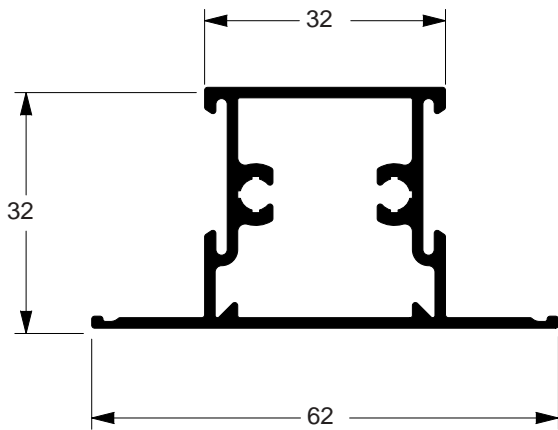
● **MH-0017**  
0.195 kg/m



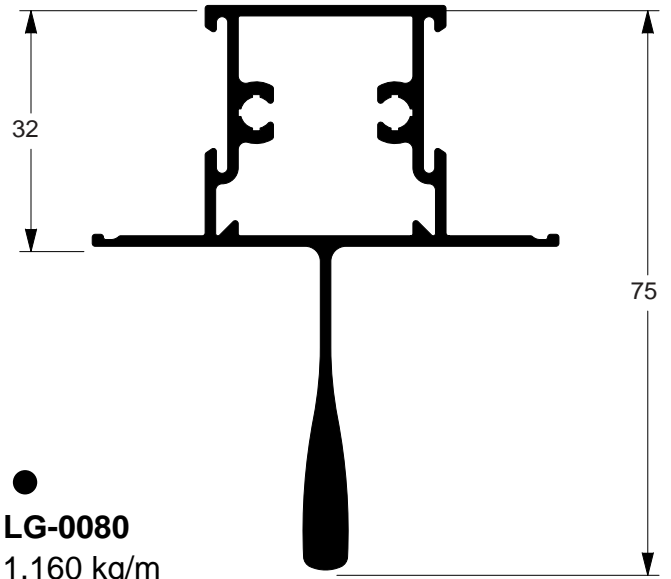
● **LG-0092**  
0.158 kg/m



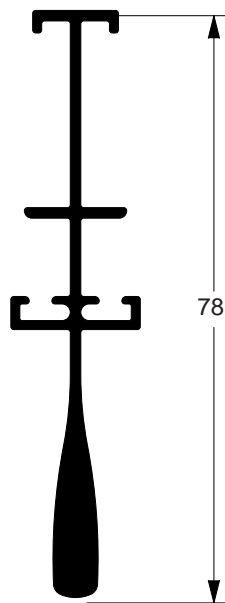
● **LG-0091**  
0.151 kg/m



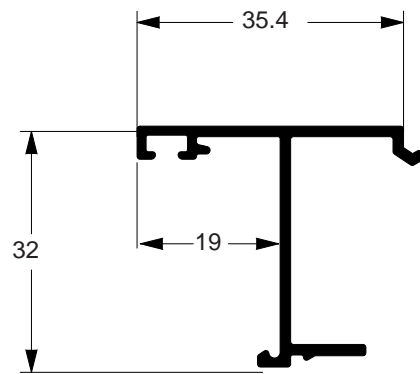
●  
**LG-0079**  
 0.770 kg/m



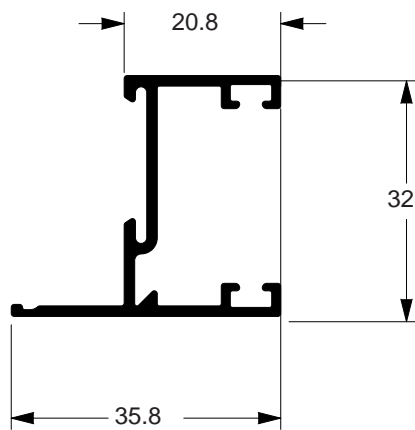
●  
**LG-0080**  
 1.160 kg/m



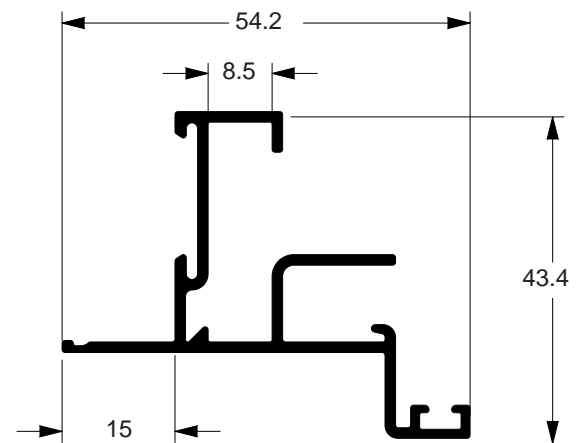
●  
**LG-0093**  
 0.706 kg/m



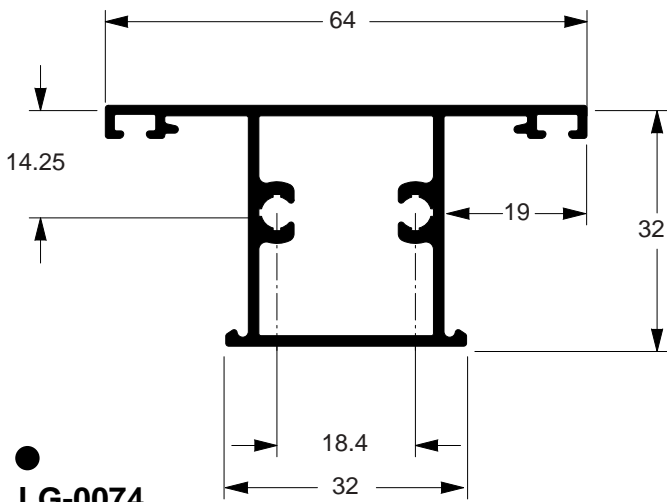
●  
**LG-0082**  
 0.356 kg/m



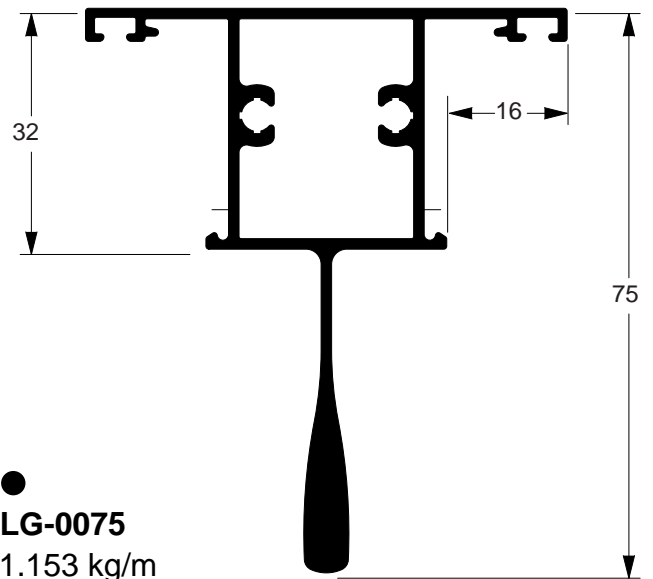
●  
**LG-0083**  
 0.409 kg/m



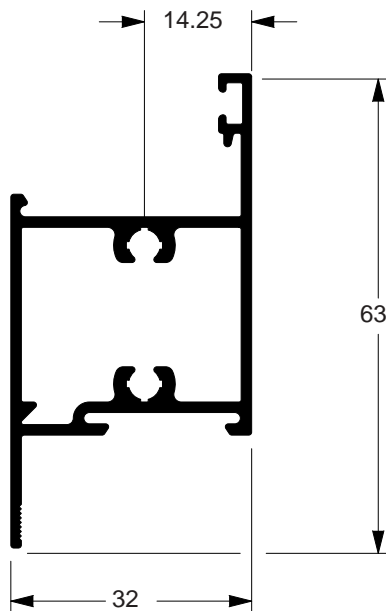
●  
**LG-0084**  
 0.597 kg/m



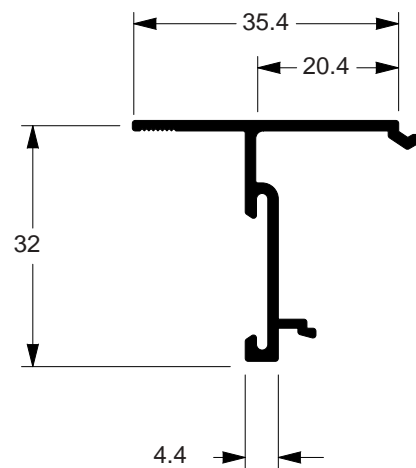
● **LG-0074**  
 0.760 kg/m



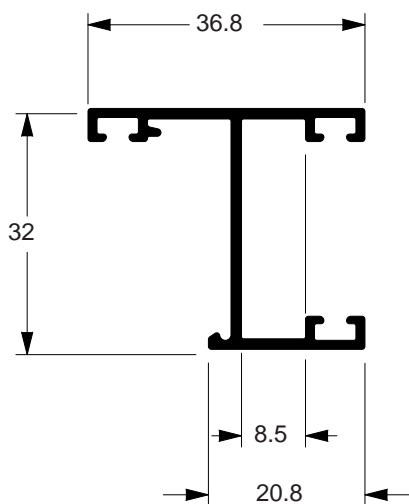
● **LG-0075**  
 1.153 kg/m



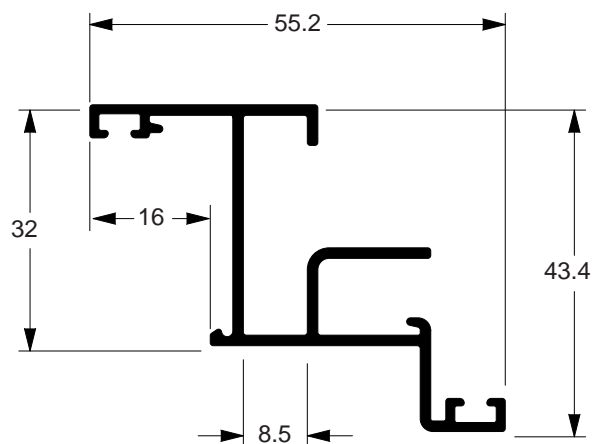
● **LG-0076**  
 0.765 kg/m



● **LG-0077**  
 0.326 kg/m



● **LG-0068**  
 0.405 kg/m



● **LG-0078**  
 0.594 kg/m

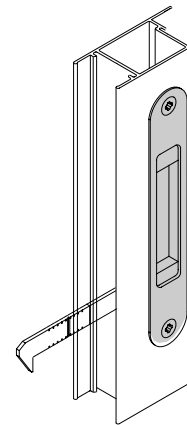
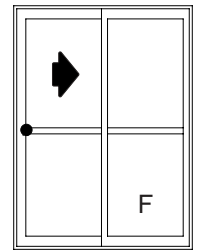
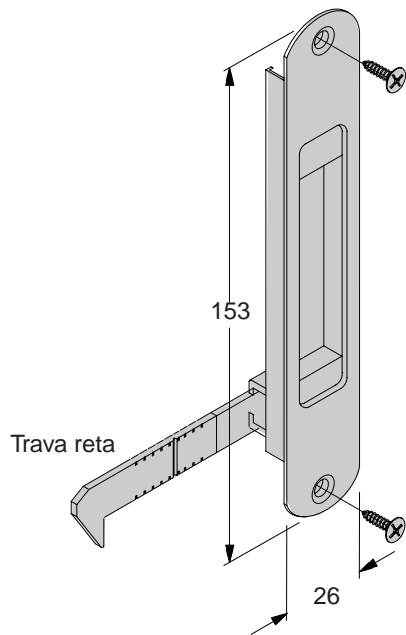


## Capítulo 6

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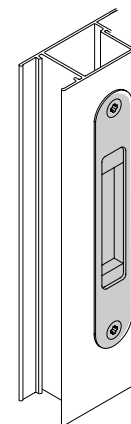
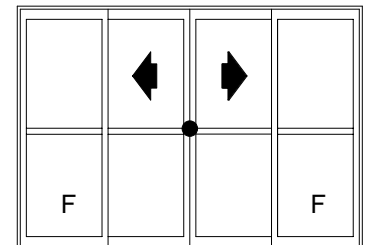
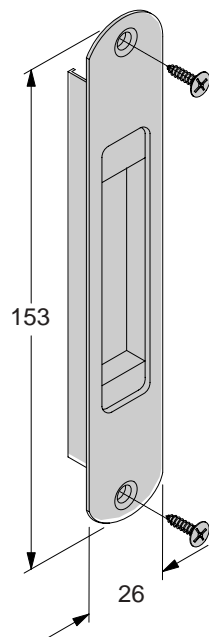
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PAR-434	Parafuso 3,5x9.5mm	102
PAR-693	Parafuso 4,2x25mm cabeça panela	95
PAR-694	Parafuso 4,2x32mm cabeça panela	95
PAR-703	Parafuso auto-atarraxante 3,5x9.5mm	94
PAR-704	Parafuso auto-atarraxante aço inox	101
PAR-936	Parafuso auto-atarraxante 4,2X1.6mm	94
PUX-006	Puxador porta de correr	79
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VZC-110,111,112,113	Veneziana sem ventilação	103
VZP-031,032,033,034	Veneziana com ventilação	103



Aplicação

## FEC-636

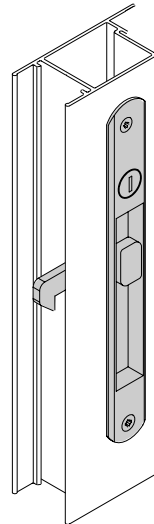
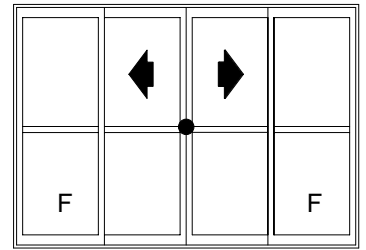
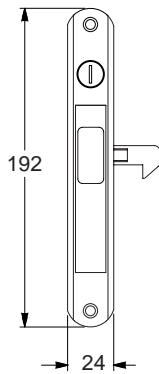
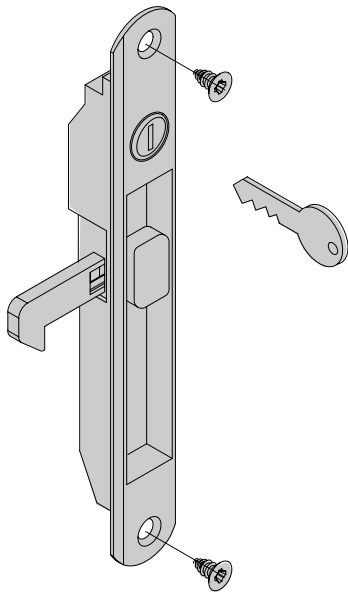
Fecho concha sem chave e trava reta - Janela e porta de correr  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça



Aplicação

## CON-280

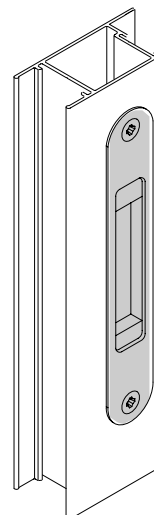
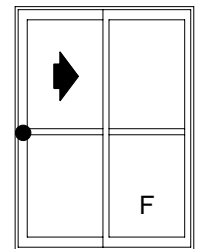
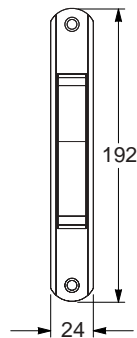
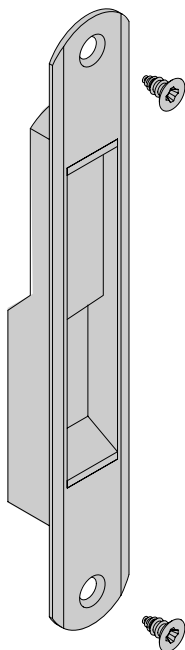
Concha simples - Janela e porta de correr  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça



Aplicação

## FEC-677

Fecho concha com chave metálica - Porta de correr  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça

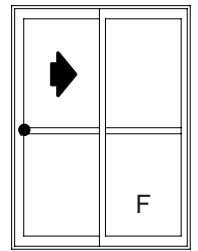
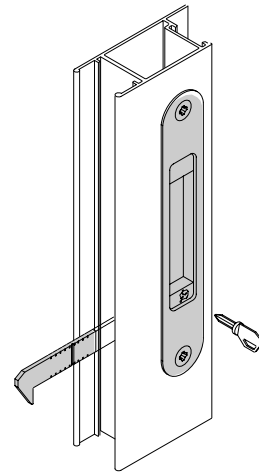
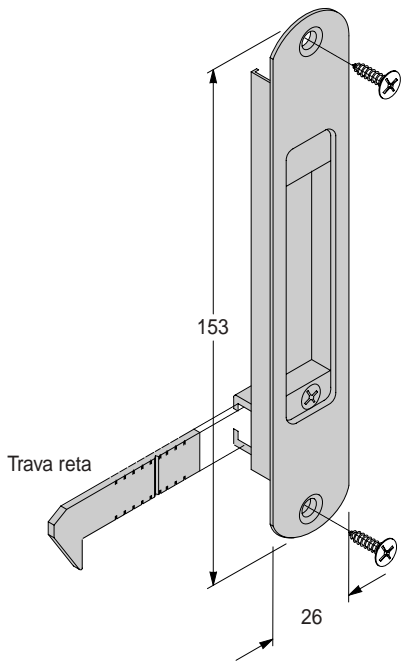


Aplicação

## FEC-052

Concha lisa - Janela e porta de correr  
 Acabamento: Nylon preto  
 Embalagem: 1 peça

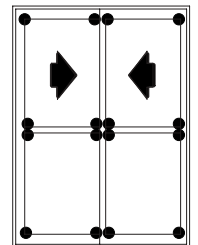
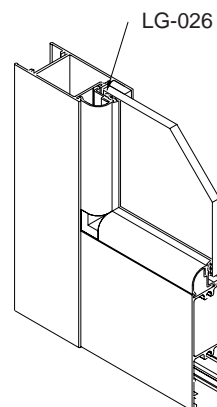
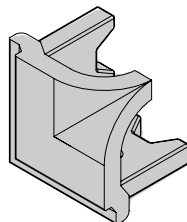
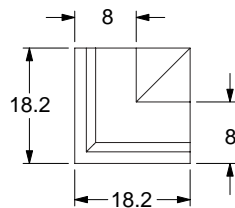




Aplicação

## FEC-645

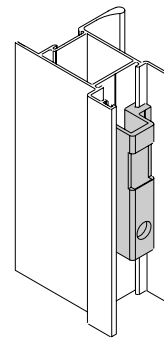
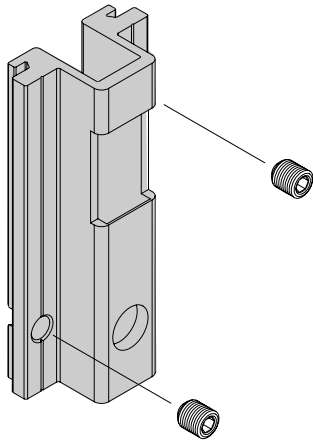
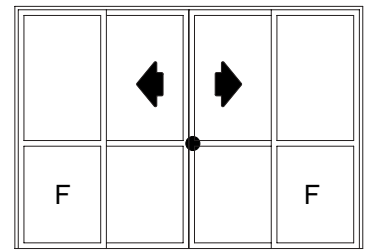
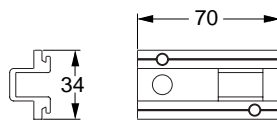
Fecho concha com chave e trava reta - Janela e porta de correr  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça



Aplicação

## CON-432

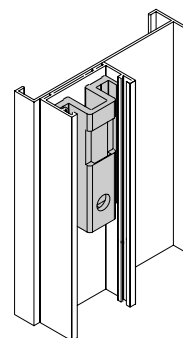
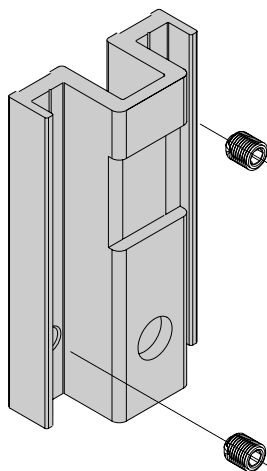
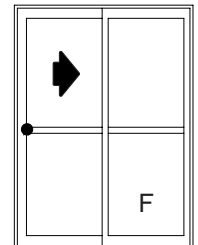
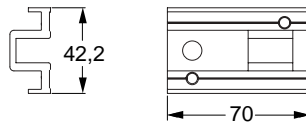
Recobrimento de canto  
 Acabamento: Alumínio preto  
 Embalagem: 100 peças



Aplicação

## CON-384

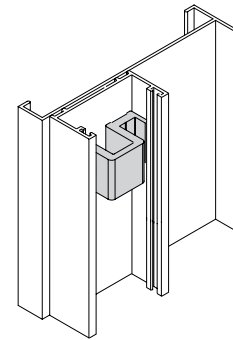
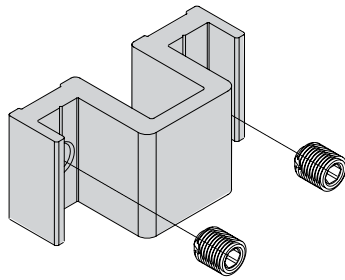
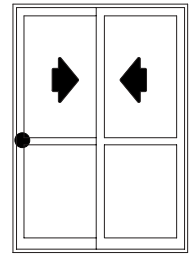
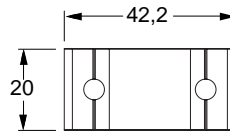
Contratesta central para fechadura  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça



Aplicação

## CON-382

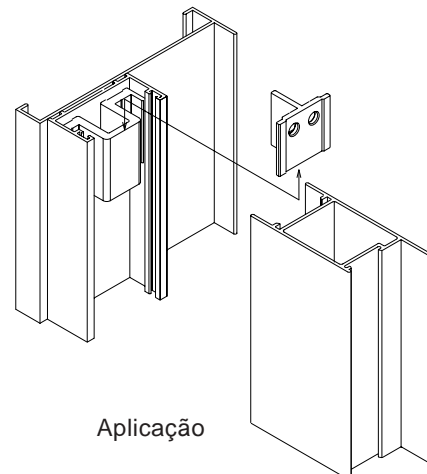
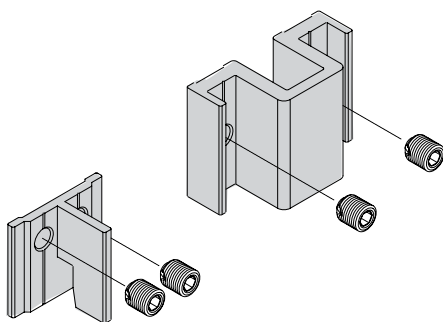
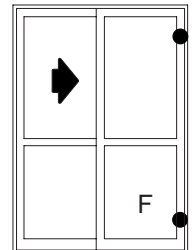
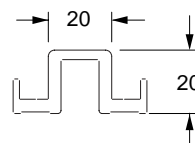
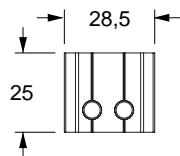
Contratesta lateral para fechadura  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça



Aplicação

## CON-383

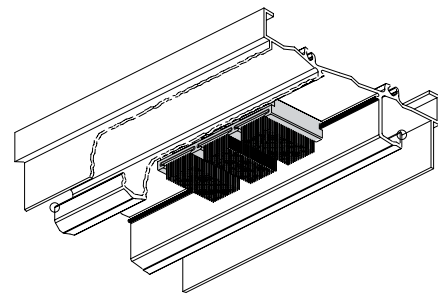
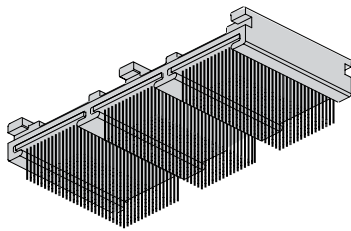
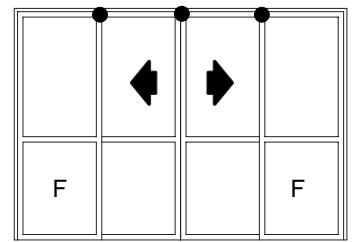
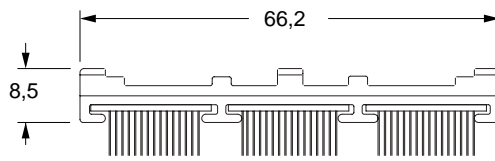
Contrafecho lateral  
 Acabamento: Alumínio preto  
 Embalagem: 10 peças



Aplicação

## SUP-622

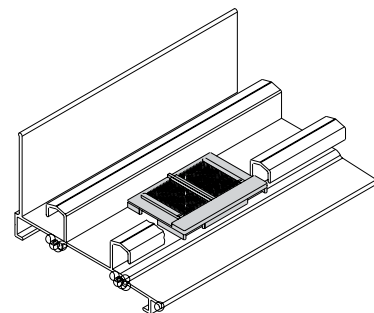
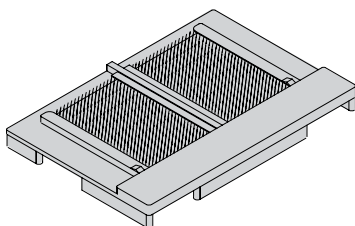
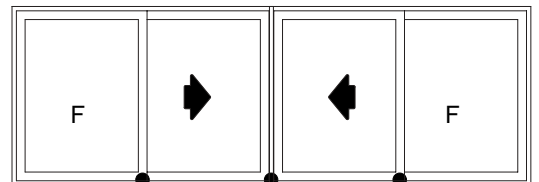
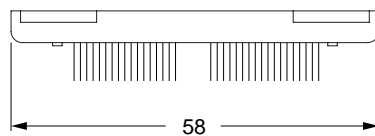
Trava da folha fixa  
 Acabamento: Alumínio preto  
 Embalagem: 2 peças



## CON-381

Vedação superior  
 Acabamento: Nylon preto  
 Embalagem: 10 peças

Aplicação

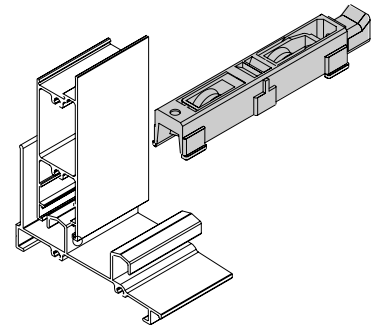
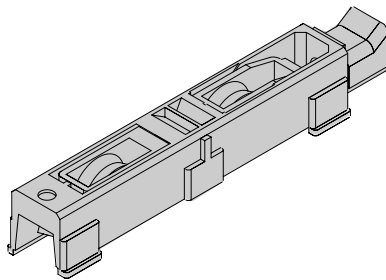
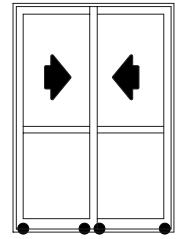
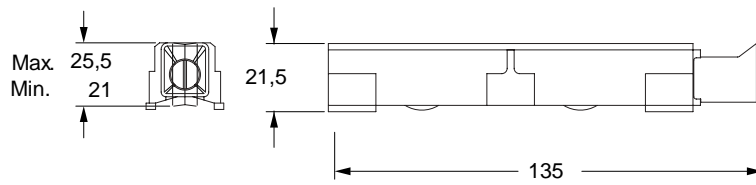


## NYL-395

Vedação inferior  
 Acabamento: Nylon preto  
 Embalagem: 10 peças

Aplicação

# Componentes

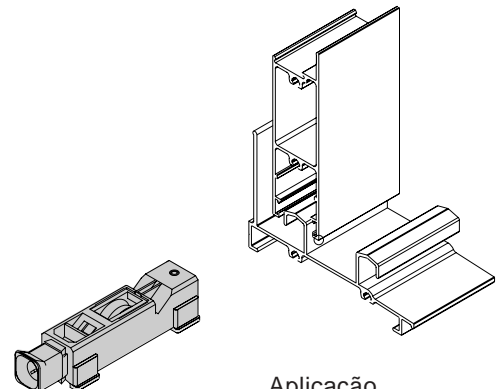
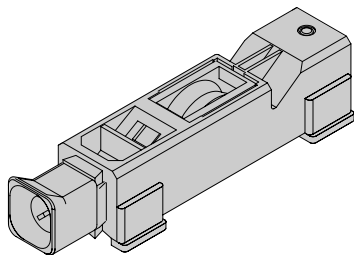
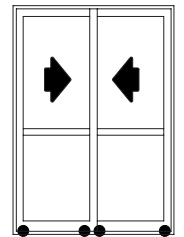
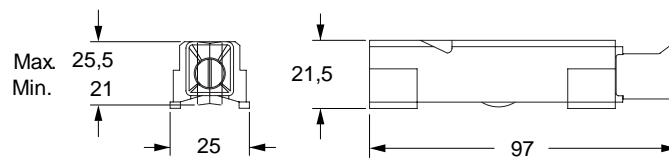


Aplicação

## ROL-413

Roldana dupla com rolamento e regulagem  
 Acabamento: Nylon e Zamak preto  
 Emalagem: 2 peças

Carga máxima 80kg por folha.

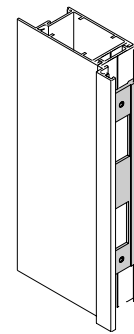
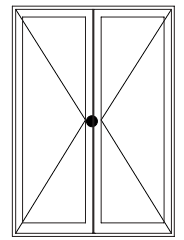
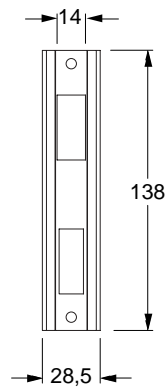
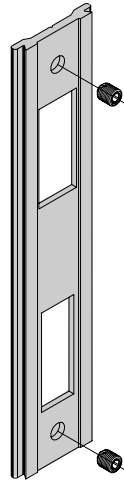


Aplicação

## ROL-468

Roldana com rolamento e regulagem  
 Acabamento: Nylon e Zamak preto  
 Emalagem: 2 peças

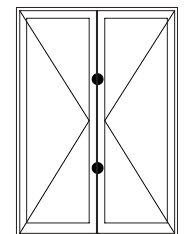
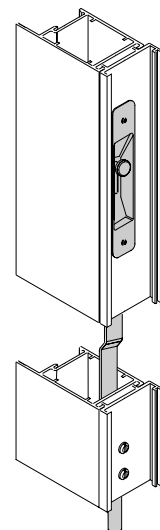
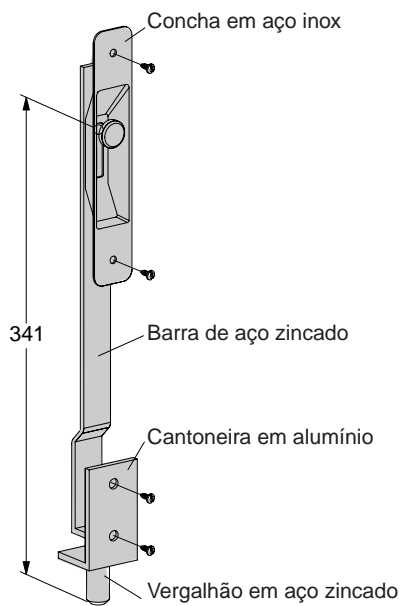
Carga máxima 40kg por folha.



Aplicação

## CON-386

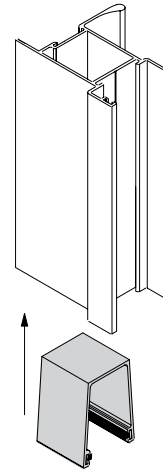
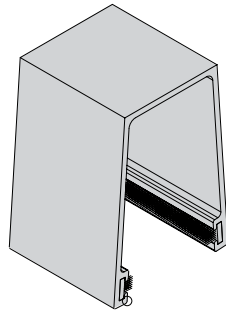
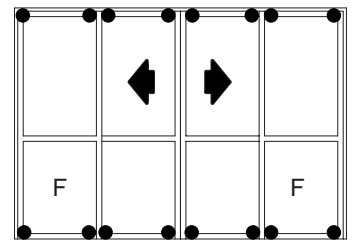
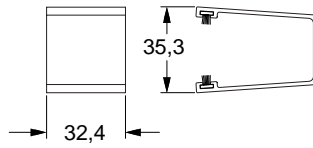
Contratesta para fechadura  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça



Aplicação

## FEC-509

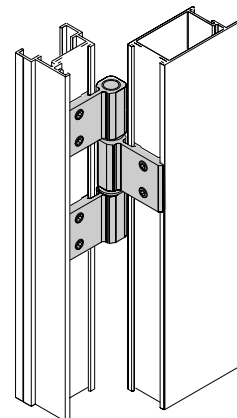
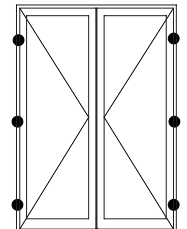
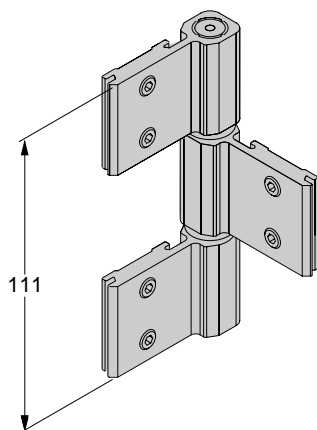
Fecho leve toque  
 Acabamento: Aço inox  
 Embalagem: 1 peça



Aplicação

## CAL-929

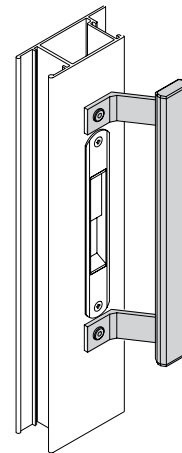
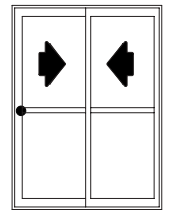
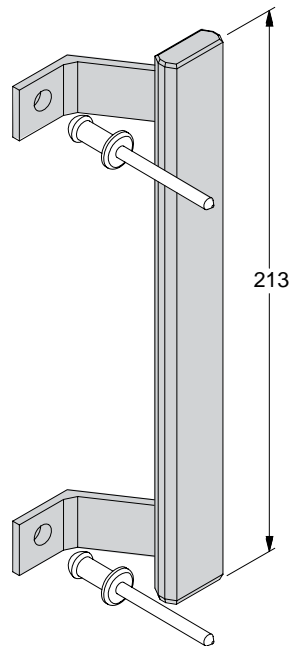
Calço vedante do montante  
 Acabamento: Alumínio natural  
 Embalagem: 8 peças



Aplicação

## DOB-828

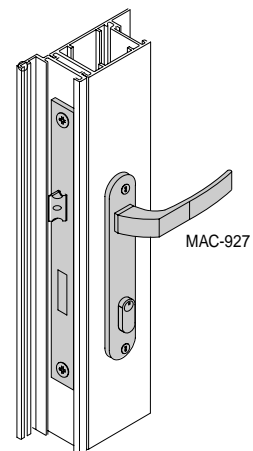
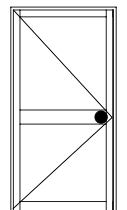
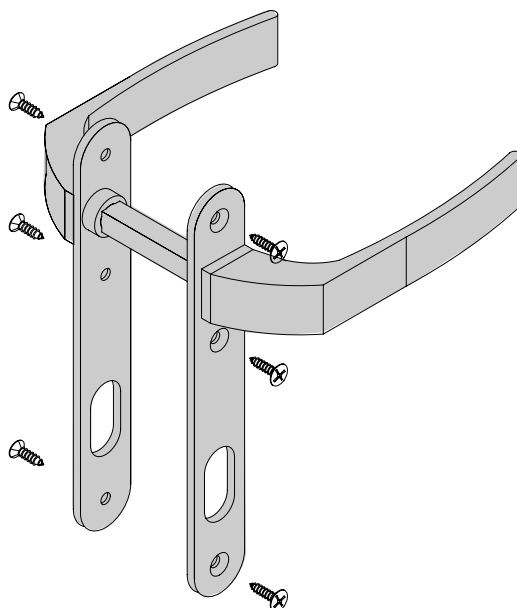
Dobradiça 3 abas  
 Acabamento: Alumínio preto  
 Embalagem: 3 peças



Aplicação

## PUX-006

Puxador porta de correr  
 Acabamento: Alumínio preto  
 Embalagem: 1 peça

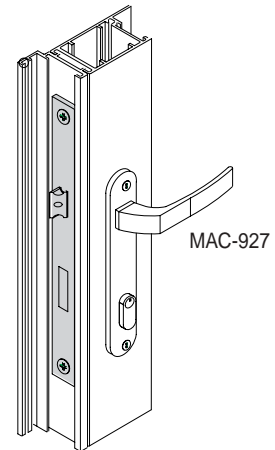
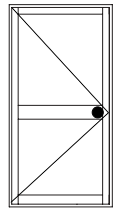
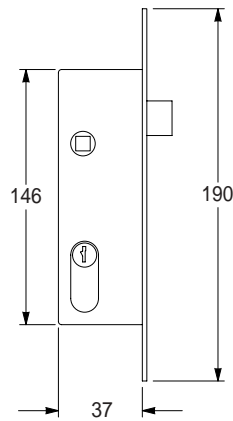
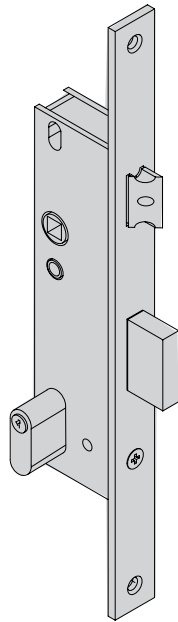


Aplicação

## MAC-927

Maçaneta com espelho - Porta de giro  
 Acabamento: Preto  
 Embalagem: 1 peça

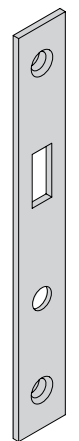
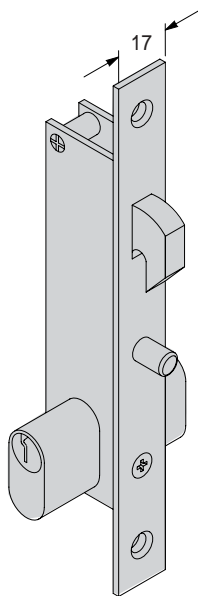




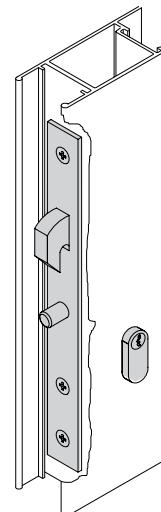
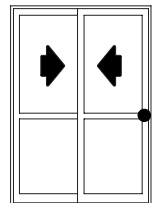
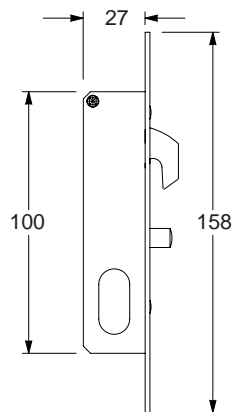
Aplicação

## FRA-822

Fechadura - Porta de giro  
 Acabamento: Latão fumê  
 Embalagem: 1 peça



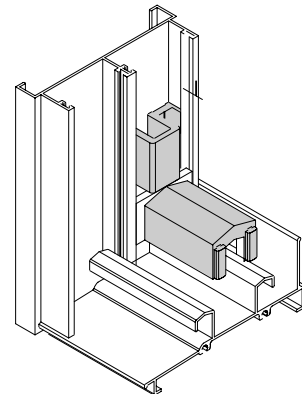
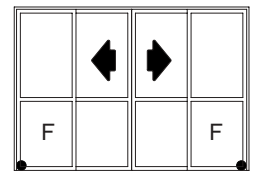
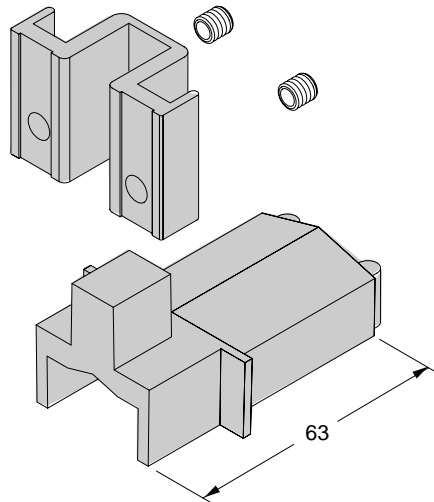
Espelho



Aplicação

## FRA-823

Fechadura - Porta de correr  
 Acabamento: Latão fume  
 Embalagem: 1 peça



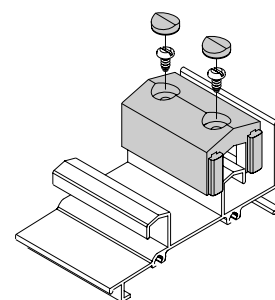
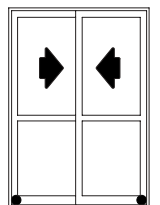
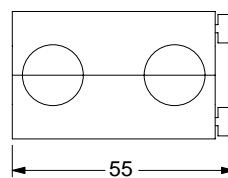
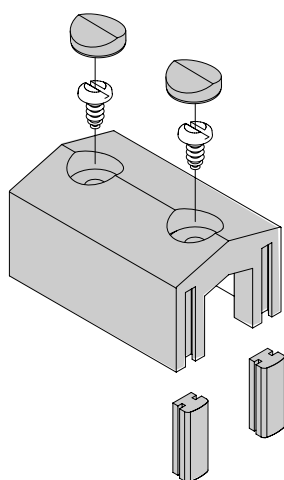
Aplicação

## NYL-347

Batedeira

Acabamento: Nylon preto

Embalagem: 2 peças



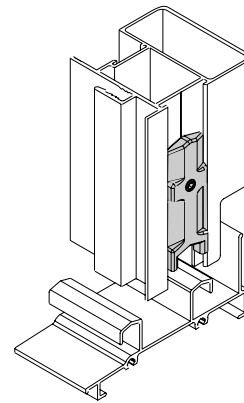
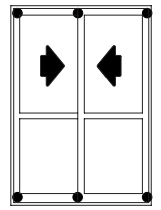
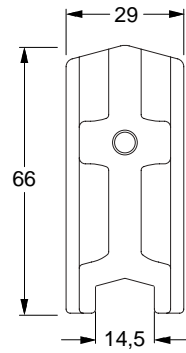
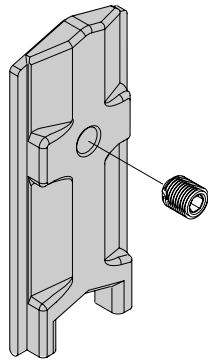
Aplicação

## NYL-398

Batedeira

Acabamento: Nylon preto

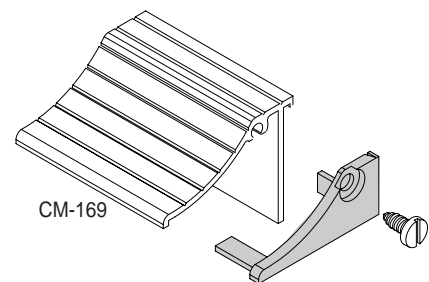
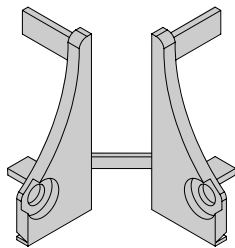
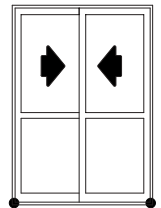
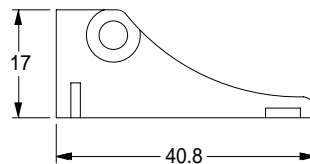
Embalagem: 2 peças



Aplicação

### NYL-396

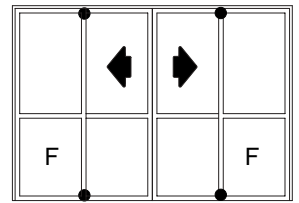
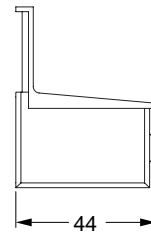
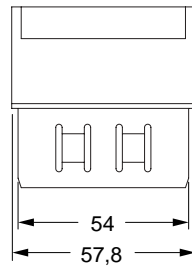
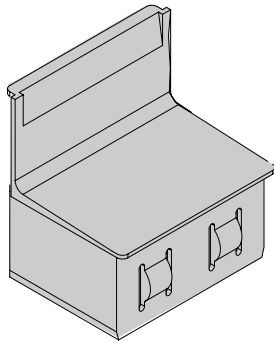
Guia e limitador superior  
 Acabamento: Nylon preto  
 Embalagem: 20 peças



Aplicação

### NYL-416

Recobrimento de soleira - Porta de correr  
 Acabamento: Nylon 6.6 preto  
 Embalagem: 10 peças com parafuso



LG-0052 / LG-0054

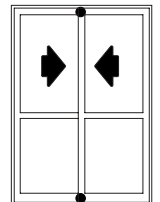
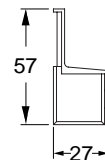
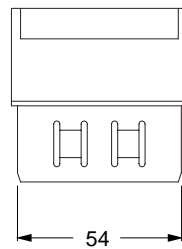
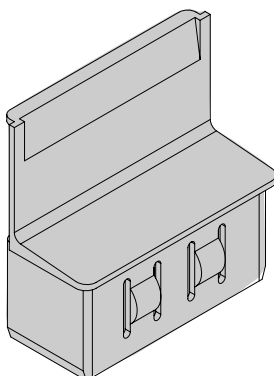
Aplicação

## NYL-399

Tampa do montante LG-0052 / LG-0054

Acabamento: Nylon preto

Embalagem: 8 peças



LG-0018

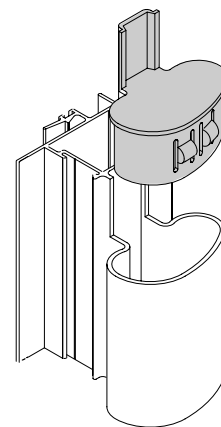
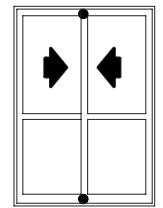
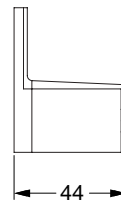
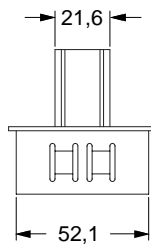
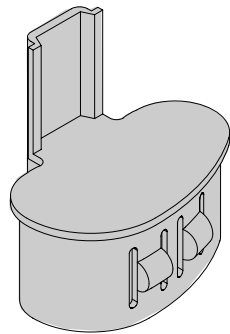
Aplicação

## NYL-401

Tampa do montante LG-018

Acabamento: Nylon preto

Embalagem: 8 peças



LG-021

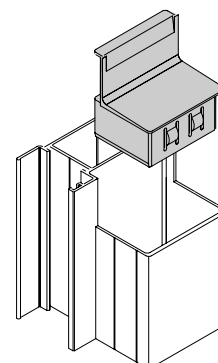
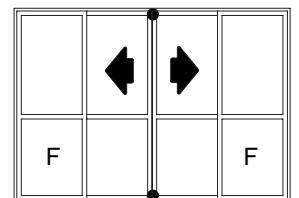
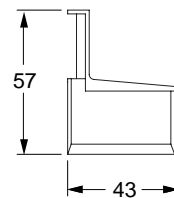
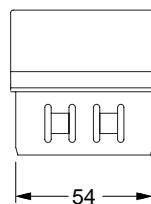
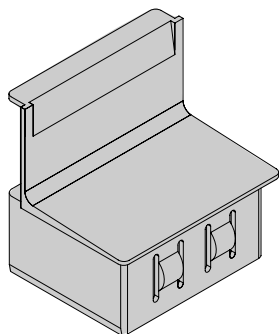
Aplicação

## NYL-400

Tampa para montante LG-021

Acabamento: Nylon preto

Embalagem: 4 peças direitas e 4 esquerdas



LG-053

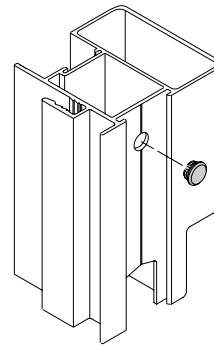
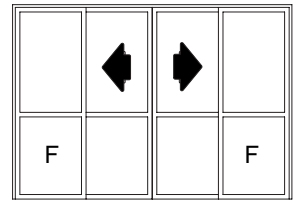
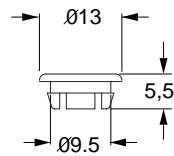
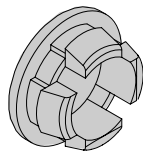
Aplicação

## NYL-402

Tampa do montante LG-053

Acabamento: Nylon preto

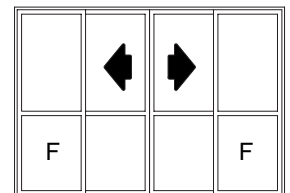
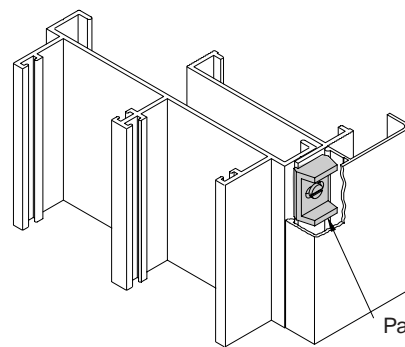
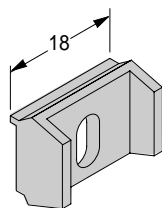
Embalagem: 8 peças



Aplicação

### NYL-042

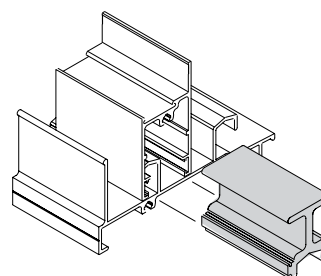
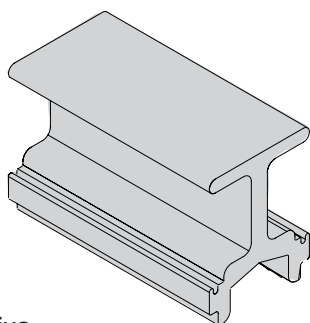
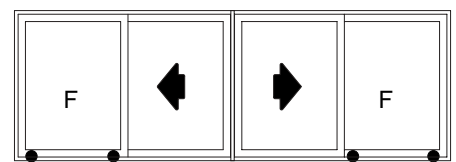
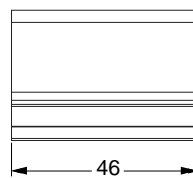
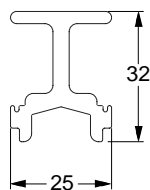
Botão tampa furo  
 Acabamento: Nylon preto  
 Embalagem: 1000 peças



Aplicação

### NYL-190

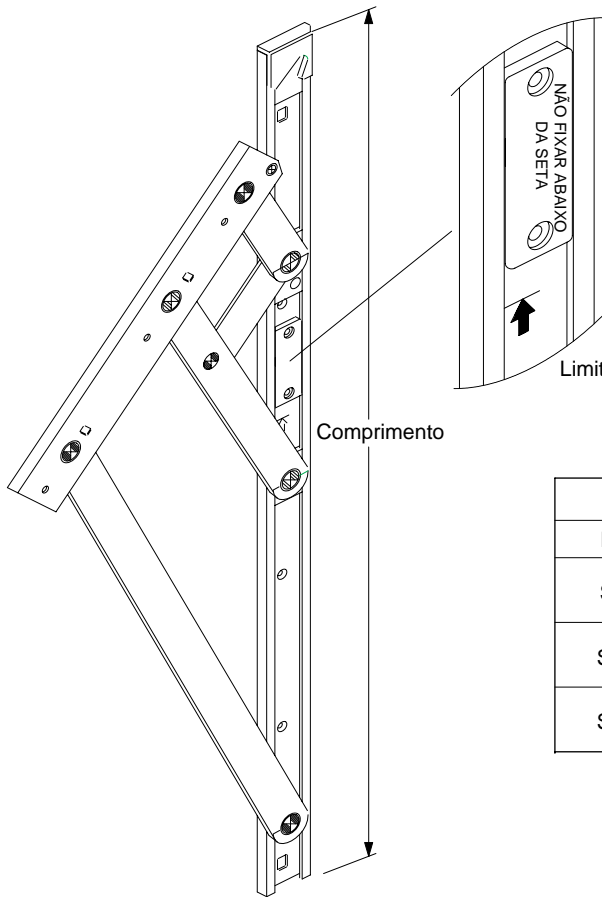
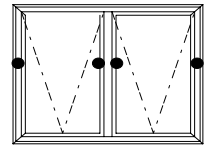
Botão de fixação do remate  
 Acabamento: Nylon 6.6 preto  
 Embalagem: 500 peças



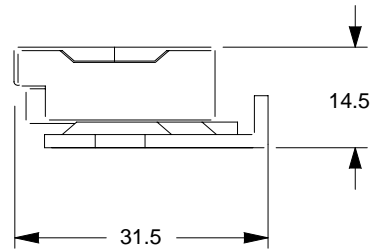
Aplicação

### NYL-394

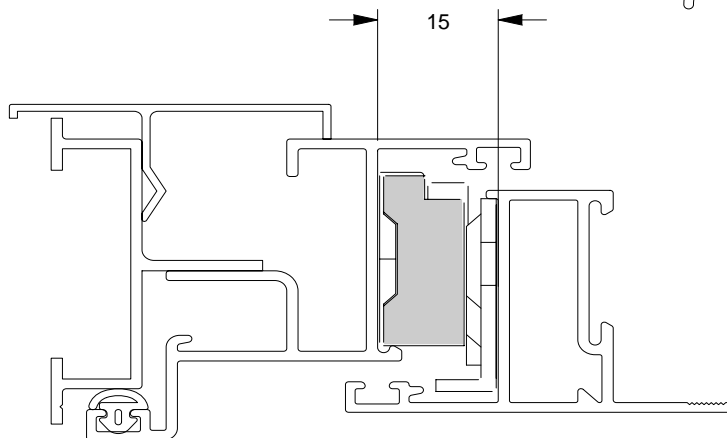
Calço para folha fixa  
 Acabamento: Nylon preto  
 Embalagem: 10 peças



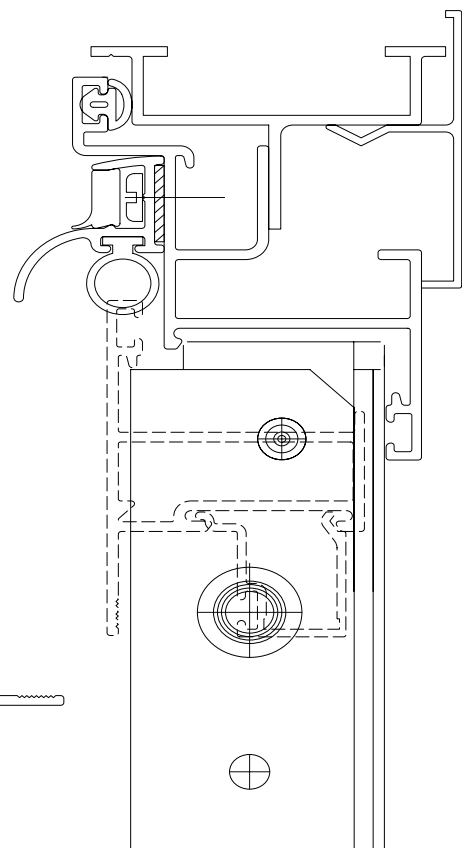
Limitador de abertura somente para BRA-768



CÓDIGOS		Comprimento	FOLHA		
Fermax	Alcoa		Altura Máxima	Largura Máxima	Carga Máxima
SRG 01	<b>BRA-766</b>	342mm	600	1200	22kg
SRG 02	<b>BRA-767</b>	600mm	1000	1200	30kg
SRG 03	<b>BRA-768</b>	951mm	1200	1200	36kg



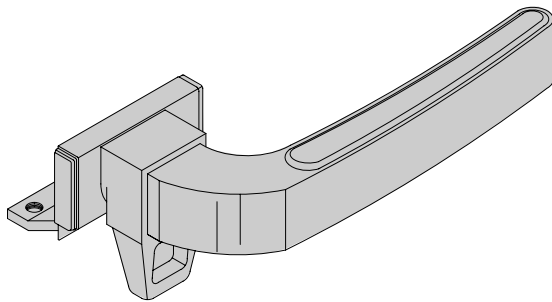
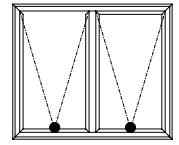
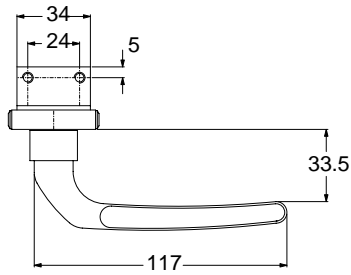
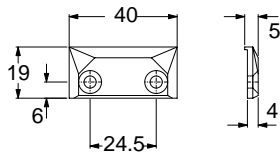
Aplicação



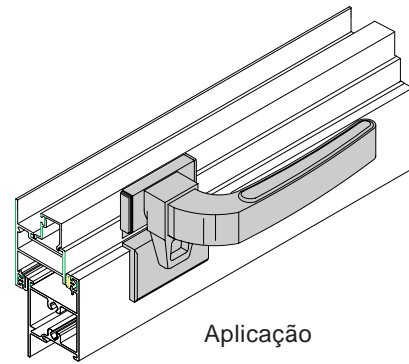
## BRAÇO

Acabamento: Preto  
 Embalagem: 1 par

Batente 4,0mm



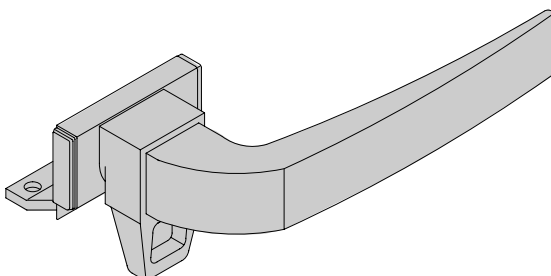
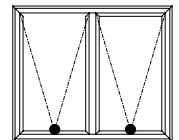
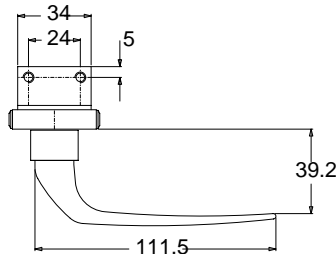
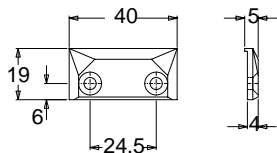
FERMAX	LADO	ALCOA
FMA 99	DIREITO	FEC-493
	ESQUERDO	FEC-494



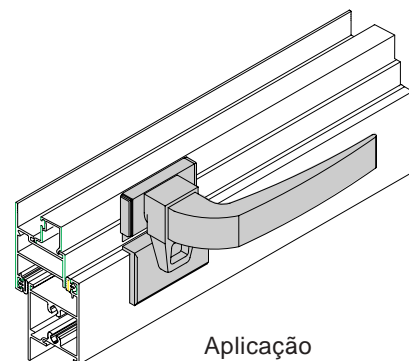
## FECHO

Fecho direito e esquerdo  
 Acabamento: Preto  
 Embalagem: 1 peça

Batente 4,0mm



FERMAX	LADO	ALCOA
FMA 98	DIREITO	FEC-495
	ESQUERDO	FEC-496

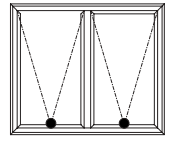
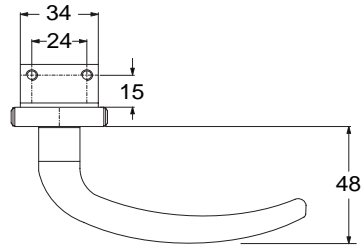


## FECHO

Fecho direito e esquerdo  
 Acabamento: Preto  
 Embalagem: 1 peça

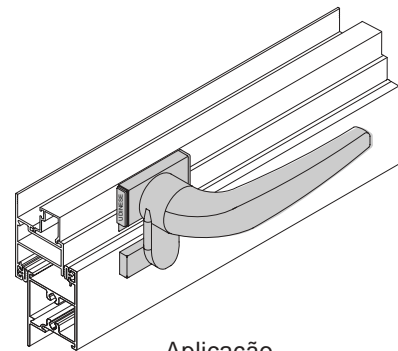
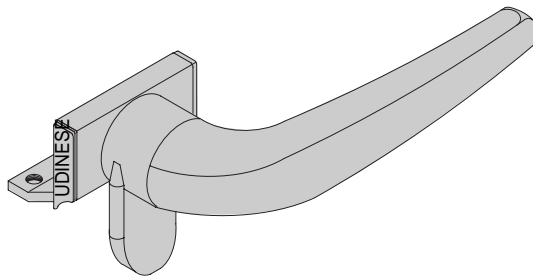


# Componentes



**FECHO UDINESE**

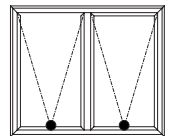
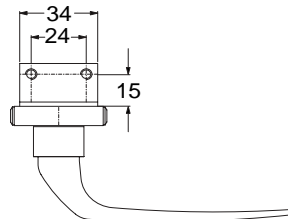
LADO	ALCOA
DIREITO	<b>FEC-1002</b>
ESQUERDO	<b>FEC-1003</b>



Aplicação

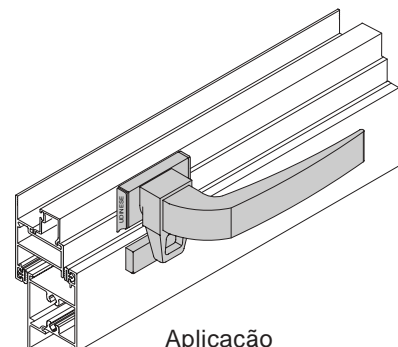
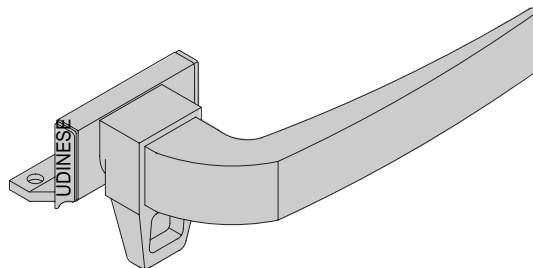
## FECHO

Fecho direito e esquerdo  
 Acabamento: Preto  
 Embalagem: 1 peça



**FECHO UDINESE**

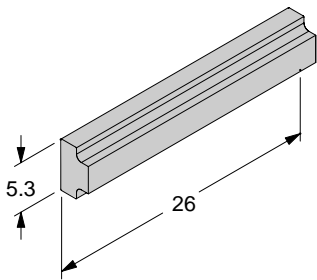
LADO	ALCOA
DIREITO	<b>FEC-1000</b>
ESQUERDO	<b>FEC-1001</b>



Aplicação

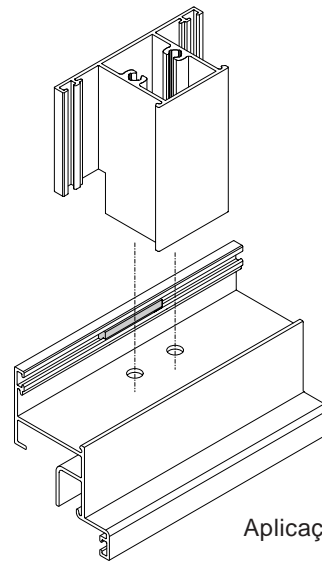
## FECHO

Fecho direito e esquerdo  
 Acabamento: Preto  
 Embalagem: 1 peça

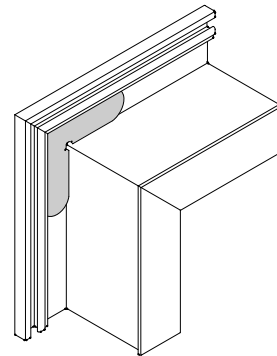
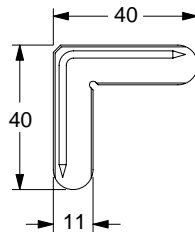
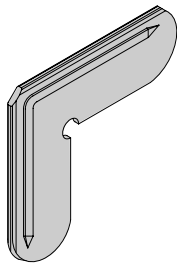
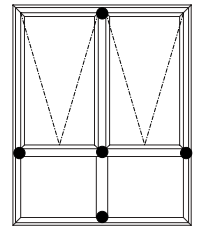


### CAL-945

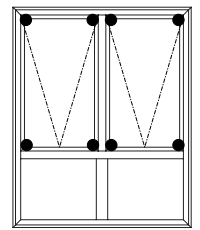
Calço de vedação da travessa  
 Acabamento: Nylon preto  
 Embalagem: 10 peças



Aplicação

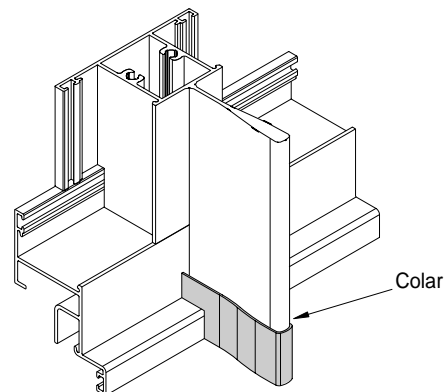
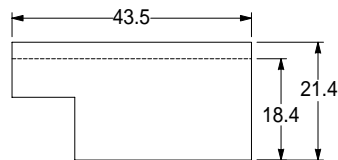
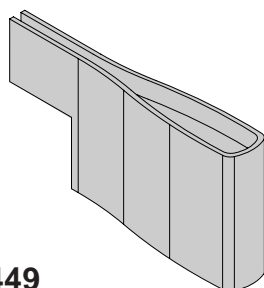


Aplicação

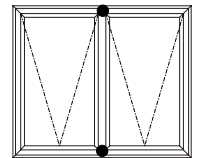


### CON-433

Conexão de alinhamento  
 Acabamento: Nylon 6.6 preto  
 Embalagem: 20 peças

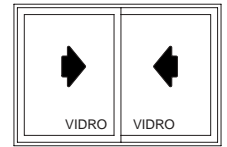
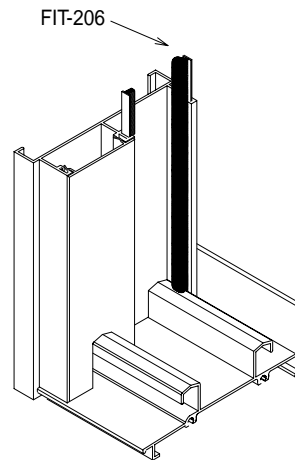
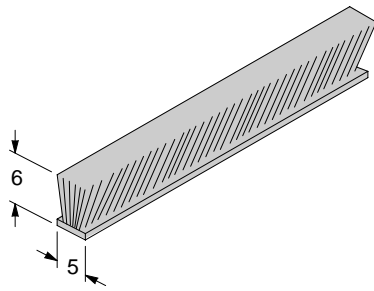


Aplicação



### NYL-449

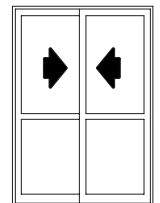
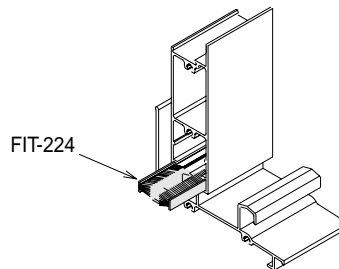
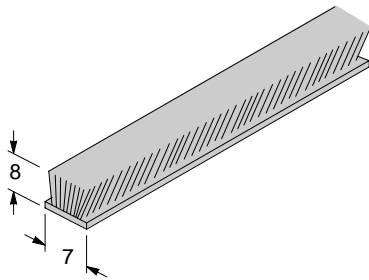
Tampa de recobrimento  
 Acabamento: Nylon preto  
 Embalagem: 20 peças



### FIT-206

Fita vedadora sem barreira plástica  
 Acabamento: Preto  
 Embalagem: 50 metros

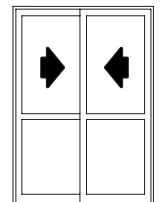
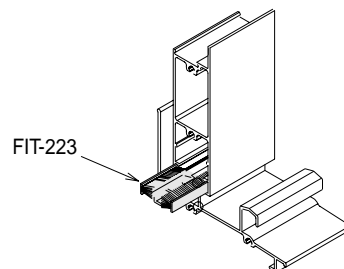
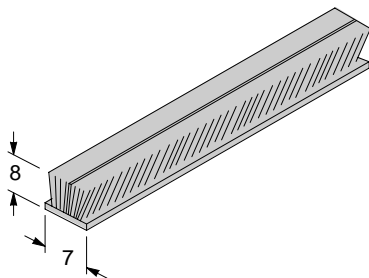
Aplicação



### FIT-224

Fita vedadora sem barreira plástica  
 Acabamento: Preto  
 Embalagem: 50 metros

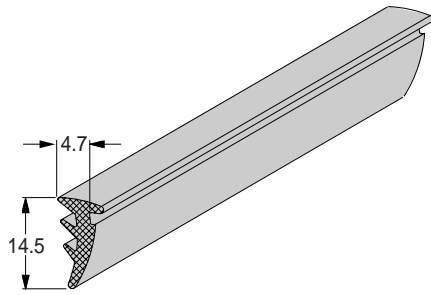
Aplicação



### FIT-223

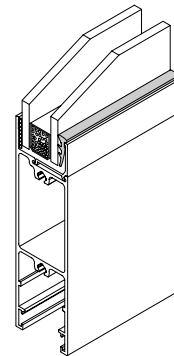
Fita vedadora com barreira plástica  
 Acabamento: Preto  
 Embalagem: 50 metros

Aplicação

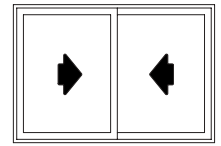


### GUA-303

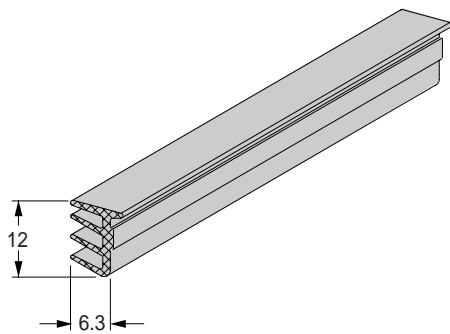
Guarnição em E.P.D.M.  
 Acabamento: Preto  
 Embalagem: 50 metros



Aplicação

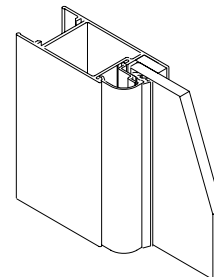


Ver aplicação na página 104

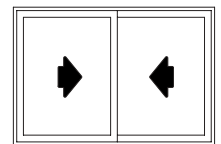


### GUA-256

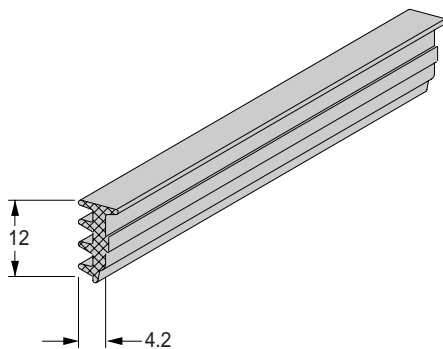
Guarnição em E.P.D.M.  
 Acabamento: Preto  
 Embalagem: 50 metros



Aplicação

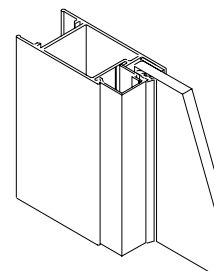


Ver aplicação na página 104

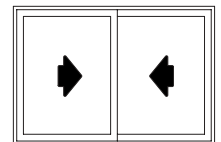


### GUA-259

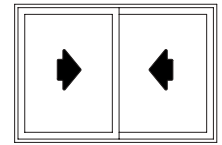
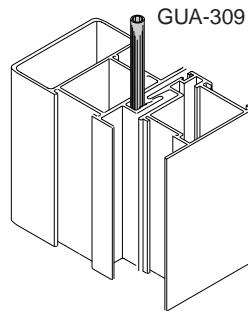
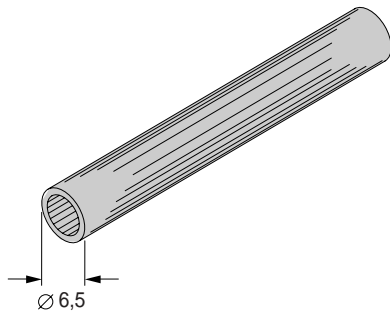
Guarnição em E.P.D.M.  
 Acabamento: Preto  
 Embalagem: 50 metros



Aplicação



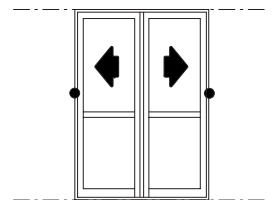
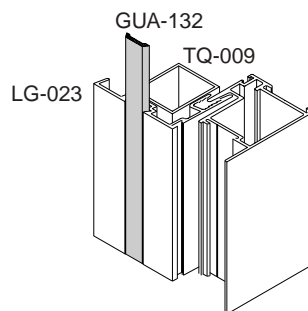
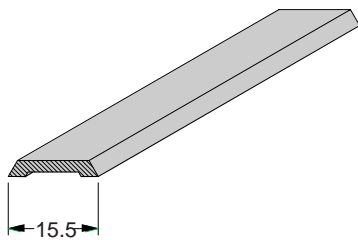
Ver aplicação na página 104



### GUA-309

Vedação de engate  
 Acabamento: E.P.D.M.  
 Embalagem: Rolo com 50 metros

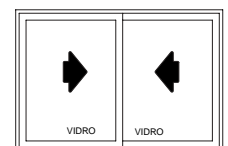
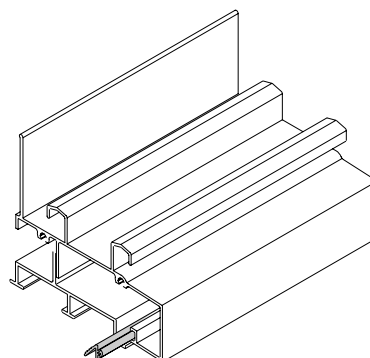
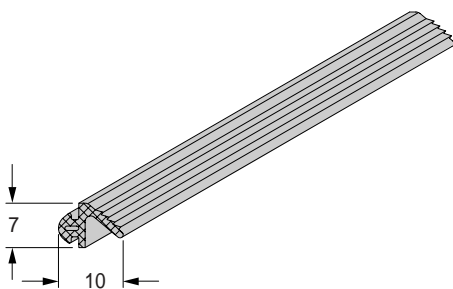
Aplicação



### GUA-132

Guarnição em P.V.C.  
 Acabamento: Preto  
 Embalagem: 30 metros

Aplicação



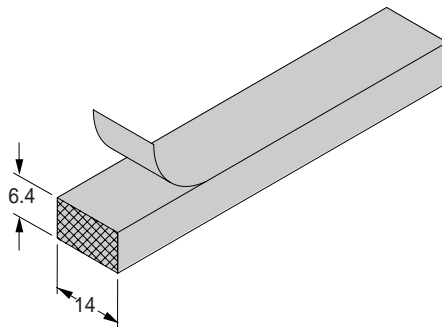
### GUA-239

Guarnição em E.P.D.M.  
 Acabamento: Preto  
 Embalagem: 50 metros

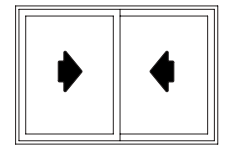
Aplicação

## GUA-304

Guarnição adesiva esponjosa  
 Acabamento: Preto  
 Embalagem: 15 metros

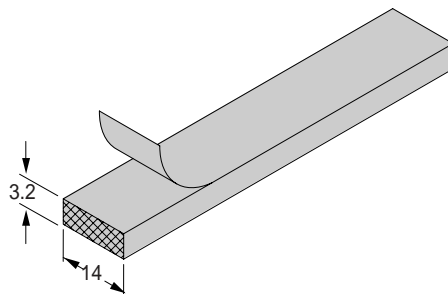


Ver aplicação na página 104

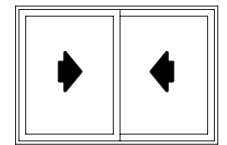


## GUA-305

Guarnição adesiva esponjosa  
 Acabamento: Preto  
 Embalagem: 30 metros

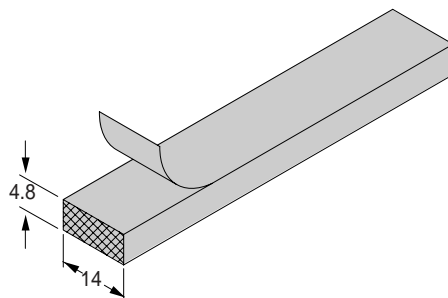


Ver aplicação na página 104

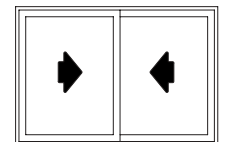


## GUA-306

Guarnição adesiva esponjosa  
 Acabamento: Preto  
 Embalagem: 15 metros

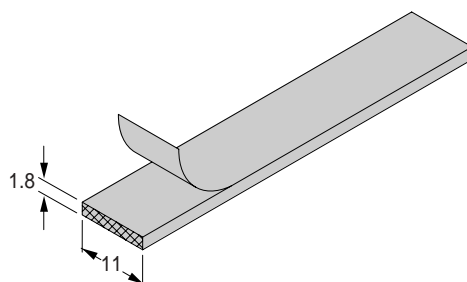


Ver aplicação na página 104

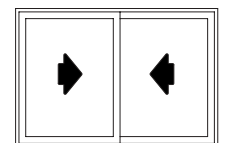


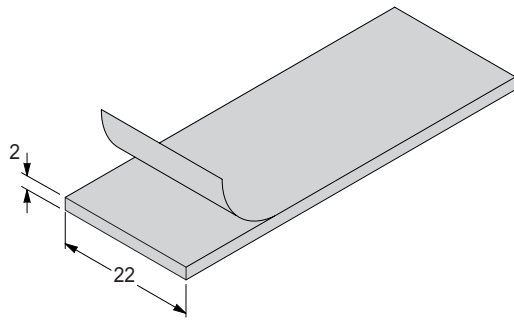
## GUA-172

Guarnição adesiva esponjosa  
 Acabamento: Preto  
 Embalagem: 61 metros



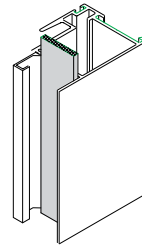
Ver aplicação na página 104



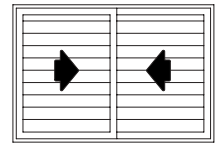


## GUA-282

Guarnição adesiva esponjosa  
 Acabamento: Preto  
 Embalagem: 30 metros

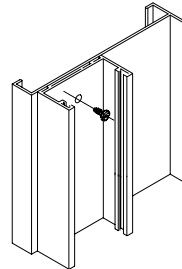


Aplicação

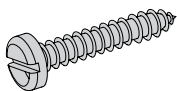
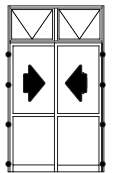


## PAR-703

Parafuso 3.5x9.5mm cabeça panela  
 Acabamento: Inox preto  
 Embalagem: 100 peças

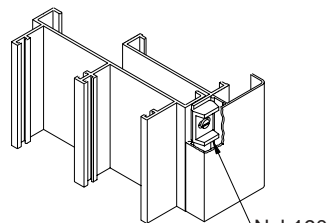


Aplicação

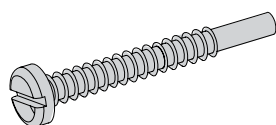
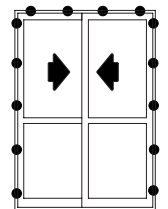


## PAR-936

Parafuso 4.2x16mm cabeça panela  
 Acabamento: Inox  
 Embalagem: 100 peças

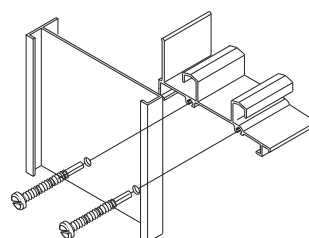


Aplicação

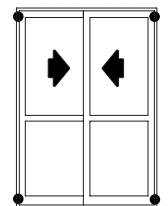


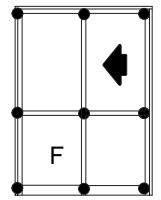
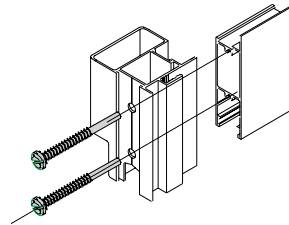
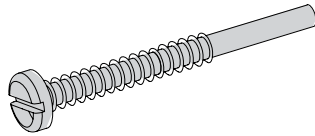
## PAR-428

Parafuso 4.2x32mm cabeça panela  
 Acabamento: Inox  
 Embalagem: 100 peças



Aplicação

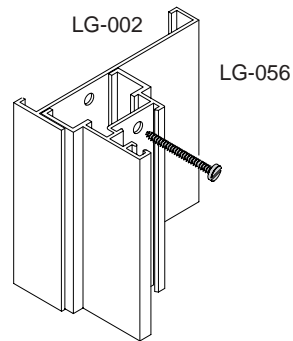
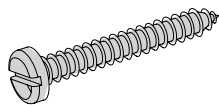




### PAR-431

Parafuso 4.8x50mm cabeça panela  
 Acabamento: Inox  
 Embalagem: 100 peças

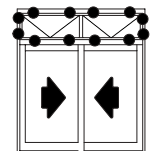
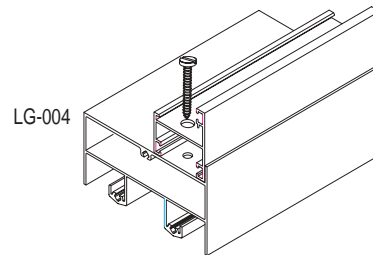
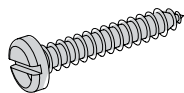
Aplicação



### PAR-694

Parafuso 4.2x32mm cabeça panela  
 Acabamento: Inox  
 Embalagem: 100 peças

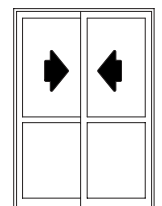
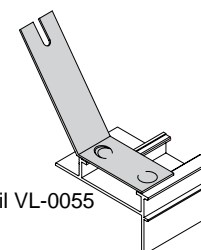
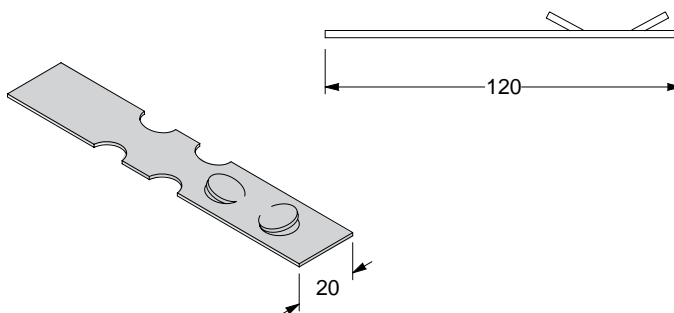
Aplicação



### PAR-693

Parafuso 4.2x25mm cabeça panela  
 Acabamento: Inox  
 Embalagem: 100 peças

Aplicação



### CHU-879

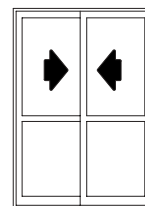
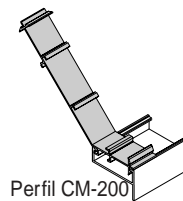
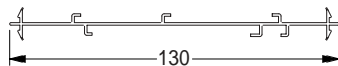
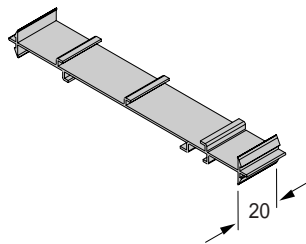
Chumbador para contramarco  
 Acabamento: Aço zincado  
 Embalagem: 50 peças

Perfil VL-0055

Aplicação



Perfil base CM-093

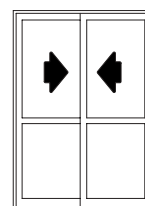
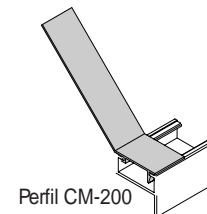
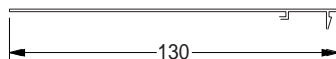
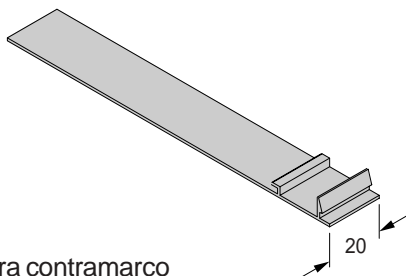


## CHU-838

Chumbador para contramarco  
 Acabamento: Alumínio natural  
 Embalagem: 50 peças

Aplicação

Perfil base CM-099

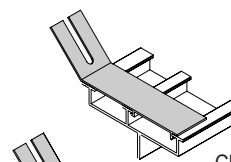
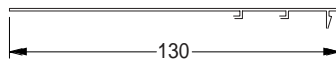
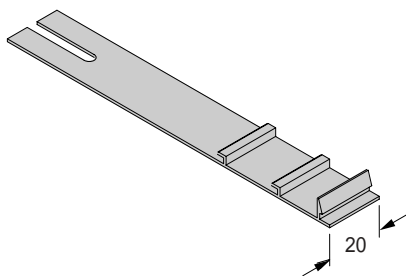


## CHU-840

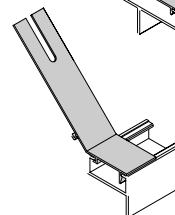
Chumbador para contramarco  
 Acabamento: Alumínio natural  
 Embalagem: 50 peças

Aplicação

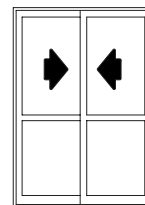
Perfil base CM-124



CM-125



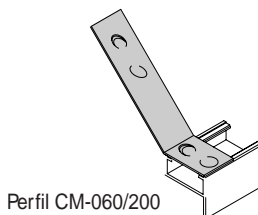
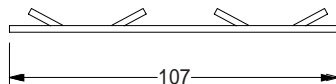
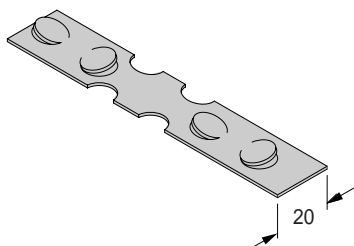
Perfil CM-060/098/200



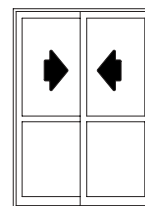
## CHU-864

Chumbador para contramarco  
 Acabamento: Alumínio natural  
 Embalagem: 50 peças

Aplicação



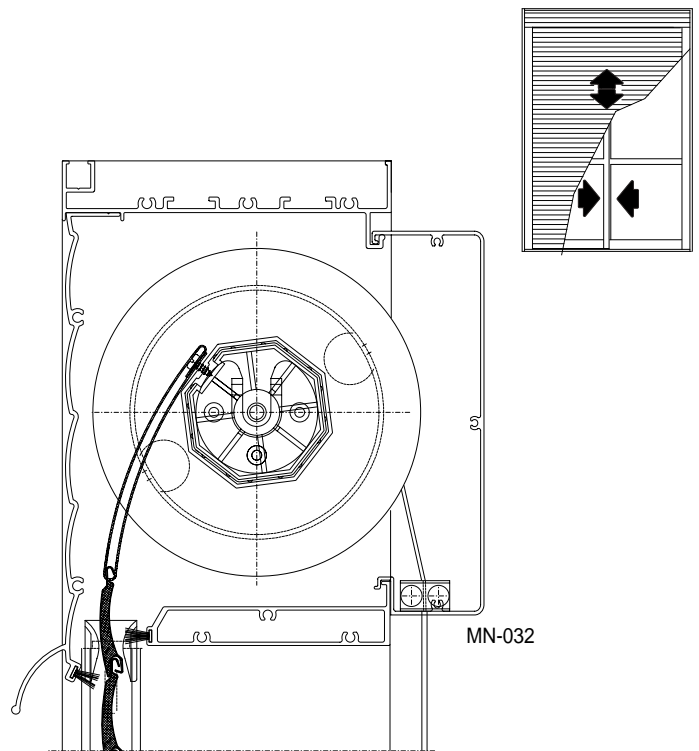
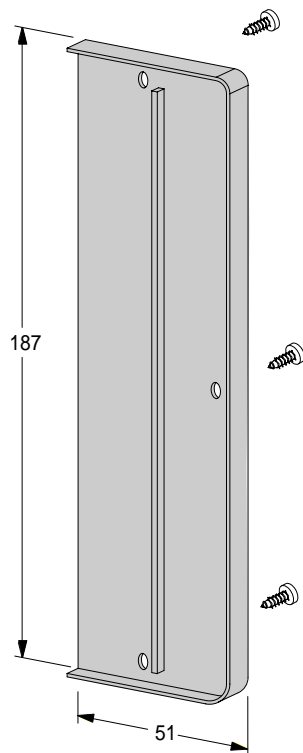
Perfil CM-060/200



## CHU-787

Chumbador para contramarco  
 Acabamento: Aço zincado  
 Embalagem: 50 peças

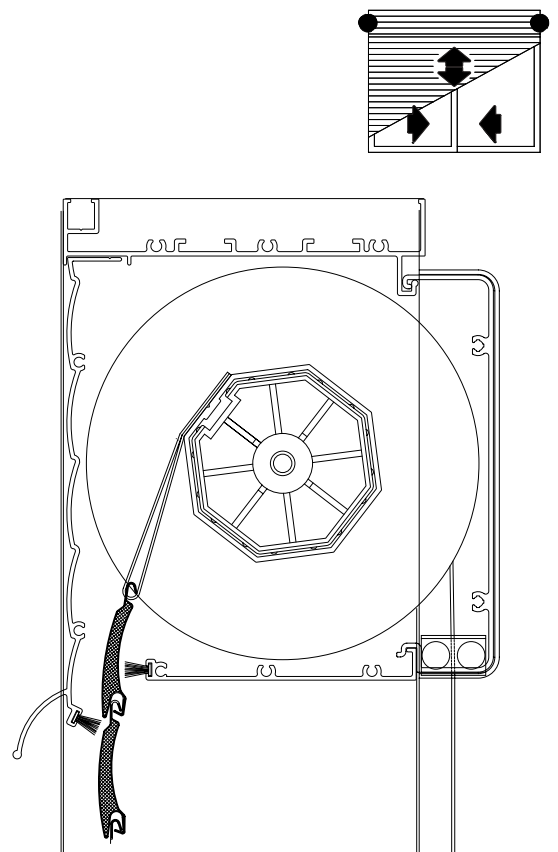
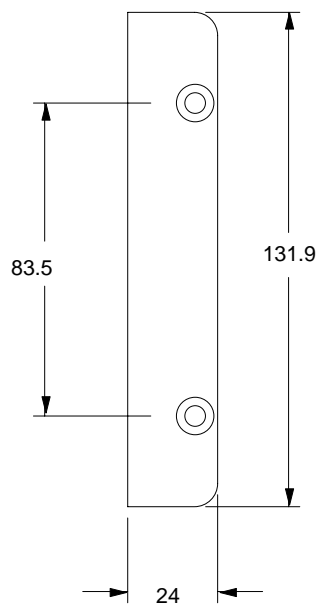
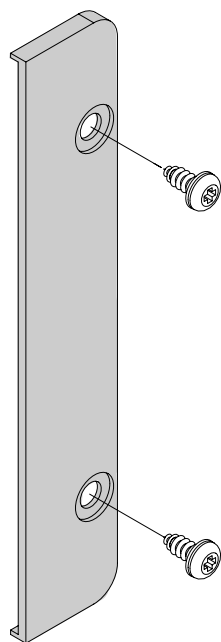
Aplicação



Aplicação

### NYL-383

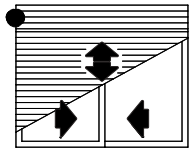
Tampa interna da caixa interna da persiana  
 Acabamento: Nylon preto  
 Embalagem: 10 peças



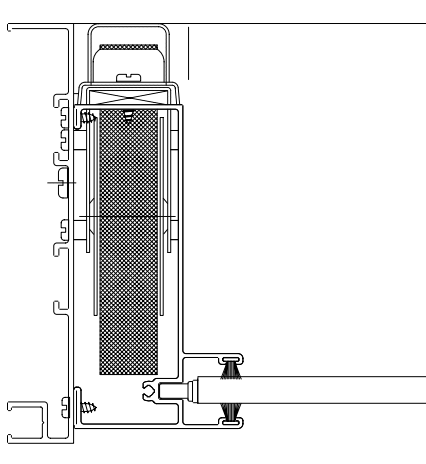
Aplicação

### NYL-411

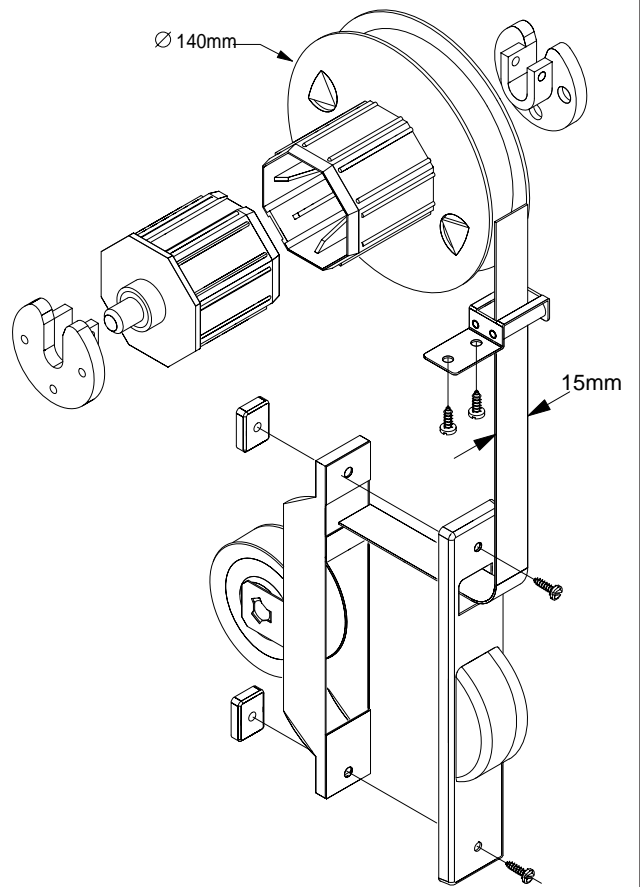
Tampa interna da caixa da persiana  
 Acabamento: Nylon preto  
 Embalagem: 10 peças



OBS: Instalação direita ou esquerda

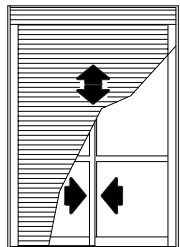


Aplicação

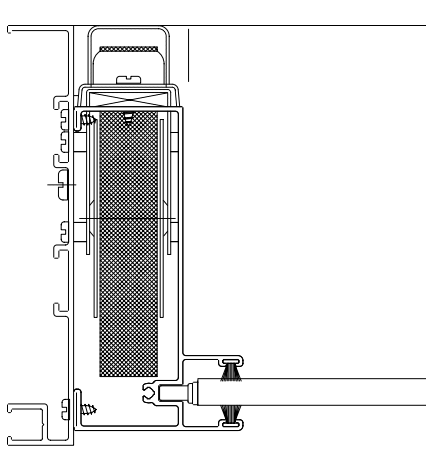


## REC-012

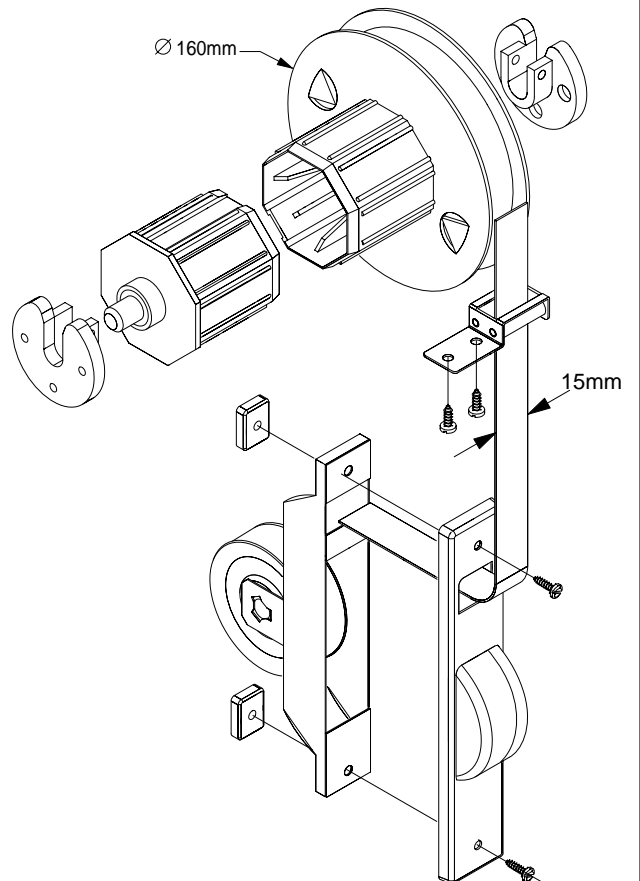
Recolhedor 140mm com fita 15mm e mola de retorno  
 Acabamento: Nylon preto  
 Embalagem: 1 peça



OBS: Instalação direita ou esquerda



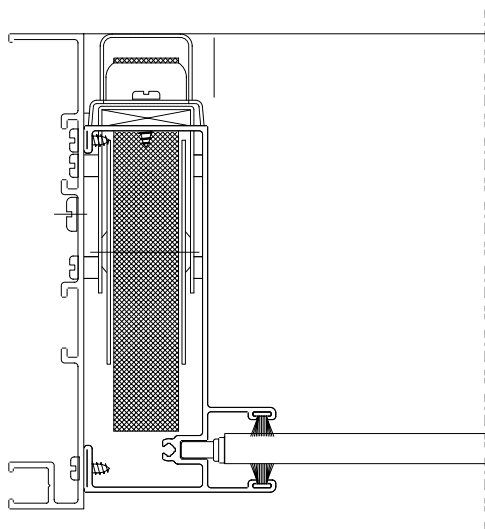
Aplicação



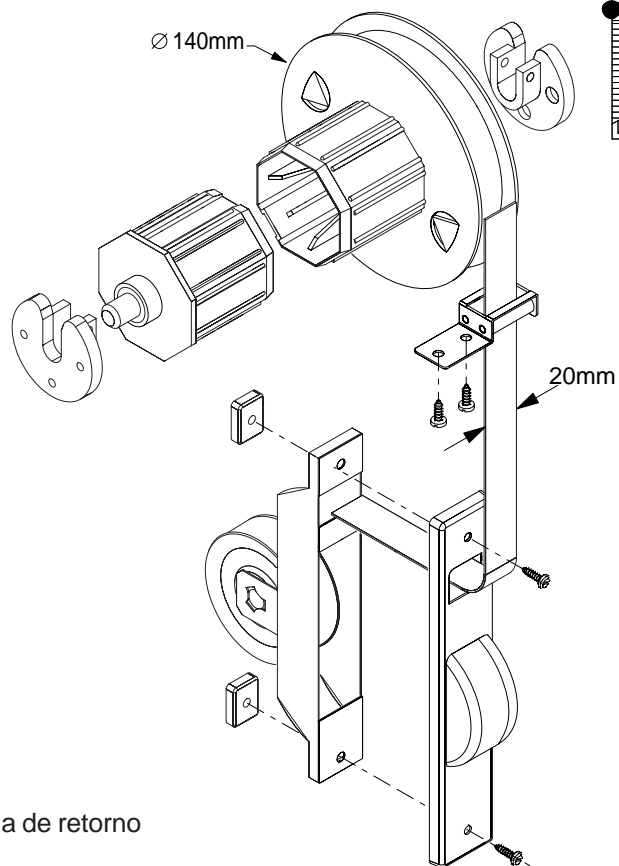
## REC-013

Recolhedor 160mm com fita 15mm e mola de retorno  
 Acabamento: Nylon preto  
 Embalagem: 1 peça

OBS: Instalação direita ou esquerda



Aplicação

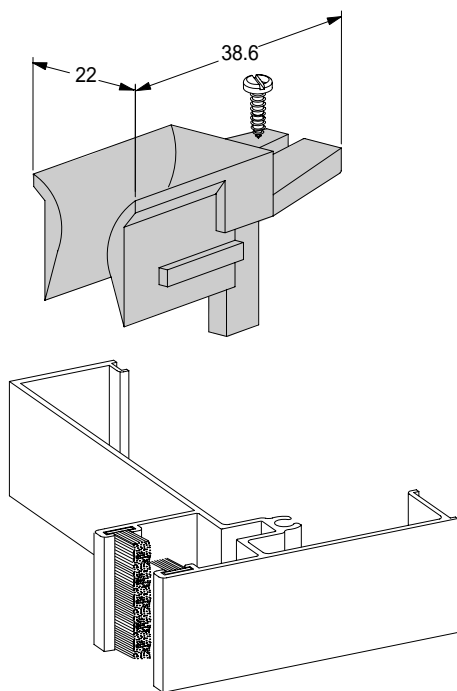


**OPCIONAL  
 REC-011**

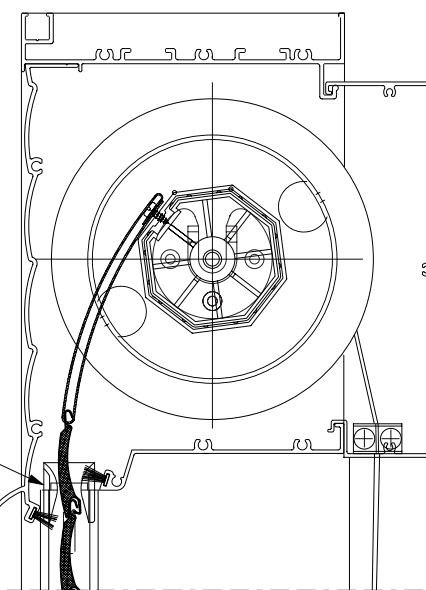
Descrição: Recolhedor Ø140mm c/ fita 20mm e mola de retorno

Acabamento: Nylon preto

Embalagem: 1 peça



NYL-370



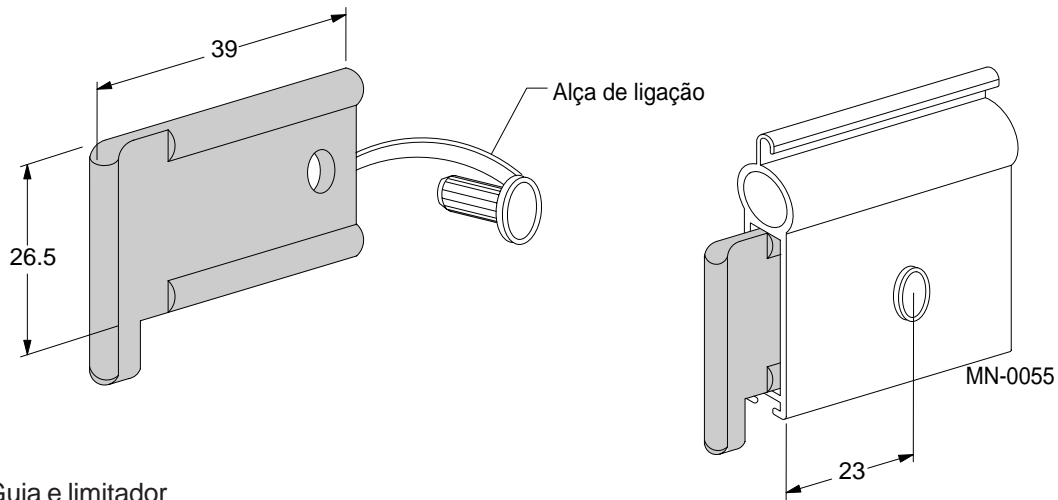
Aplicação

**NYL-370**

Descrição: Guia da persiana

Acabamento: Nylon preto

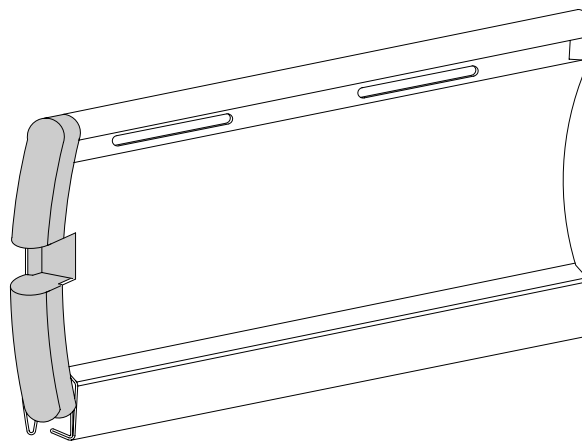
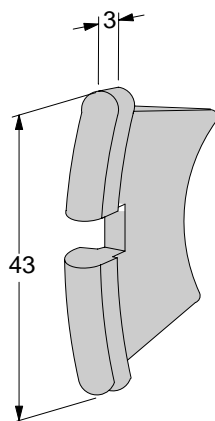
Embalagem: 25 peças com parafusos



### NYL-369

Descrição: Guia e limitador  
 Acabamento: Nylon preto  
 Embalagem: 25 peças

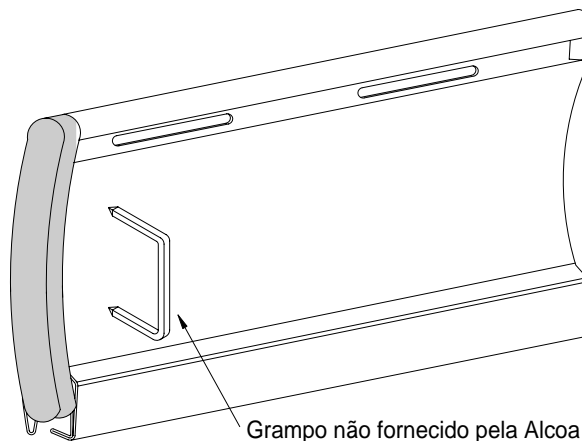
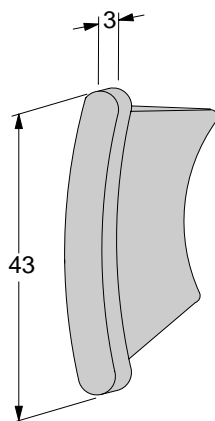
Aplicação



Aplicação

### NYL-375

Descrição: Tampa da persiana - Importada  
 Acabamento: Nylon preto  
 Embalagem: 200 peças

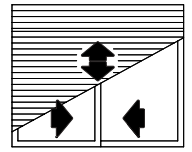
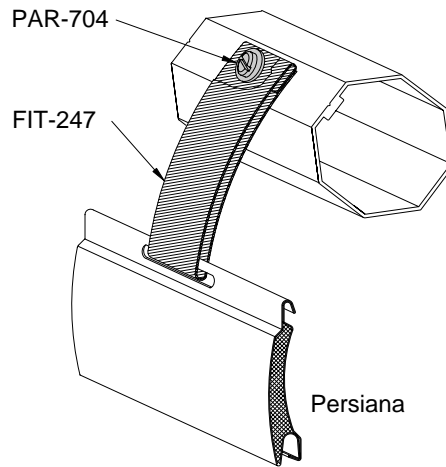
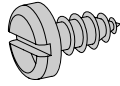


Grampo não fornecido pela Alcoa

Aplicação

### NYL-447

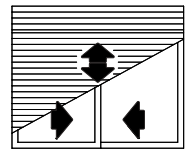
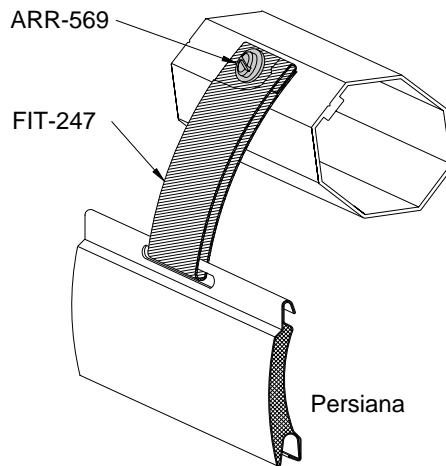
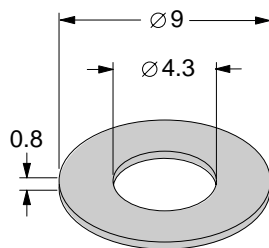
Descrição: Tampa da persiana grampeada - Udinese  
 Acabamento: Nylon preto  
 Embalagem: 200 peças



## PAR-704

Descrição: Parafuso auto-atarraxante 3.9x6.5mm  
 Acabamento: Aço inoxidável preto  
 Embalagem: 100 peças

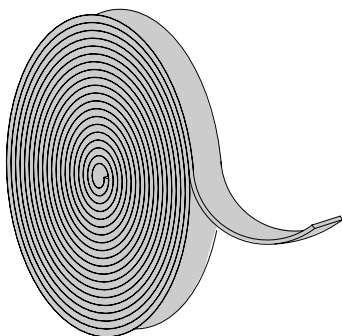
Aplicação



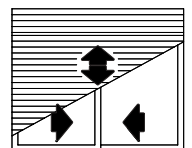
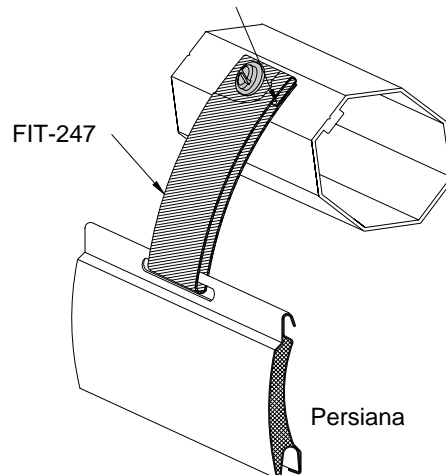
## ARR-569

Descrição: Arruela lisa 4.3x9mm  
 Acabamento: Aço inoxidável  
 Embalagem: 500 peças

Aplicação



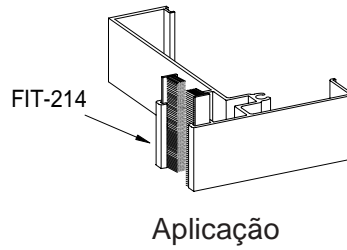
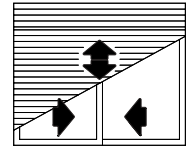
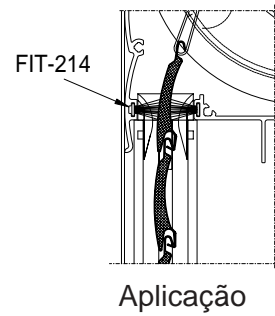
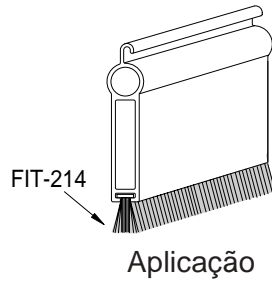
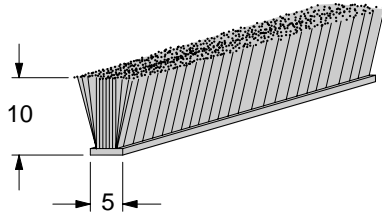
OBS: Aquecer as pontas da fita para não desfiar



## FIT-247

Descrição: Fita de ligação da persiana  
 Acabamento: Nylon preto  
 Embalagem: Rolo com 50m

Aplicação

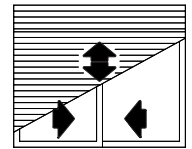
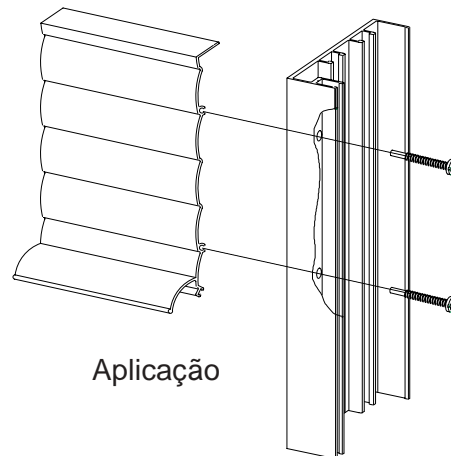
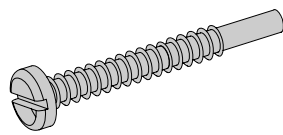


## FIT-214

Descrição: Fita vedadora 5x10mm

Acabamento: Preto

Embalagem: Rolo com 50m

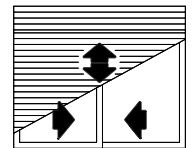
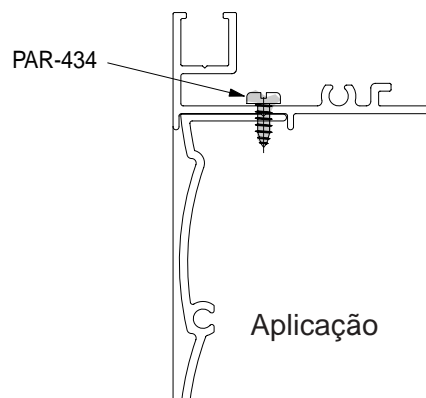
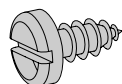


## PAR-428

Descrição: Parafuso auto-atarraxante 4,8 X 32mm

Acabamento: Aço inoxidável

Embalagem: 100 peças



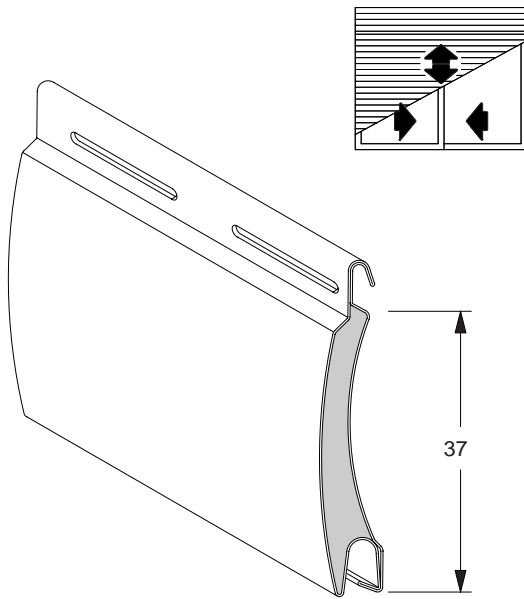
## PAR-434

Descrição: Parafuso auto-atarraxante 3.9x9.5mm

Acabamento: Aço inoxidável

Embalagem: 100 peças

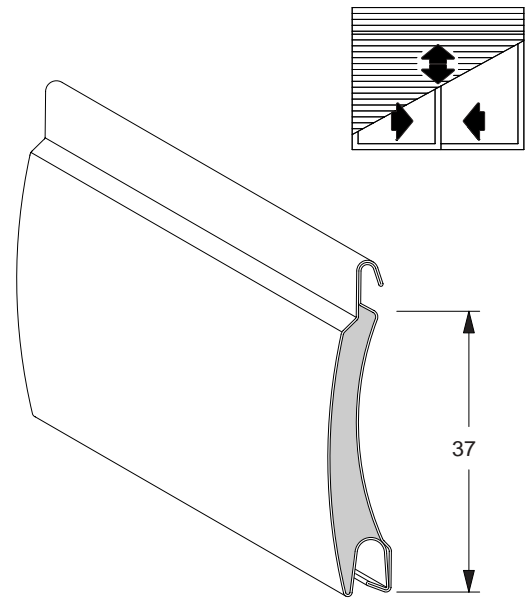
# Componentes



### Ventiladas

- VZP-031 Branca
- VZP-032 Prata
- VZP-033 Bronze 1003
- VZP-034 Preta

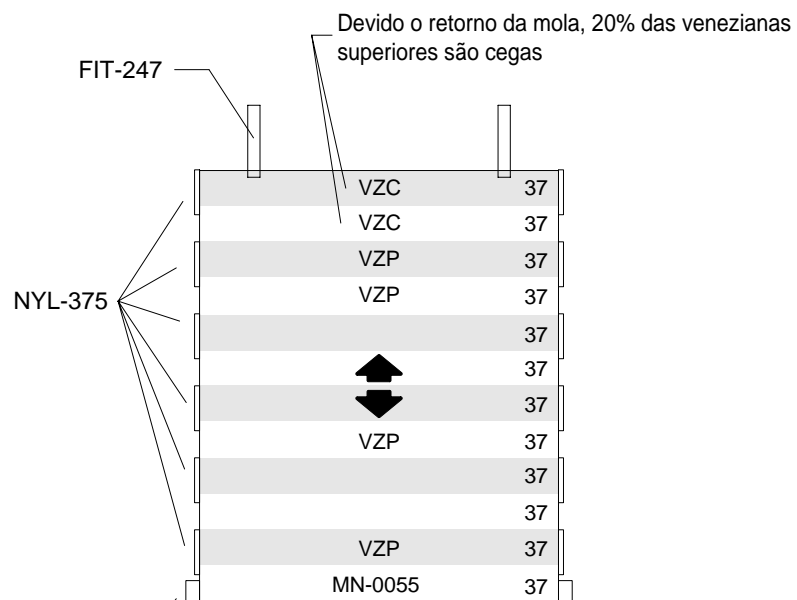
Barras com 6.000mm



### Sem ventilação

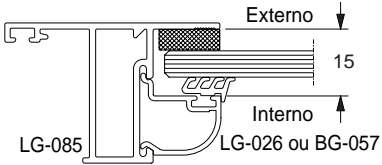
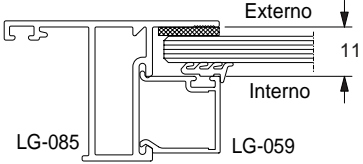
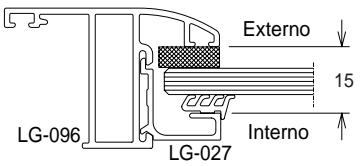
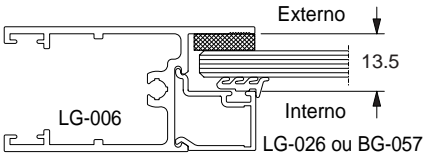
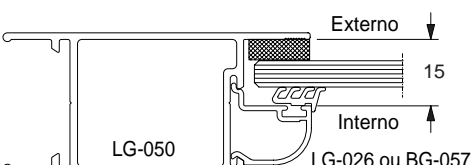
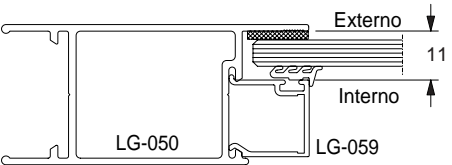
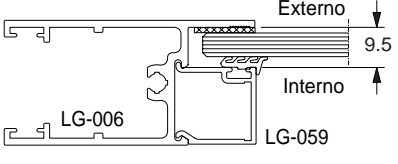
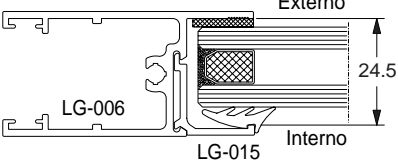
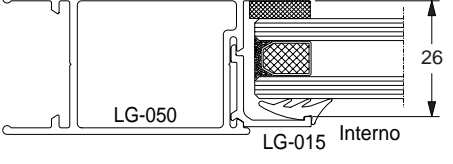
- VZC-110 Branca
- VZC-111 Prata
- VZC-112 Bronze 1003
- VZC-113 Preta

Barras com 6.000mm



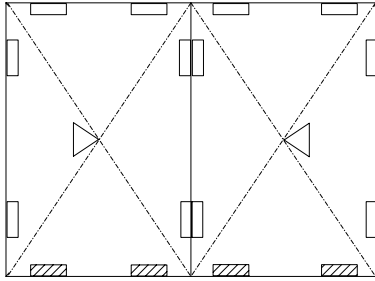
**ORIENTAÇÃO DE MONTAGEM**  
 Para não ocorrer o desalinhamento das persianas durante a movimentação da esteira.



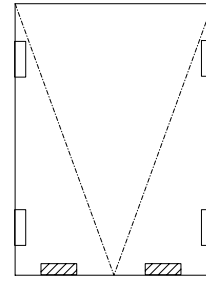
Detalhes	Esp. de vidro	Guarnição interna	Guarnição externa
 <p>LG-085                      Externo ↓                      15                      Interno ↑                      LG-026 ou BG-057</p>	6	GUA-256	GUA-304
	8	GUA-259	GUA-304
	10	GUA-259	GUA-306
 <p>LG-085                      Externo ↓                      11                      Interno ↑                      LG-059</p>	4	GUA-259	GUA-304
	6	GUA-259	GUA-306
 <p>LG-096                      Externo ↓                      15                      Interno ↑                      LG-027</p>	6	GUA-256	GUA-306
	8	GUA-259	GUA-304
	10	GUA-259	GUA-306
 <p>LG-006                      Externo ↓                      13.5                      Interno ↑                      LG-026 ou BG-057</p>	6	GUA-256	GUA-306
	8	GUA-259	GUA-306
	10	GUA-259	GUA-305
 <p>LG-050                      Externo ↓                      15                      Interno ↑                      LG-026 ou BG-057</p>	6	GUA-256	GUA-304
	8	GUA-259	GUA-304
	10	GUA-259	GUA-306
 <p>LG-050                      Externo ↓                      11                      Interno ↑                      LG-059</p>	4	GUA-256	GUA-304
	6	GUA-259	GUA-306
 <p>LG-006                      Externo ↓                      9.5                      Interno ↑                      LG-059</p>	4	GUA-259	GUA-306
	6	GUA-259	GUA-305
 <p>LG-006                      Externo ↓                      24.5                      Interno ↑                      LG-015</p>	17	GUA-303	GUA-306
	20	GUA-303	GUA-305
 <p>LG-050                      Externo ↓                      26                      Interno ↑                      LG-015</p>	17	GUA-303	GUA-304
	20	GUA-303	GUA-306

## Instrução de posicionamento dos calços do vidro

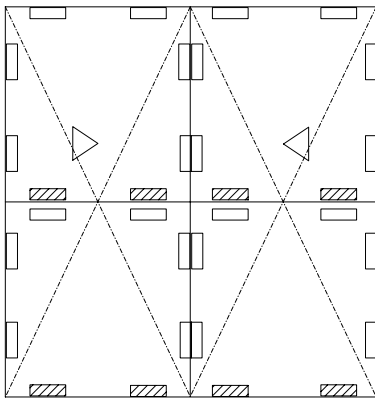
Janela de correr



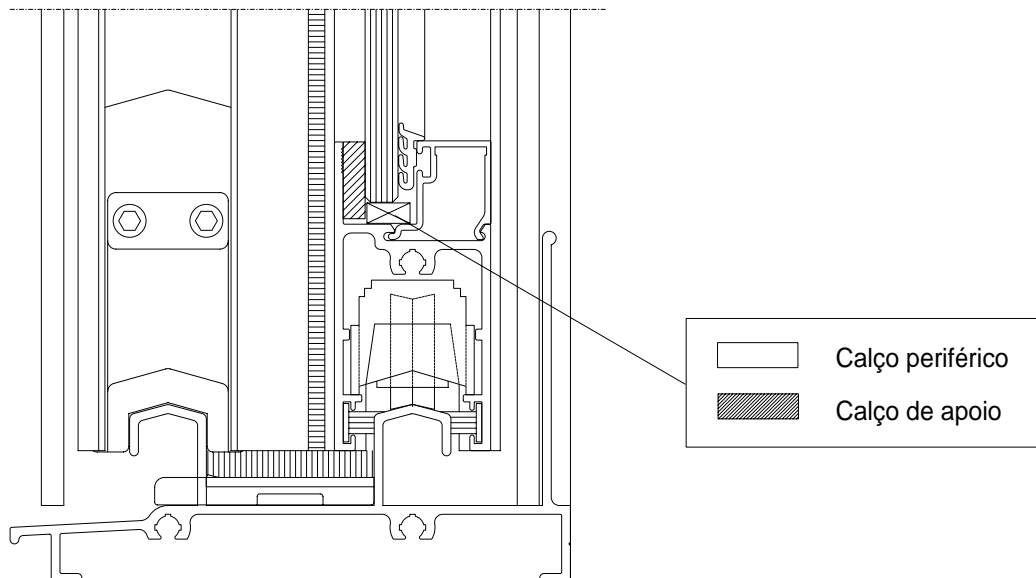
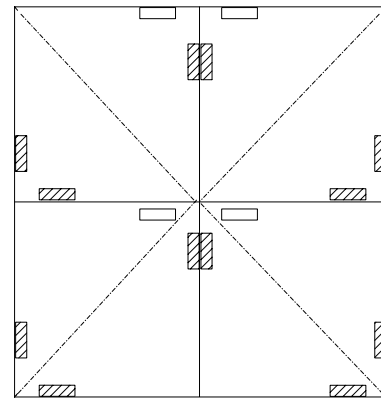
Maxim-ar



Porta de correr



Porta de giro





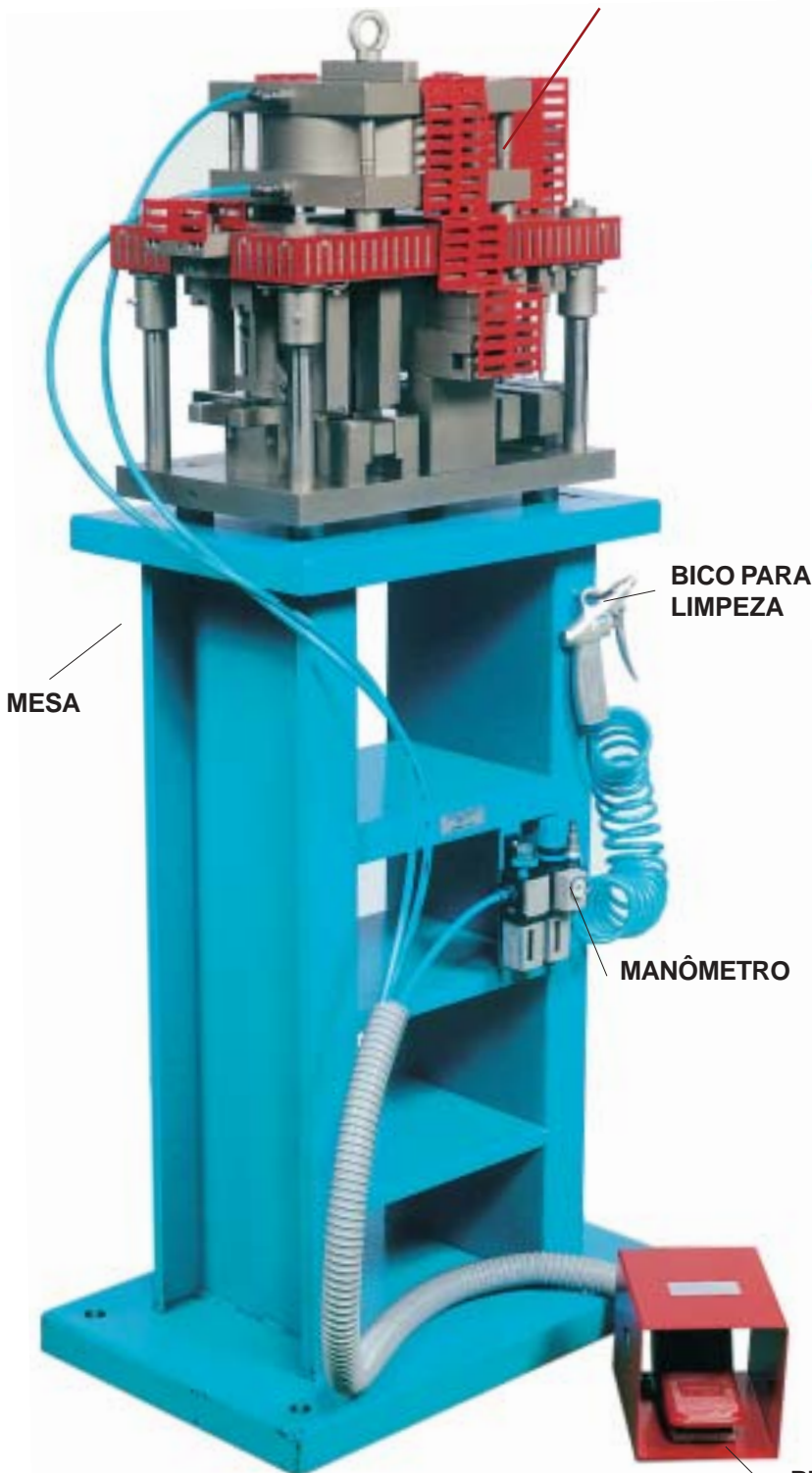
## Capítulo 7

**Equipamento  
Estampos  
Usinagens**

**EST-581**

**PULMÃO  
PNEUMÁTICO**

**EST-582**



**BICO PARA  
LIMPEZA**

## COMPONENTES EST-581/582

- FERRAMENTA
- MESA
- PEDAL DE ACIONAMENTO
- MANÔMETRO
- BICO PARA LIMPEZA

**MANÔMETRO**



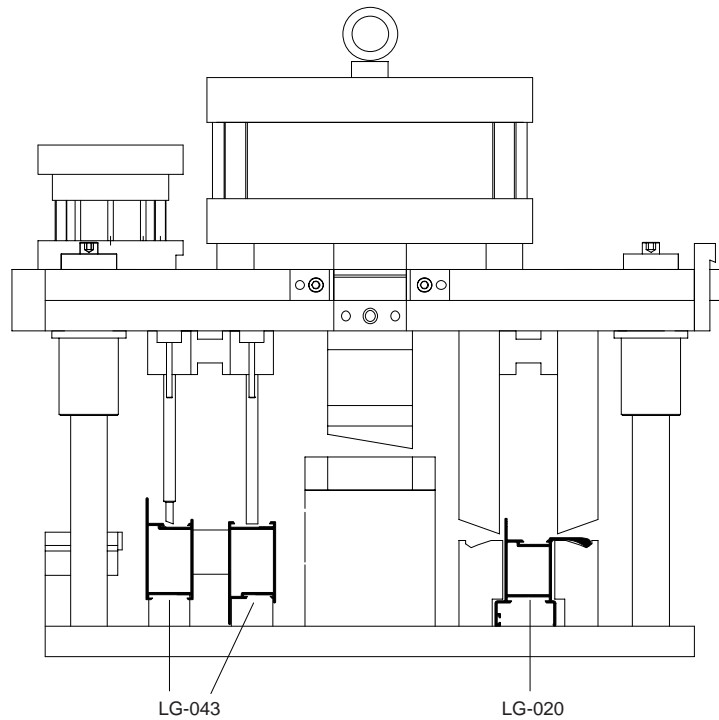
**MAQ-840**

**PEDAL DE ACIONAMENTO  
COM PROTEÇÃO**

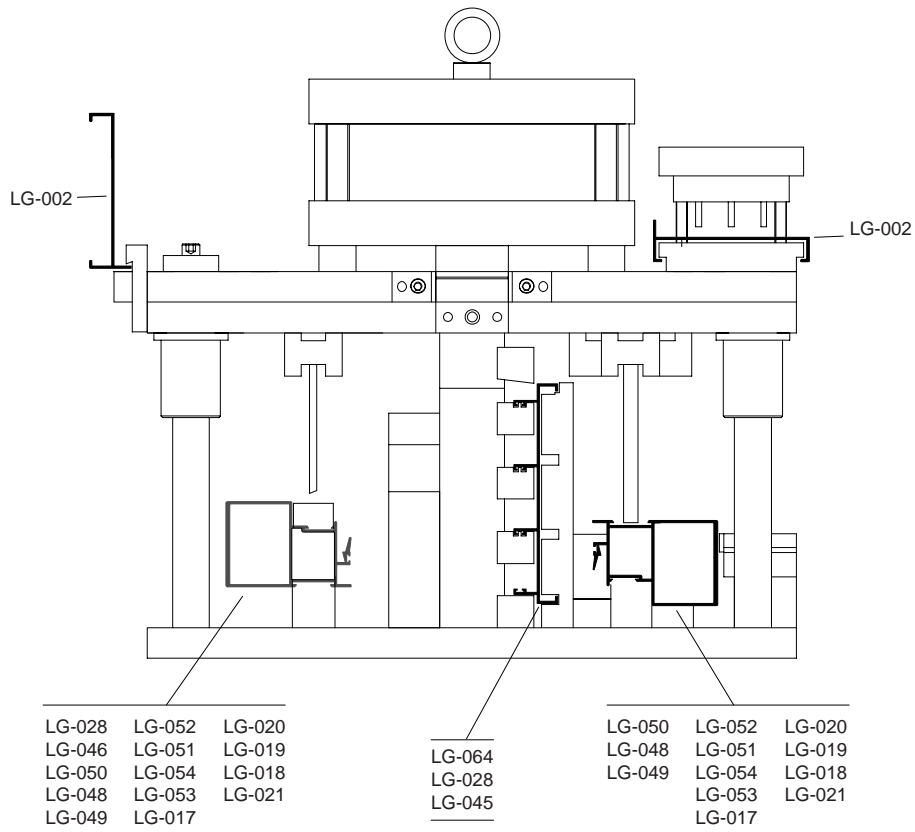
Entre muitas características inovadoras, a linha III Gold incorpora duas prensas pneumáticas e uma fresa exclusiva para serem utilizadas pelo fabricante de esquadrias na usinagem dos perfis. O equipamento garantirá qualidade consistente nas usinagens e, por consequência, nas esquadrias em um nível de profundidade muito superior ao obtido atualmente com qualquer dos produtos disponíveis.

# Estampo Est-581

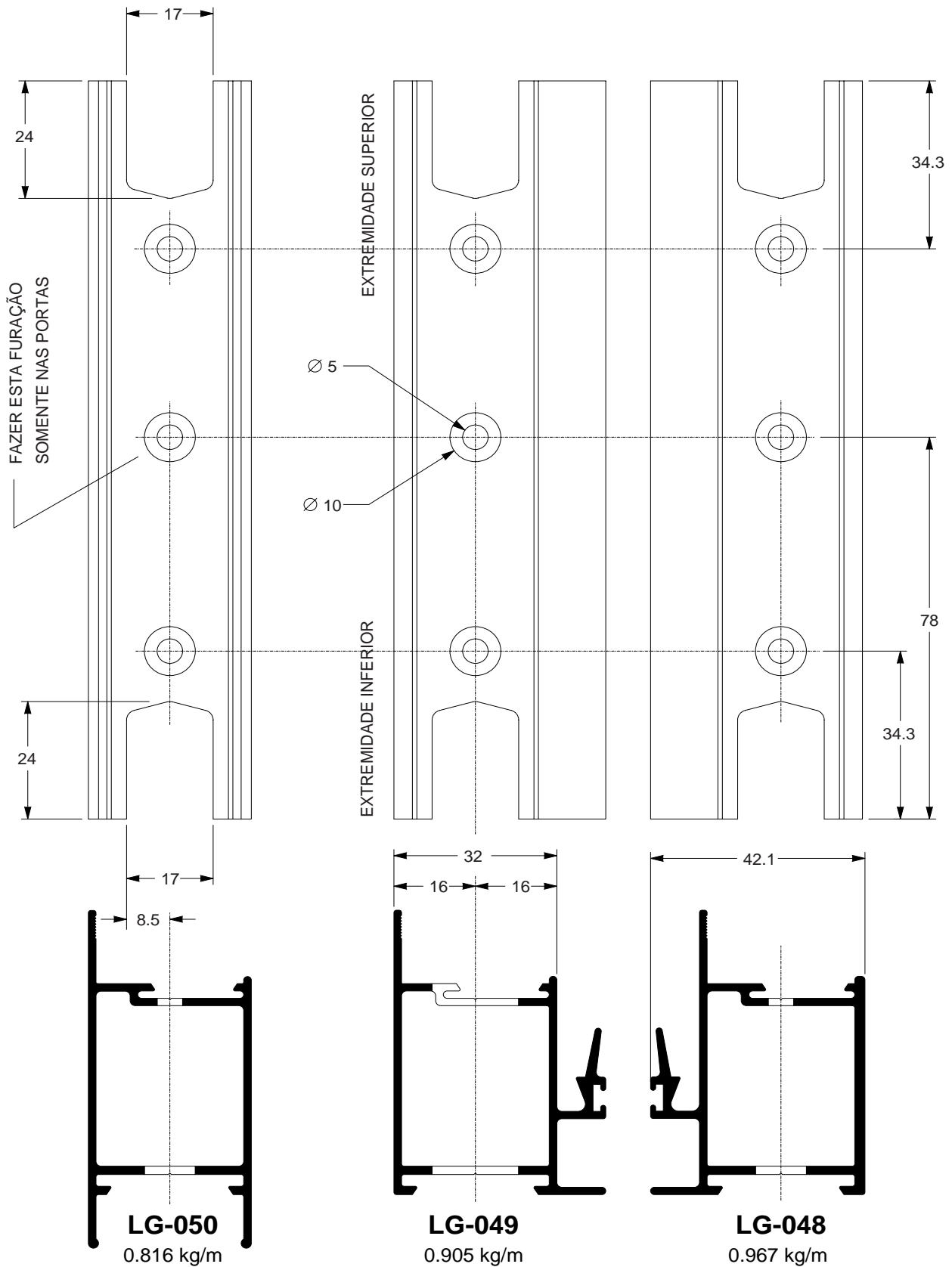
## Vista Frontal



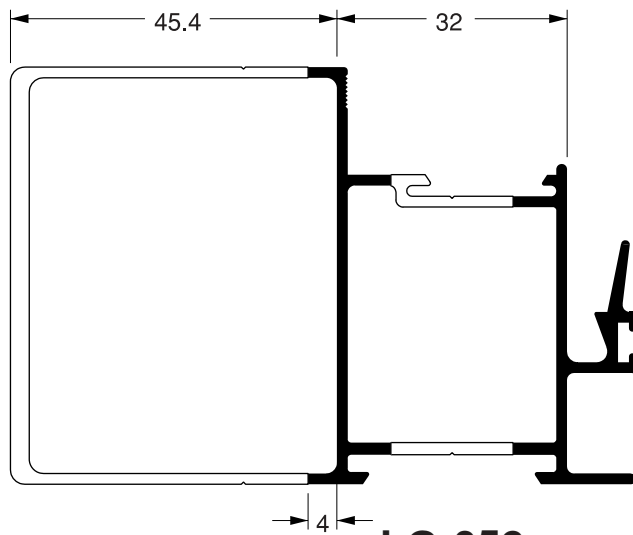
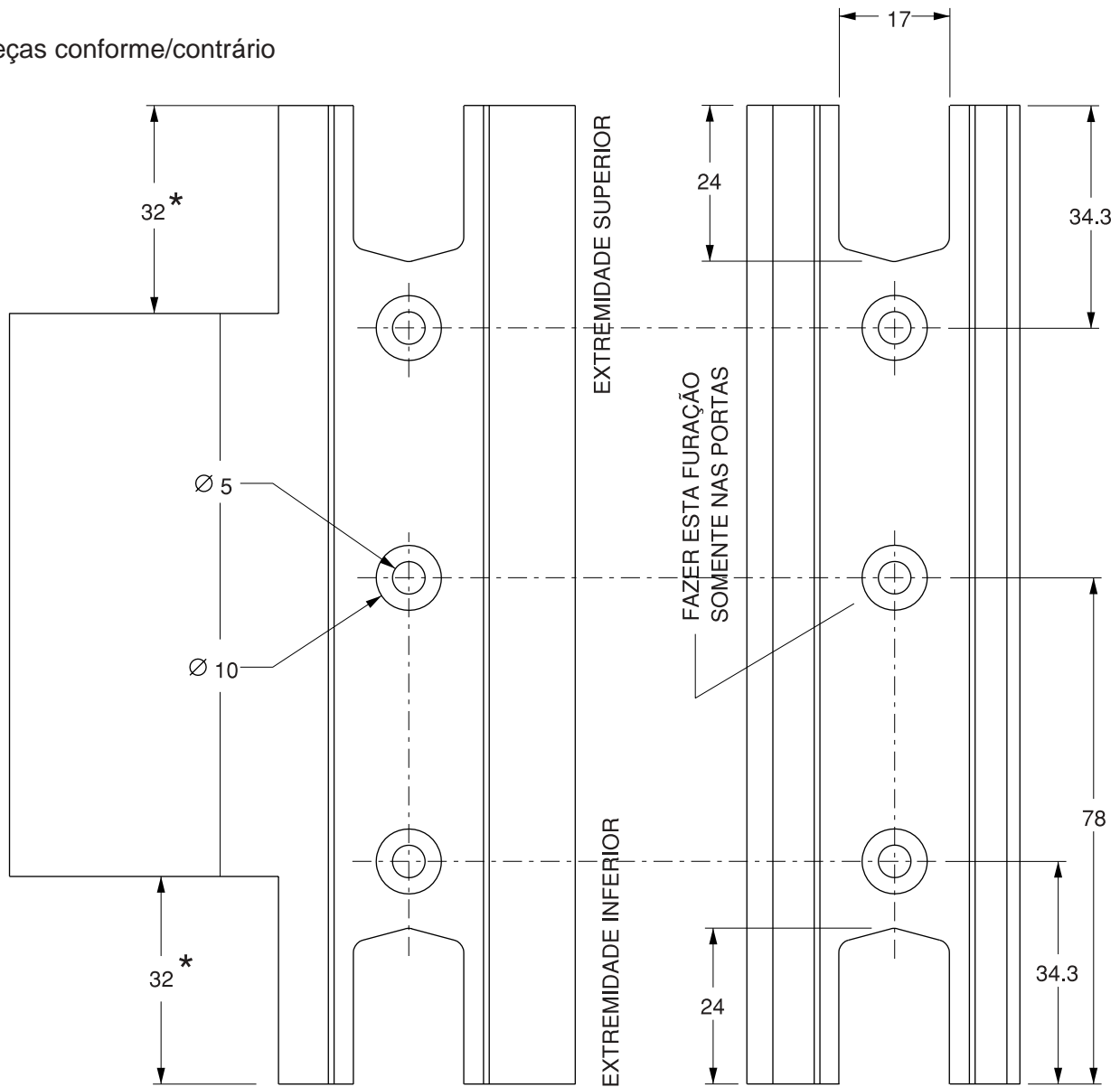
## Vista Posterior



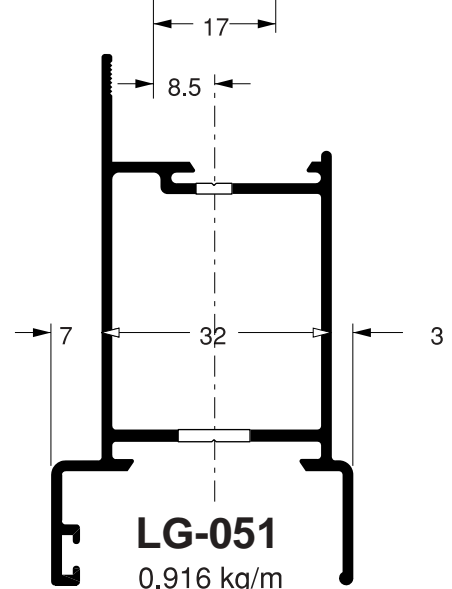
Peças conforme/contrário



Peças conforme/contrário



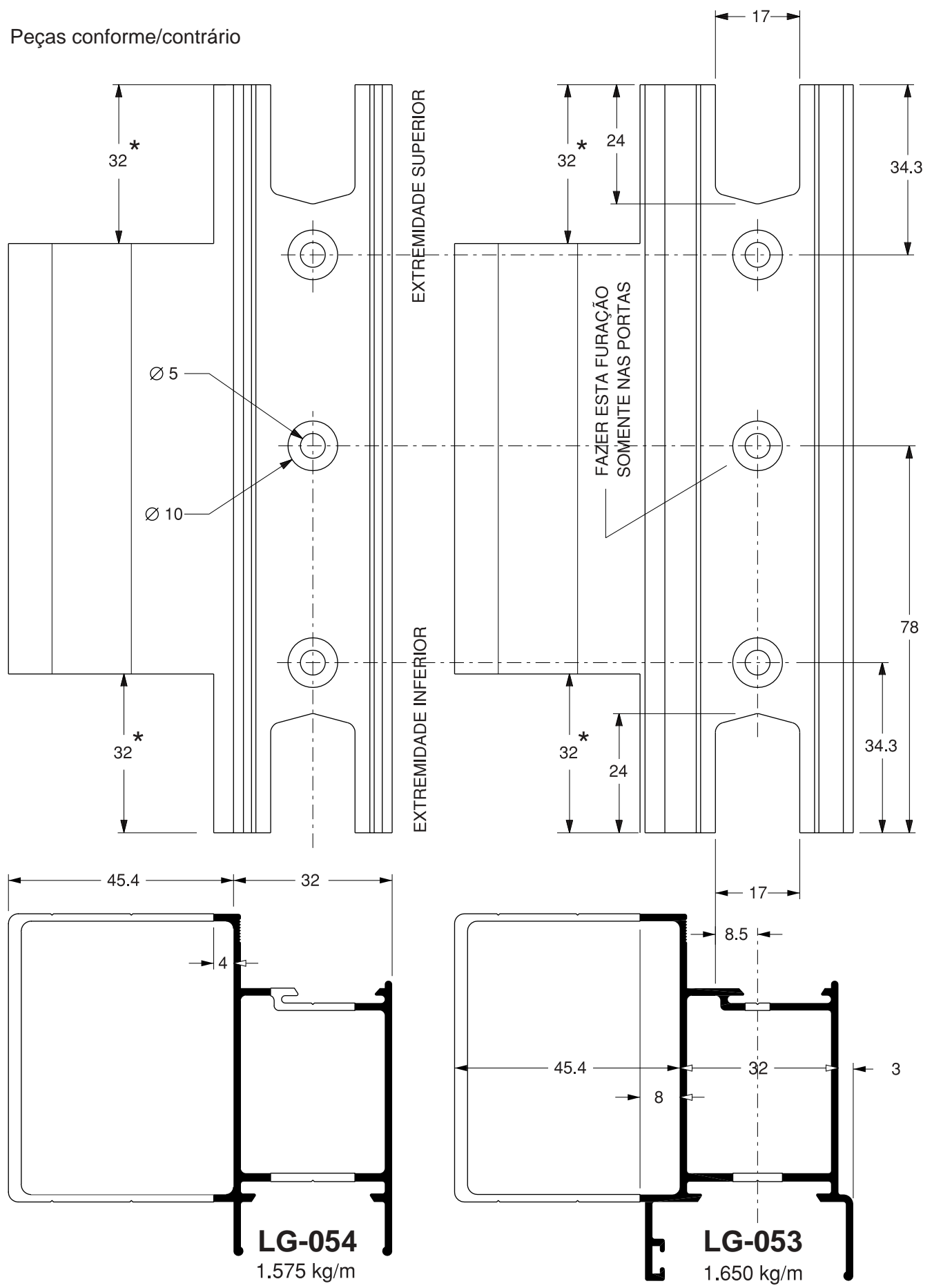
**LG-052**  
 1.669 kg/m



**LG-051**  
 0.916 kg/m

\*FRESA

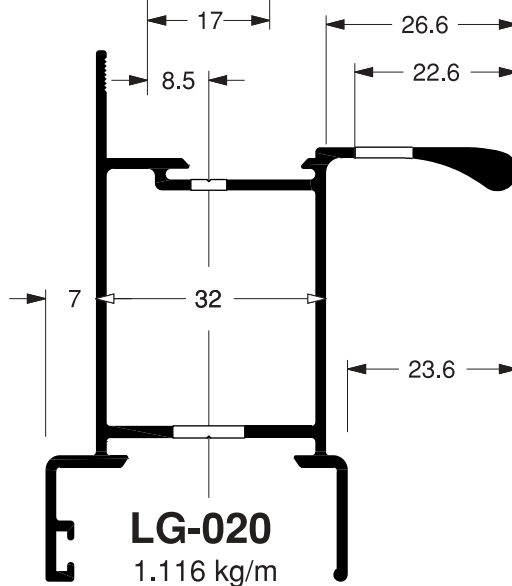
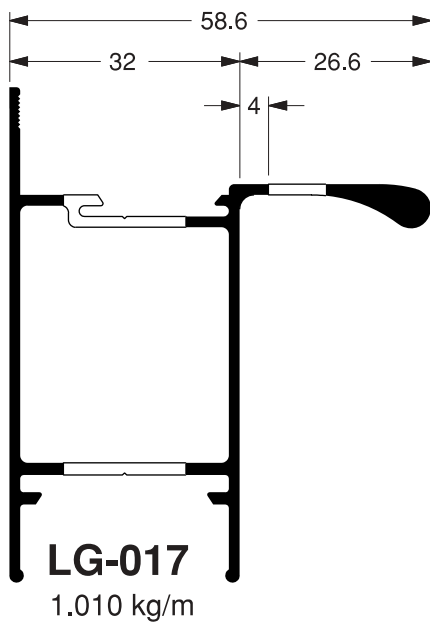
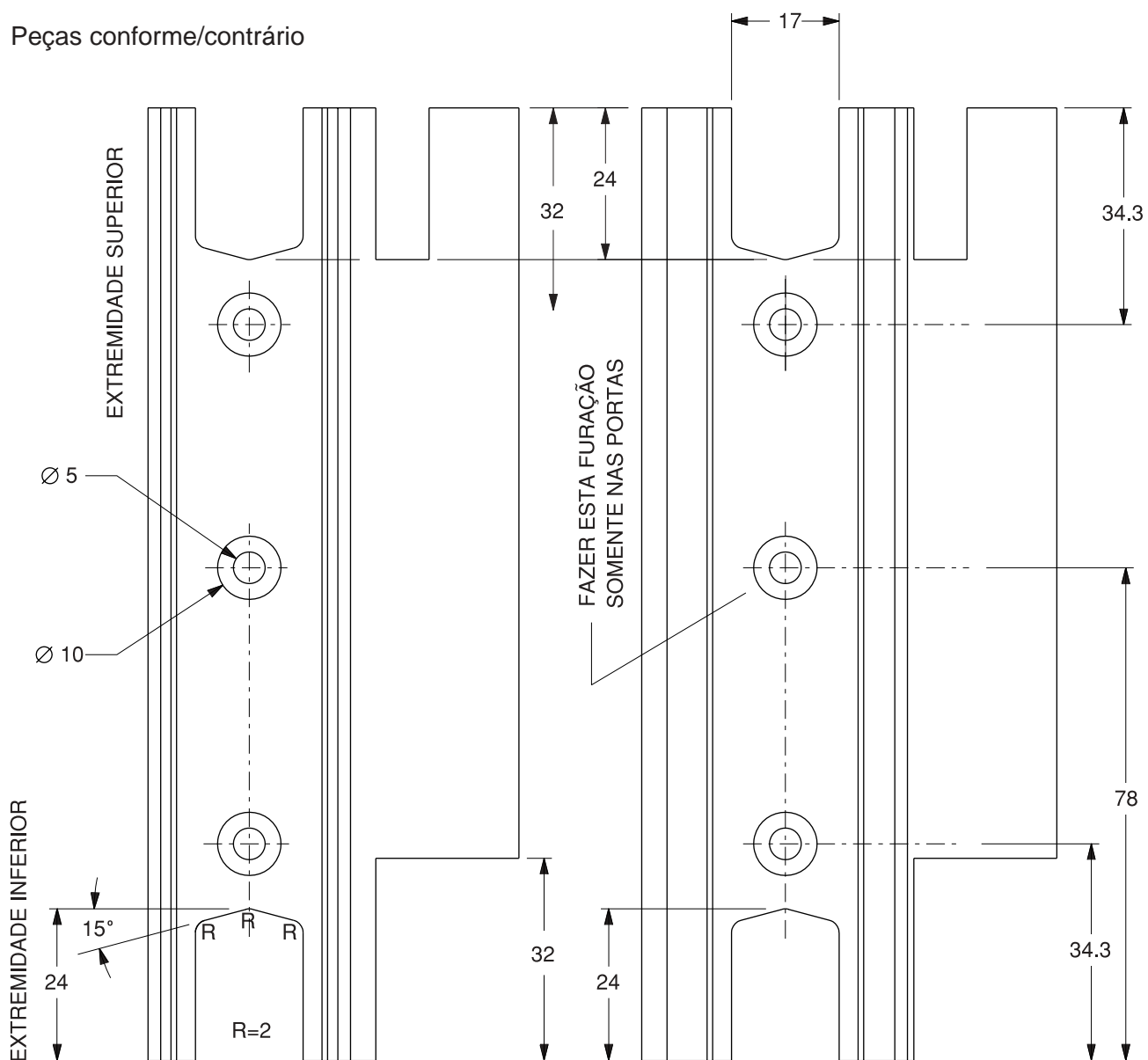
Peças conforme/contrário



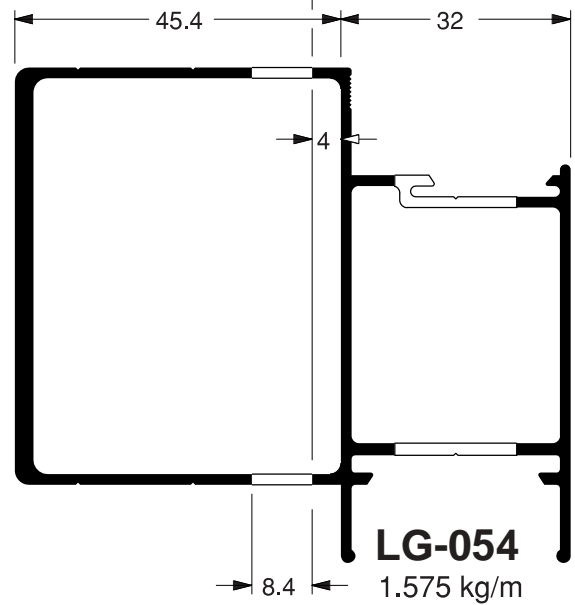
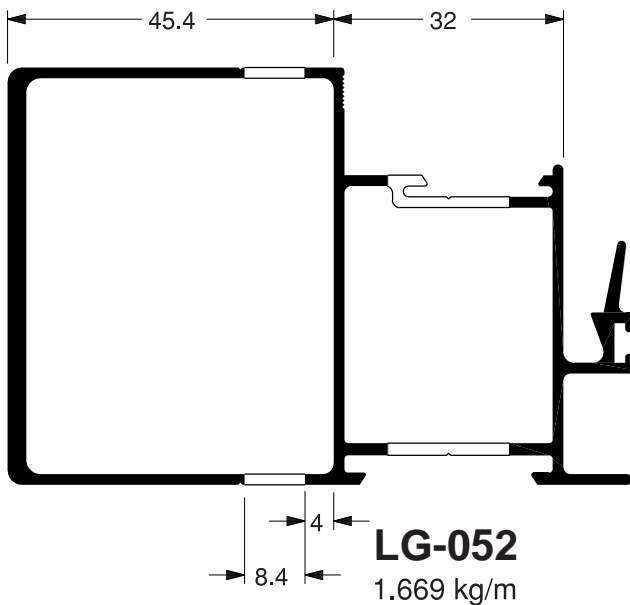
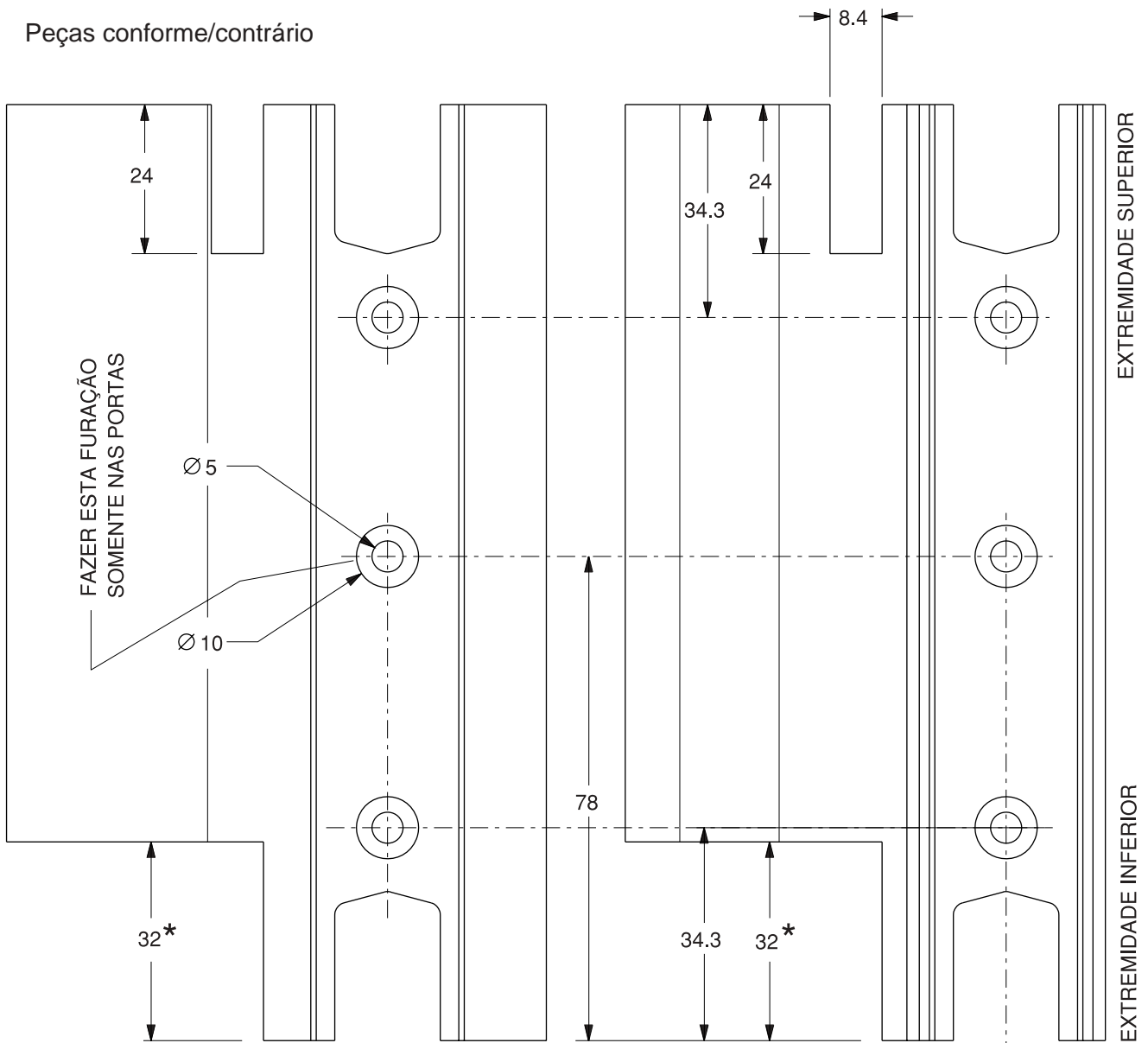
\*FRESA



Peças conforme/contrário

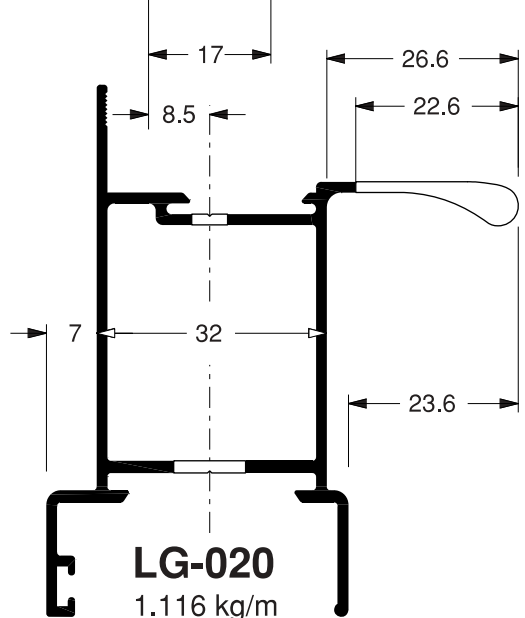
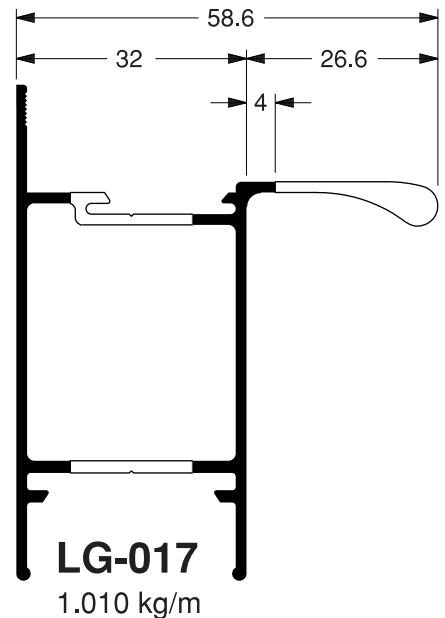
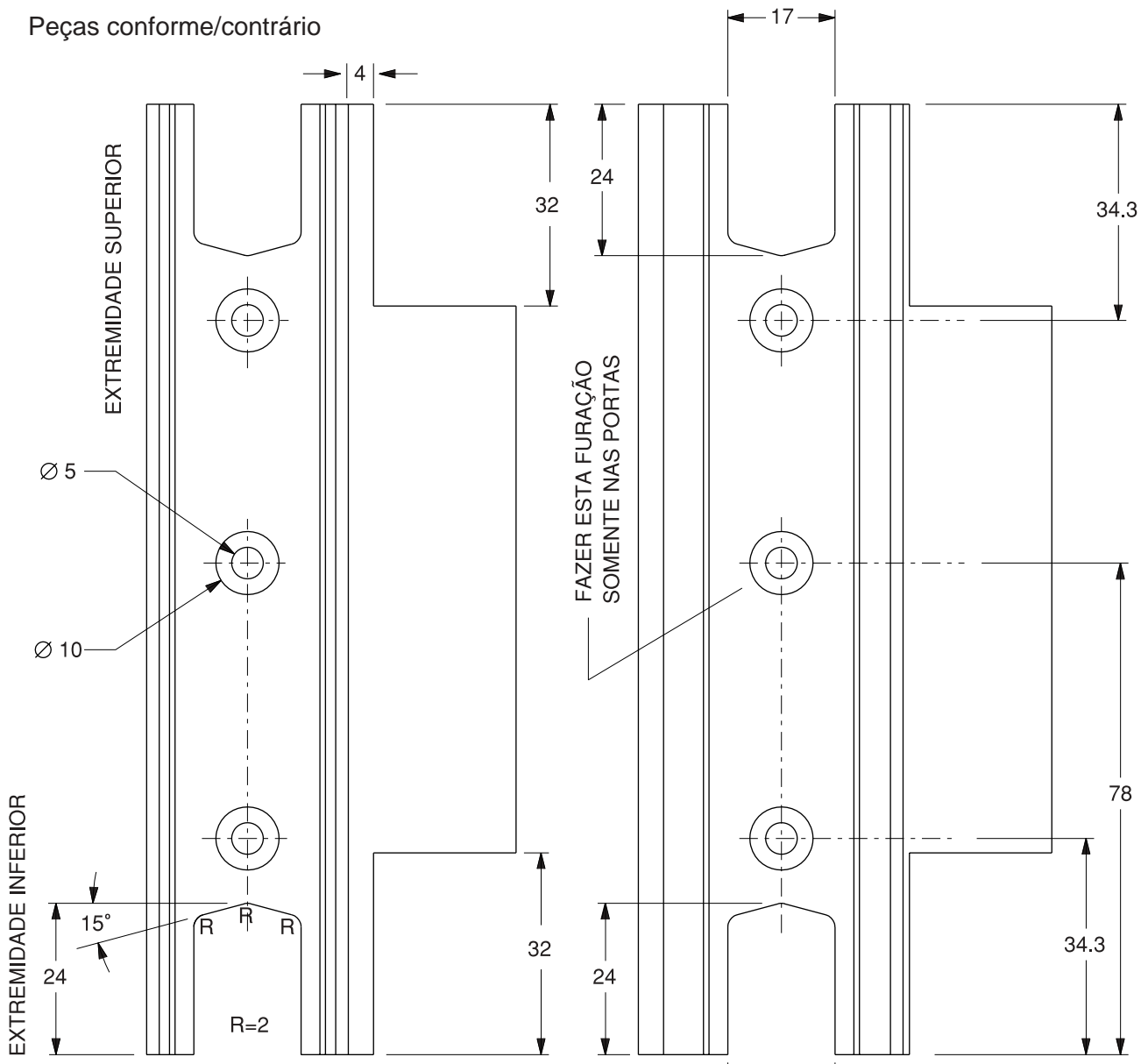


Peças conforme/contrário

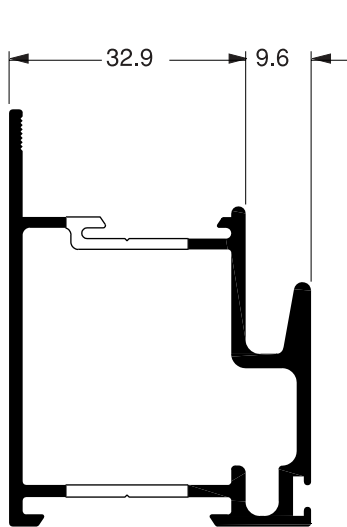
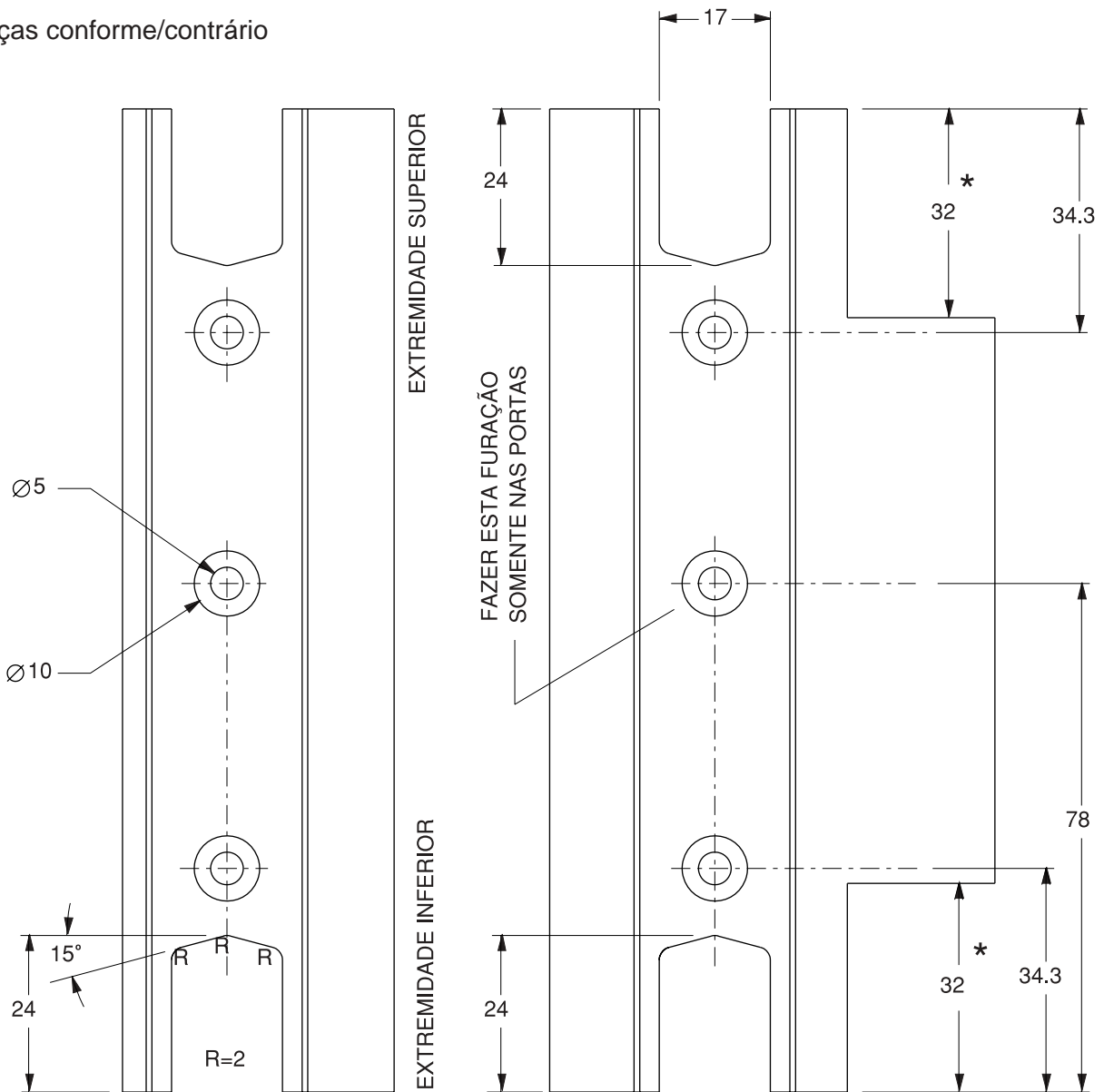


\*FRESA

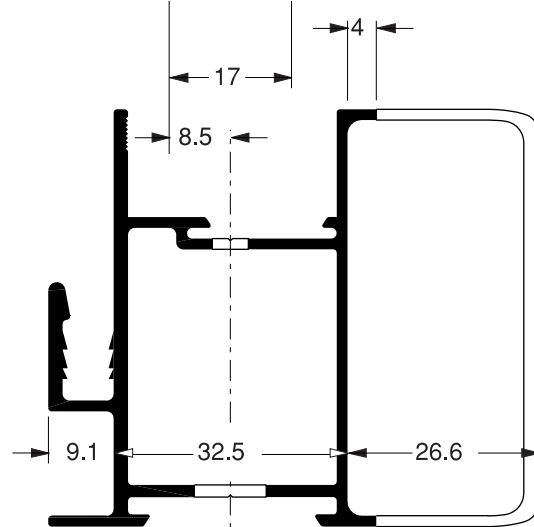
Peças conforme/contrário



Peças conforme/contrário



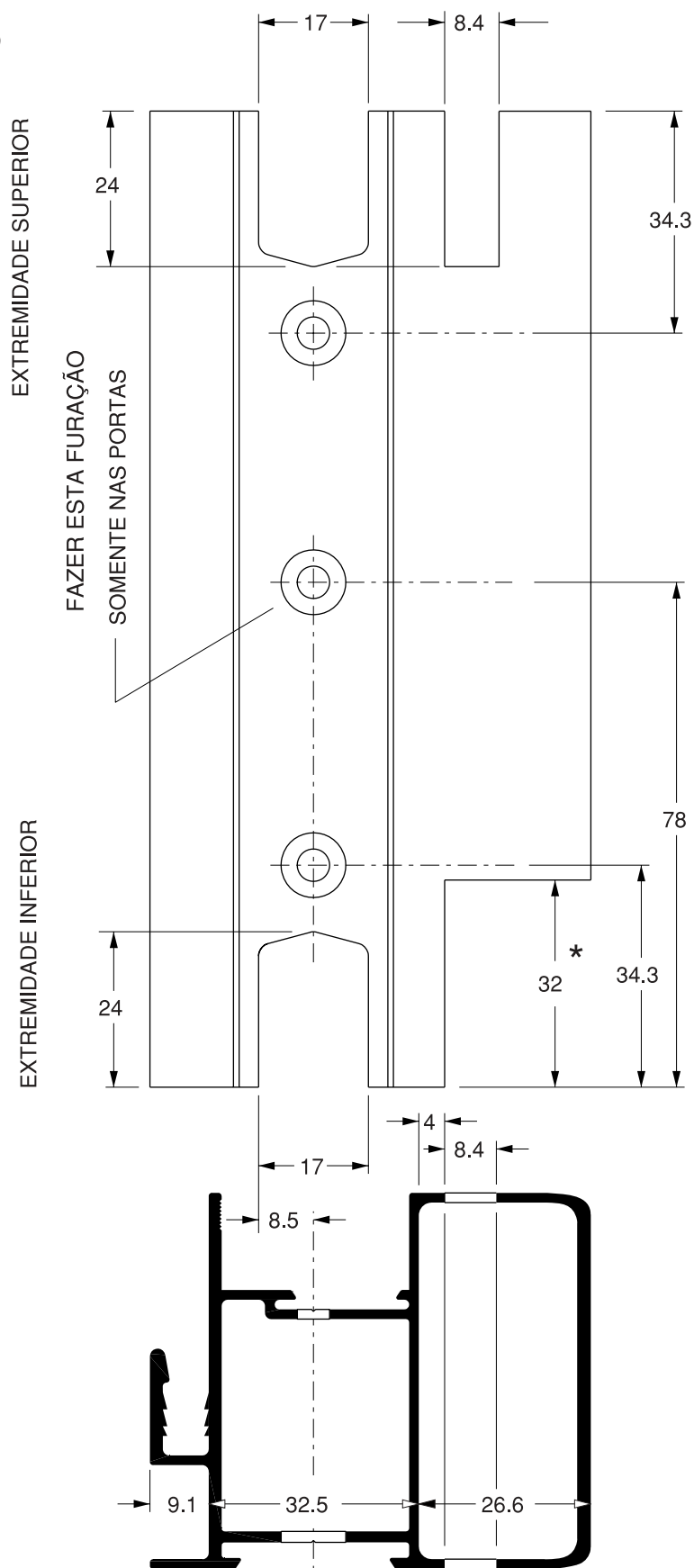
**LG-019**  
 1.080 kg/m



**LG-018**  
 1.572 kg/m

\*FRESA

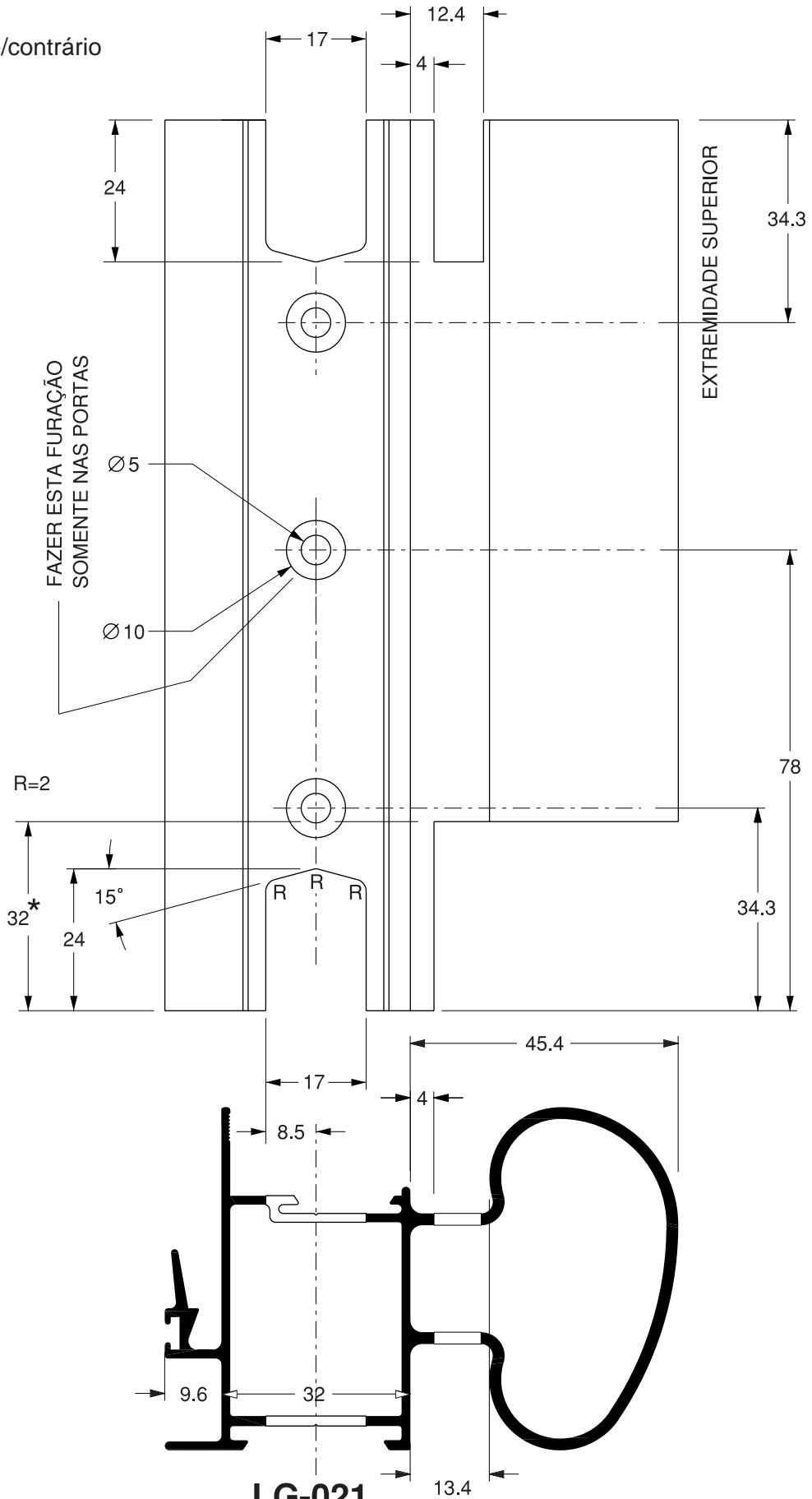
Peça conforme/contrário



**LG-018**  
 1.572 kg/m

\*FRESA

Peça conforme/contrário

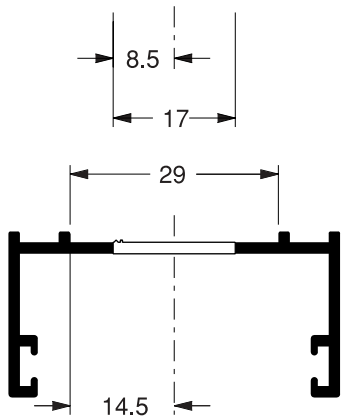
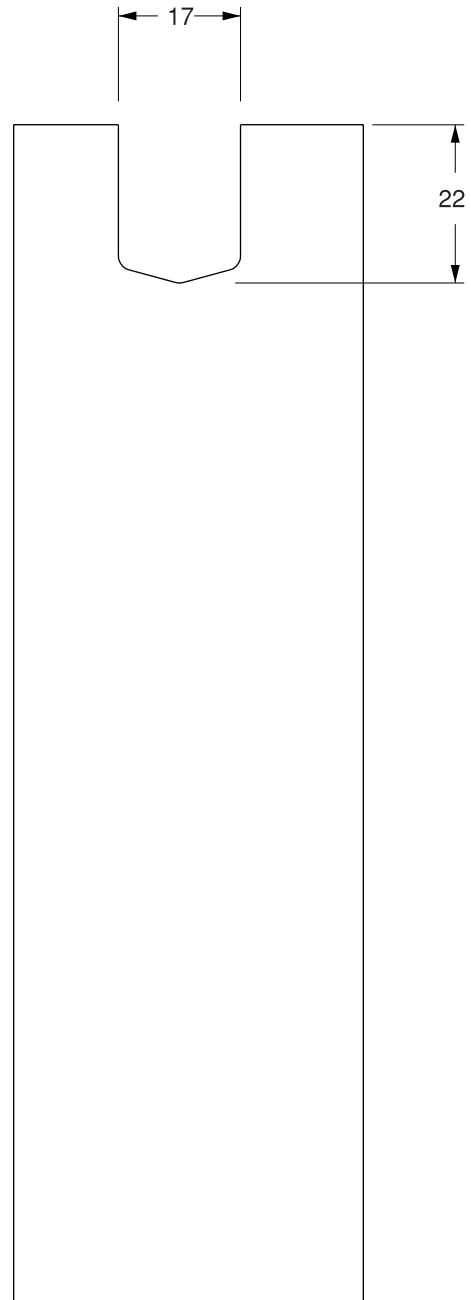
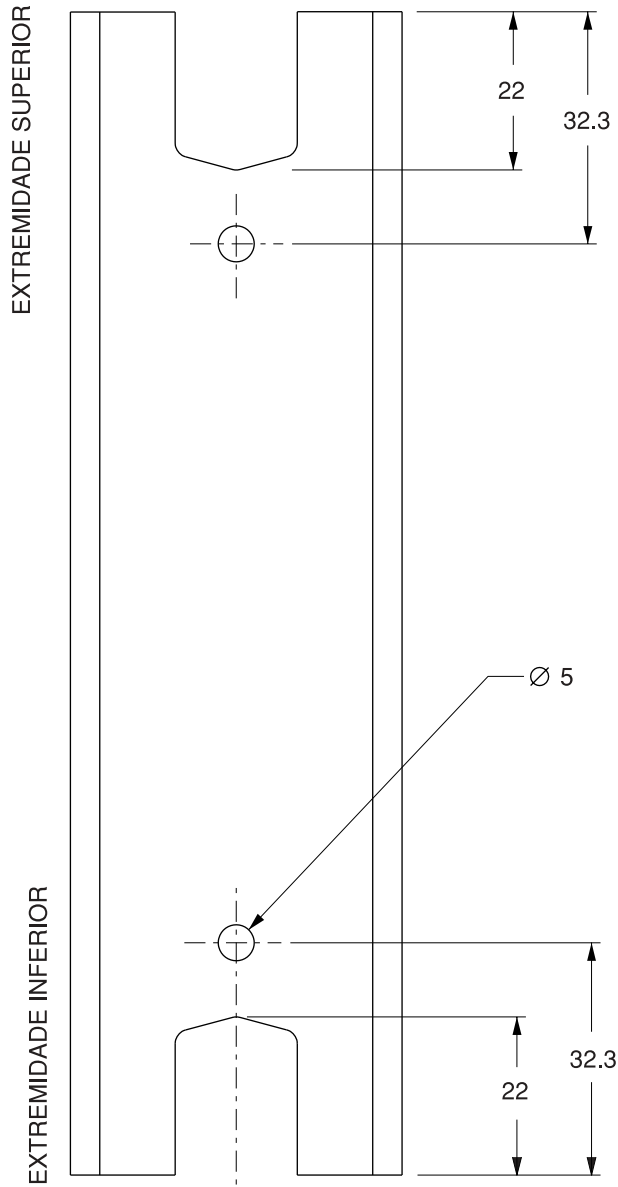


**LG-021**

1.733 kg/m

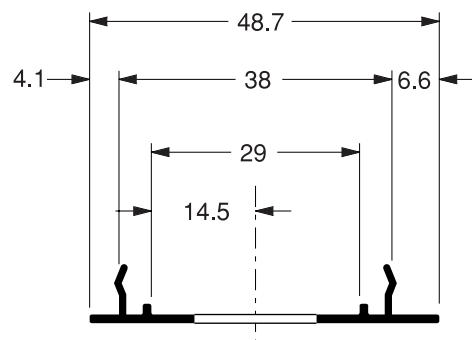
\*FRESA

Peças conforme/contrário



**LG-028**

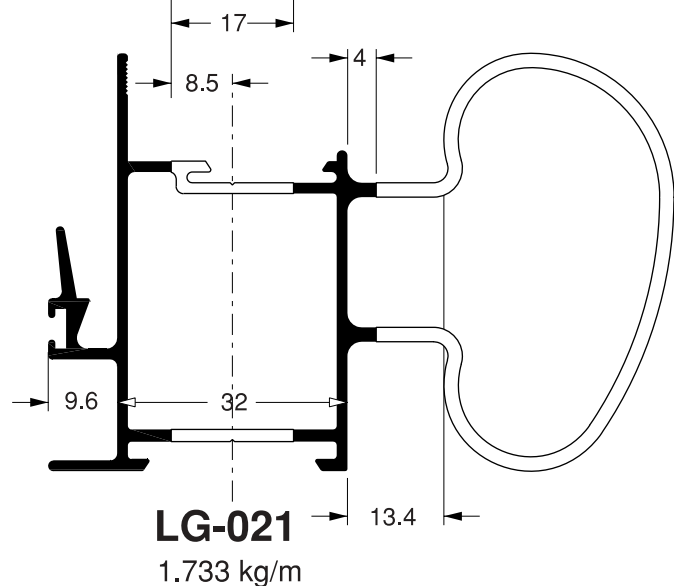
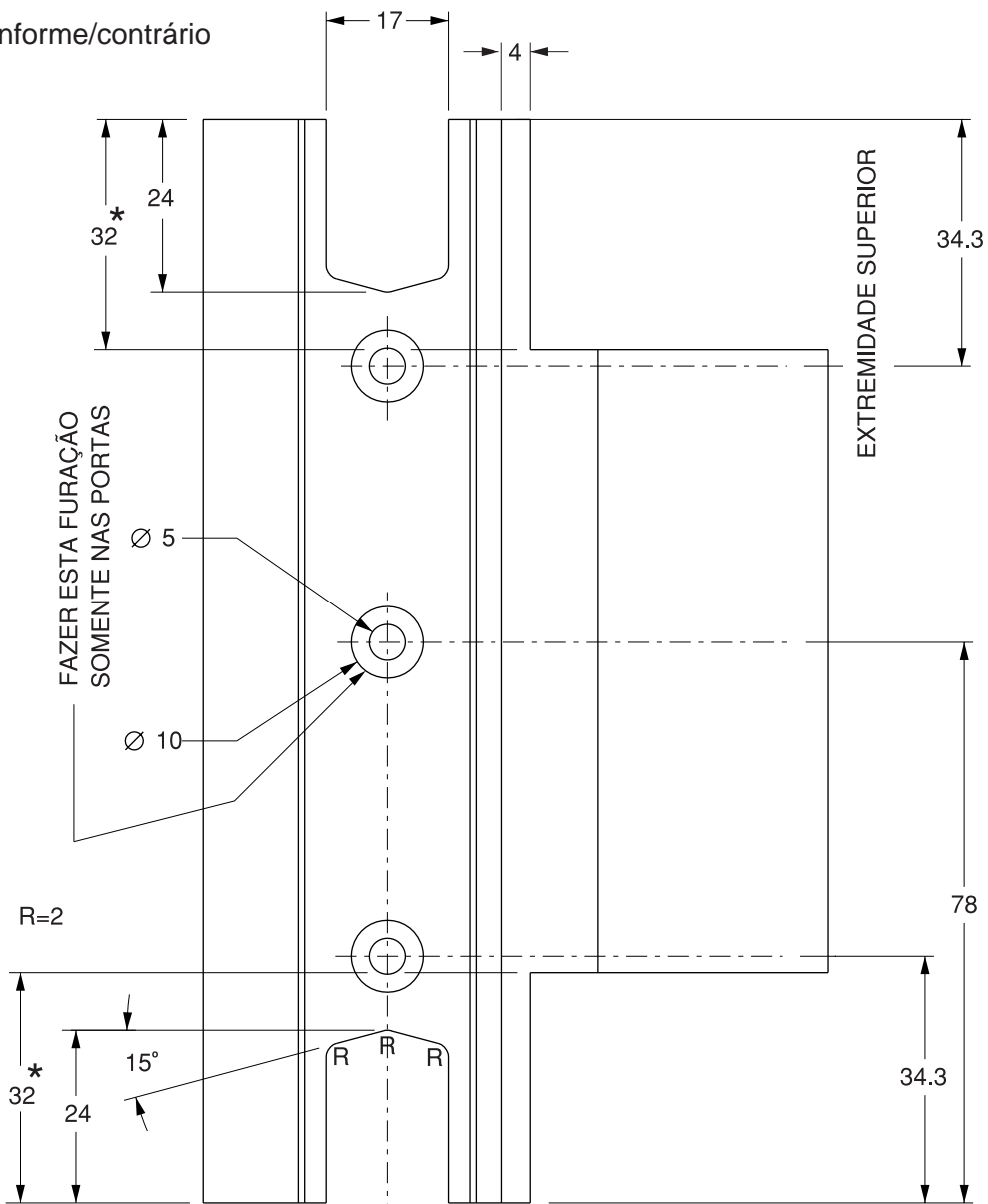
0.455 kg/m



**LG-046**

0.206 kg/m

Peça conforme/contrário

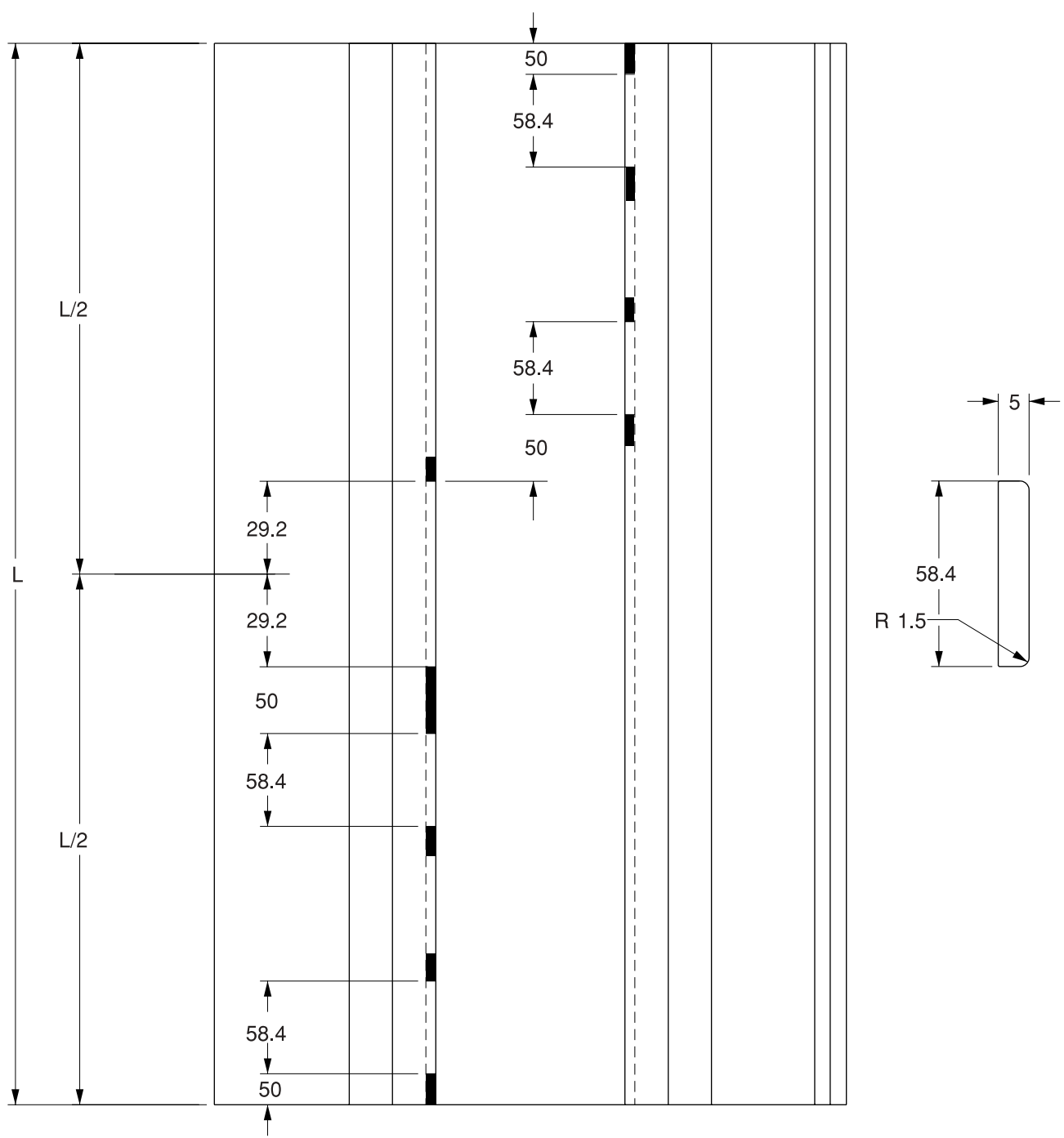
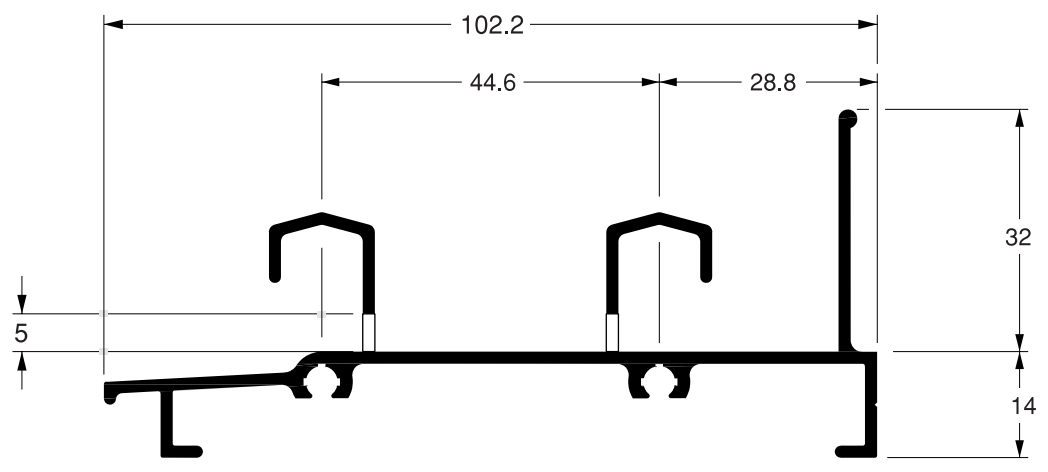


\*FRESA



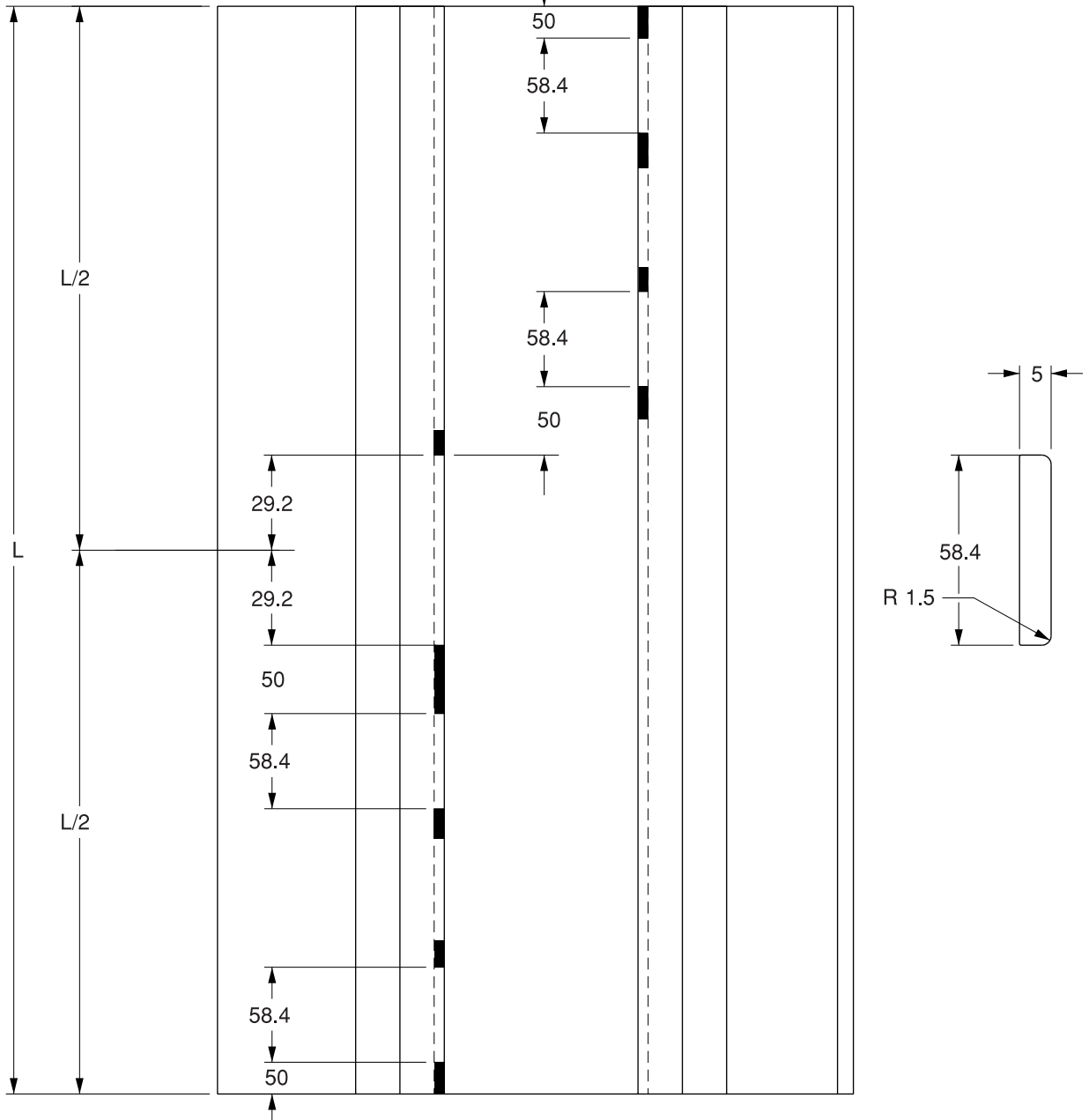
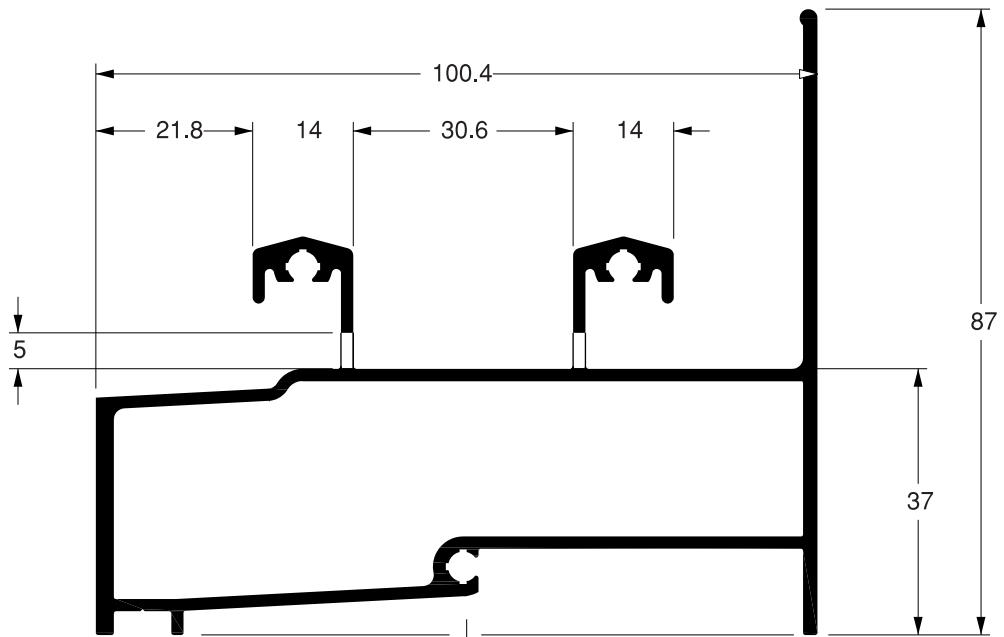


**LG-047**  
 1.133 kg/m



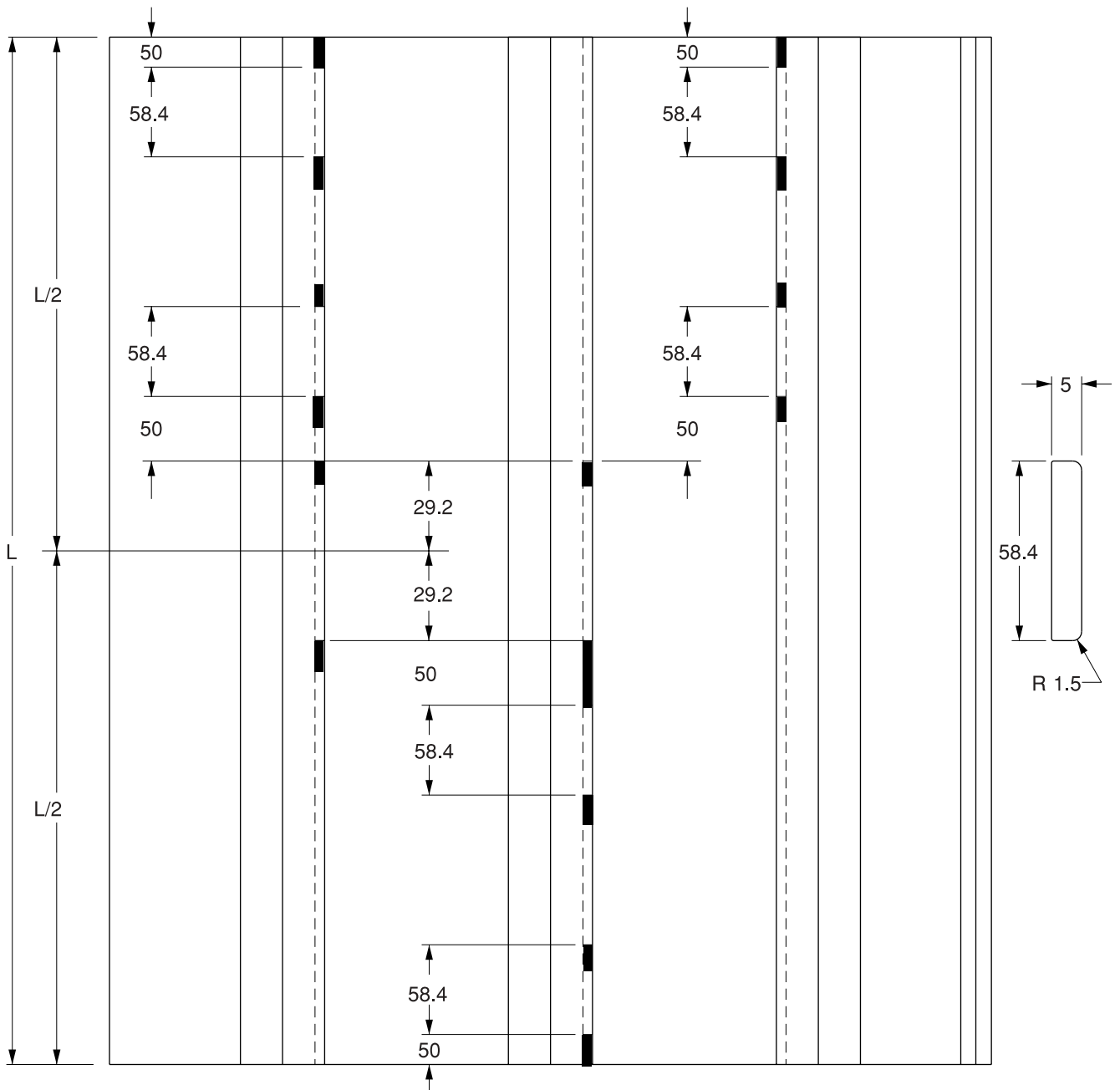
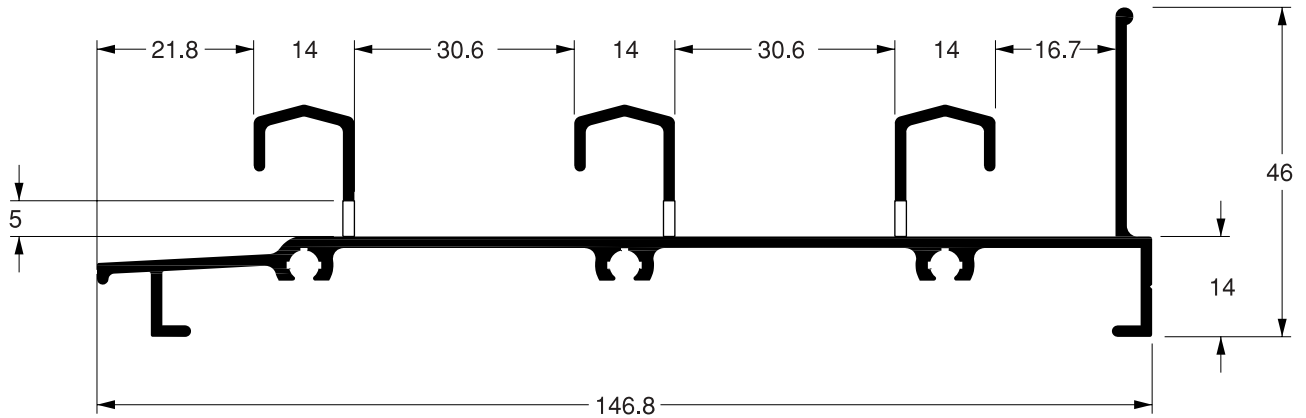
**LG-005**

2.104 kg/m



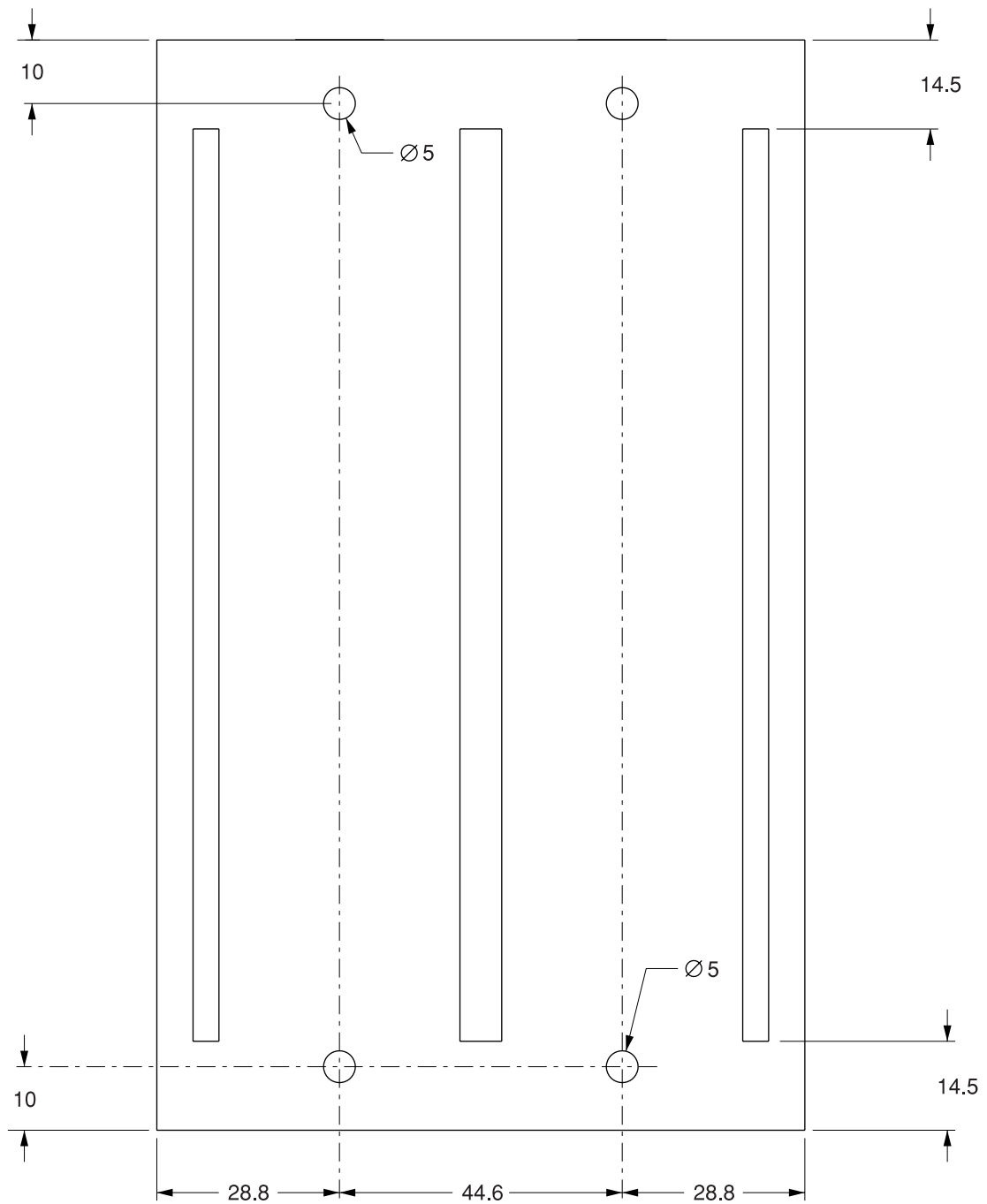
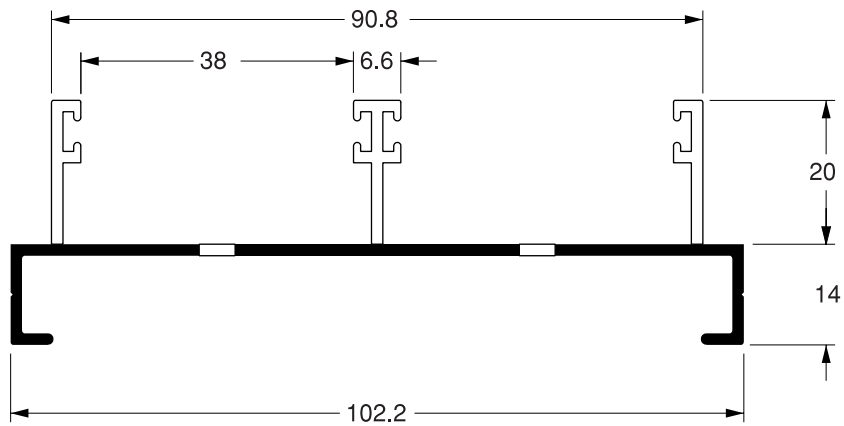
## LG-066

1.539 kg/m



**LG-045**

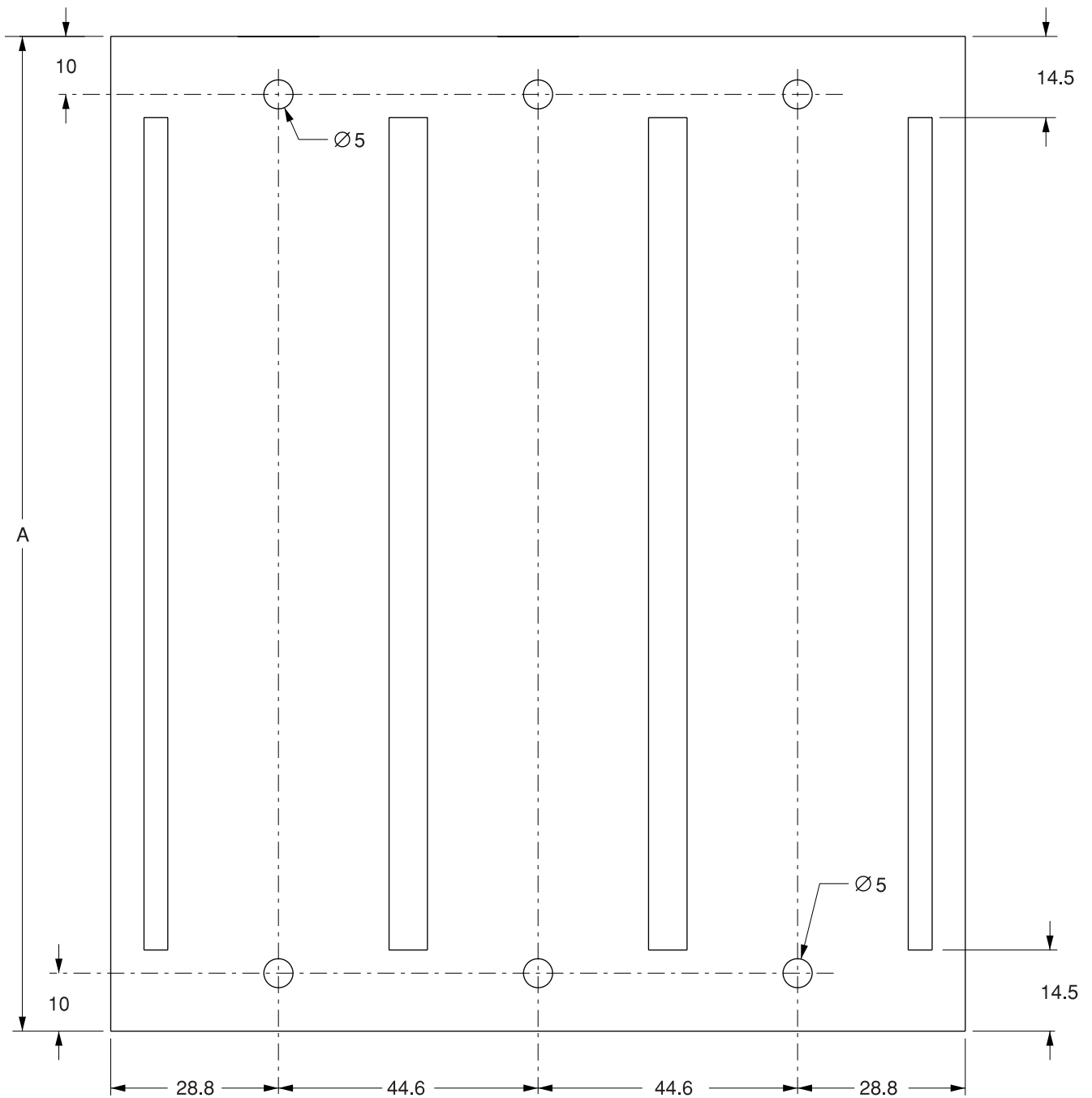
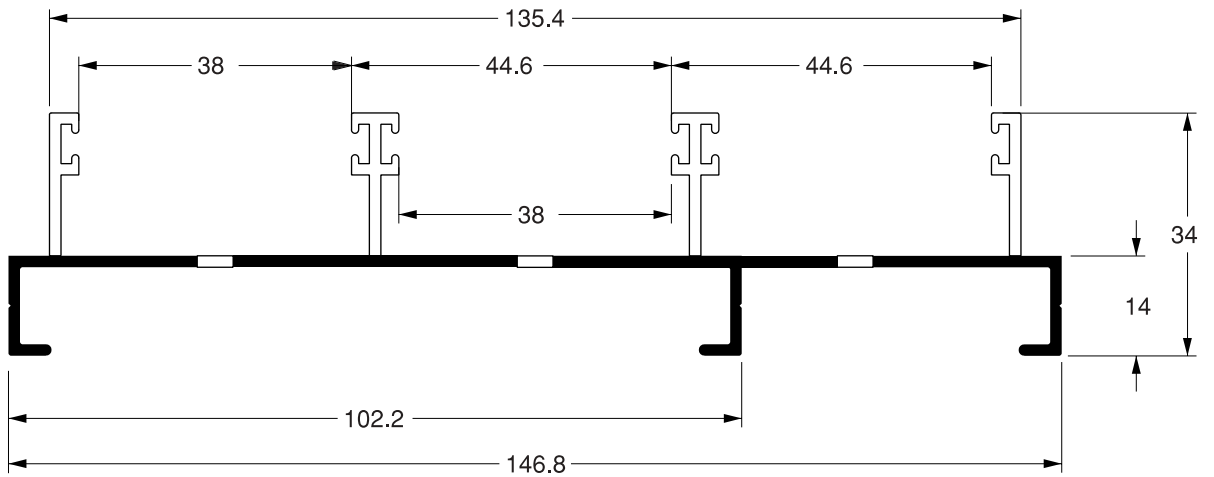
0.957 kg/m



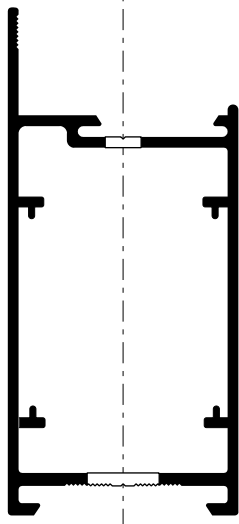
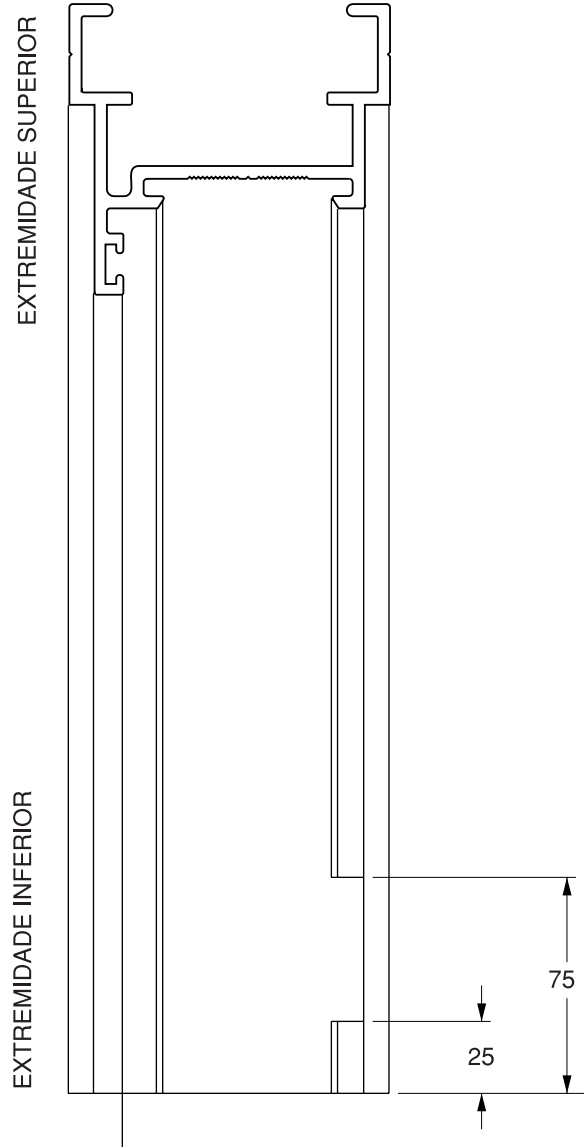
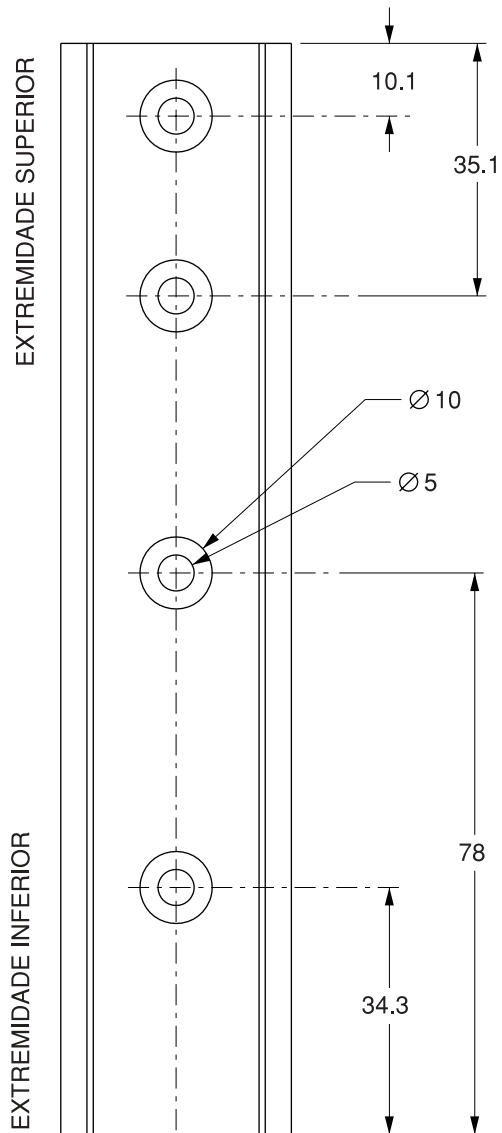


**LG-064**

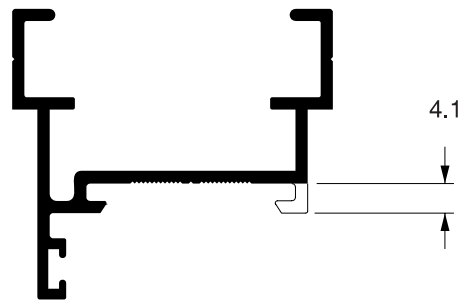
1.358 kg/m



Peças conforme/contrário



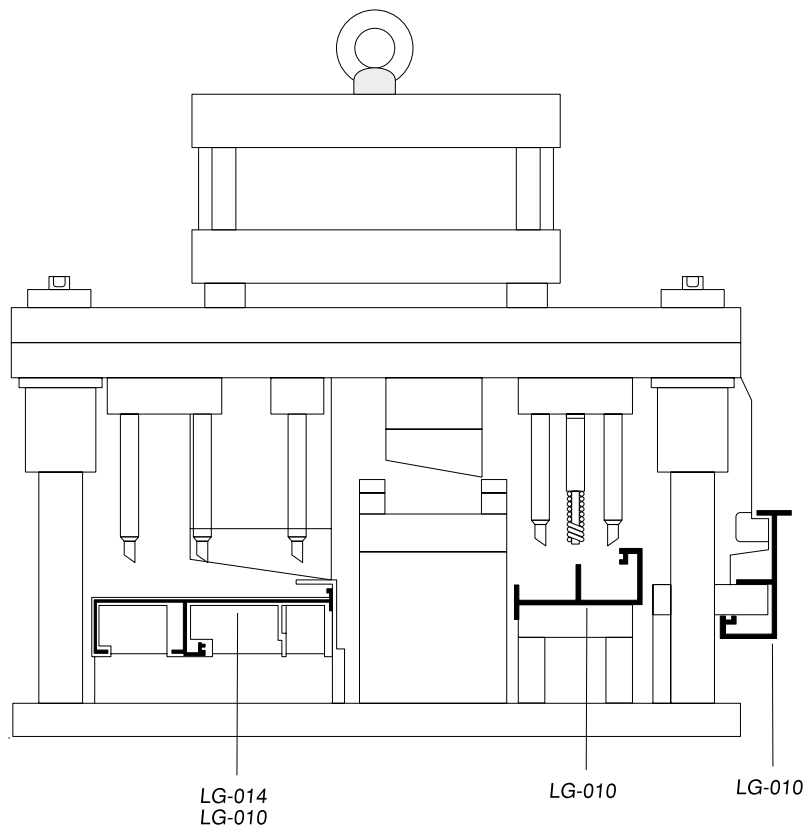
**LG-043**  
 0.930 kg/m



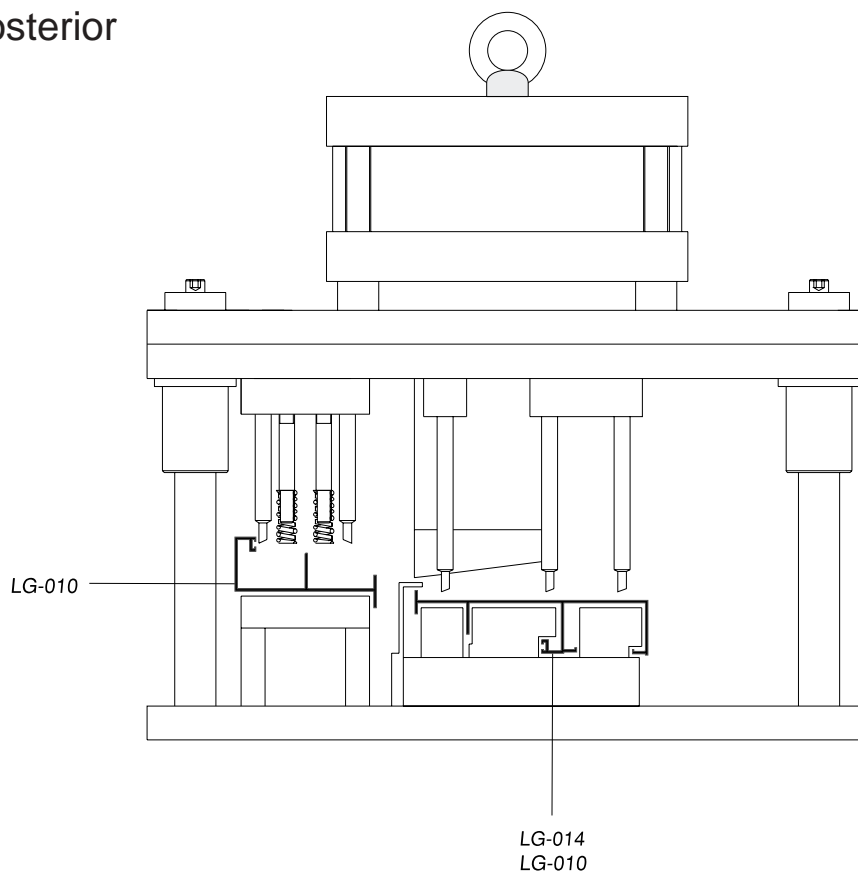
**LG-056**  
 0.664 kg/m



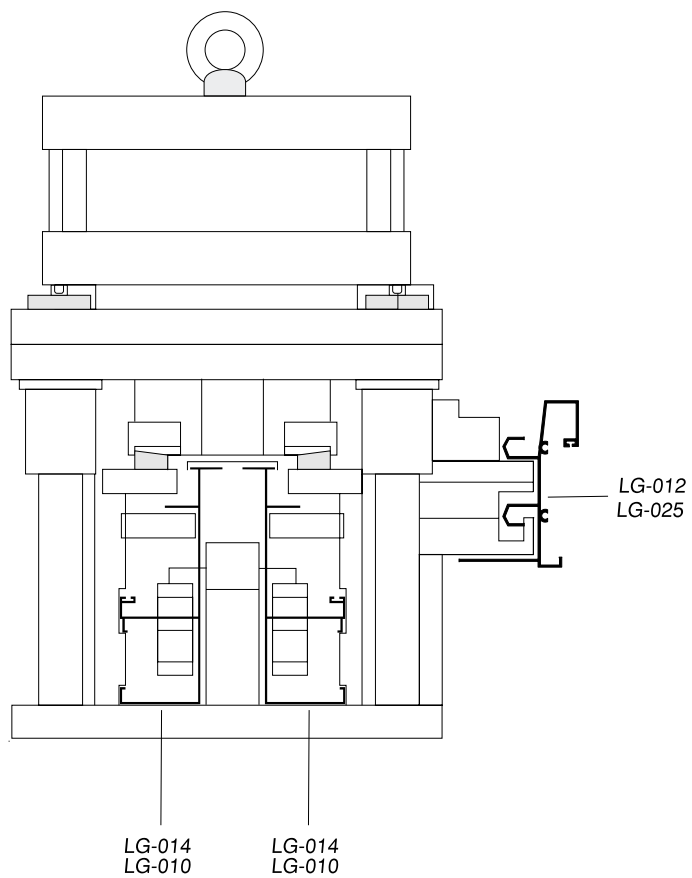
## Vista Frontal



## Vista Posterior

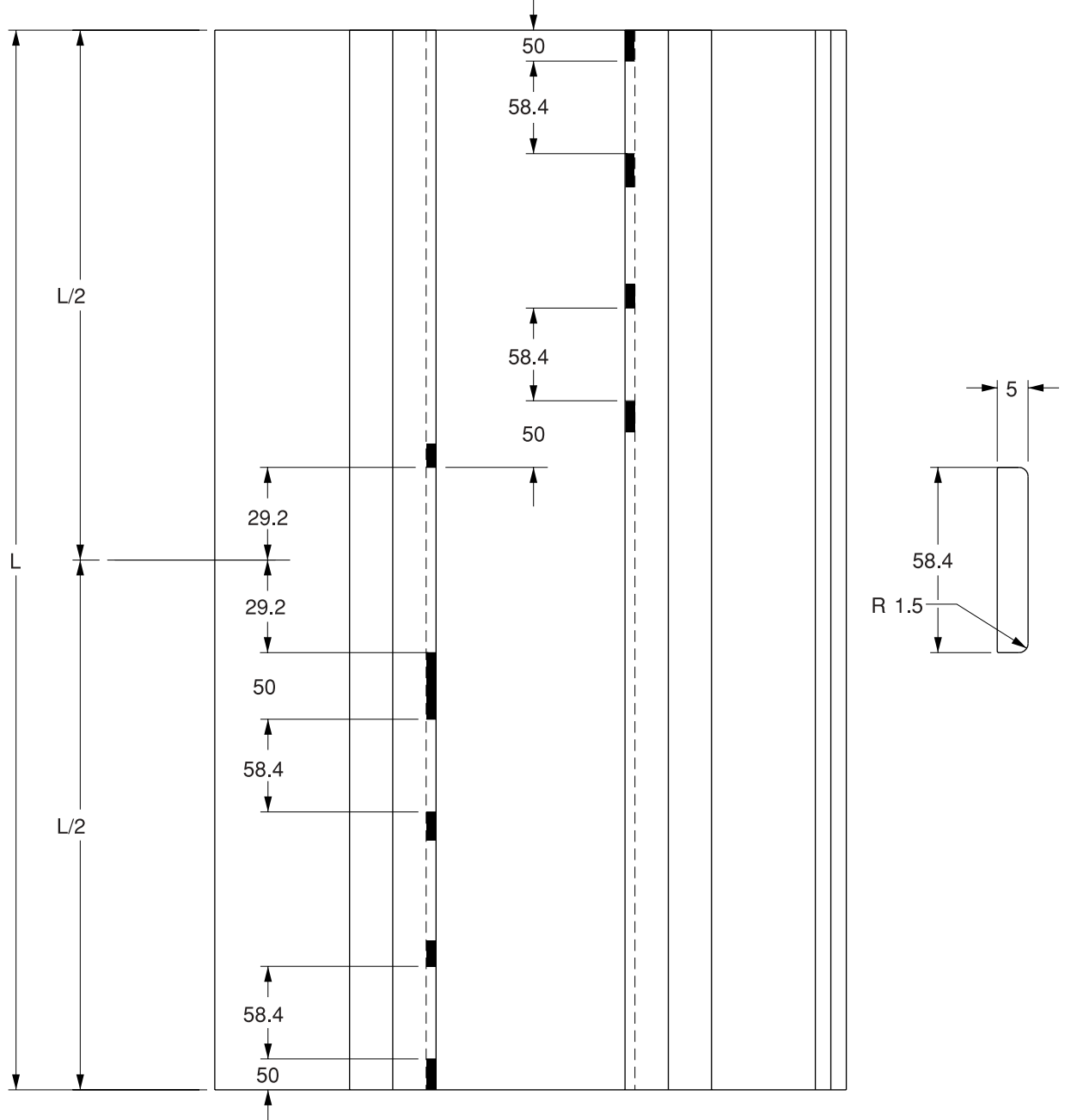
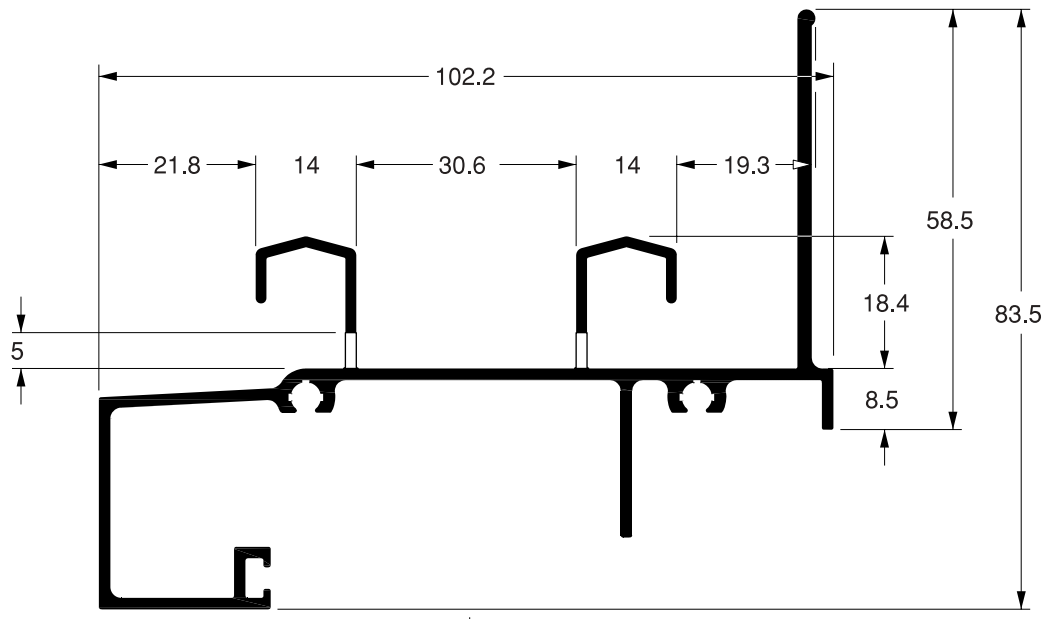


## Vista Lateral Esquerda



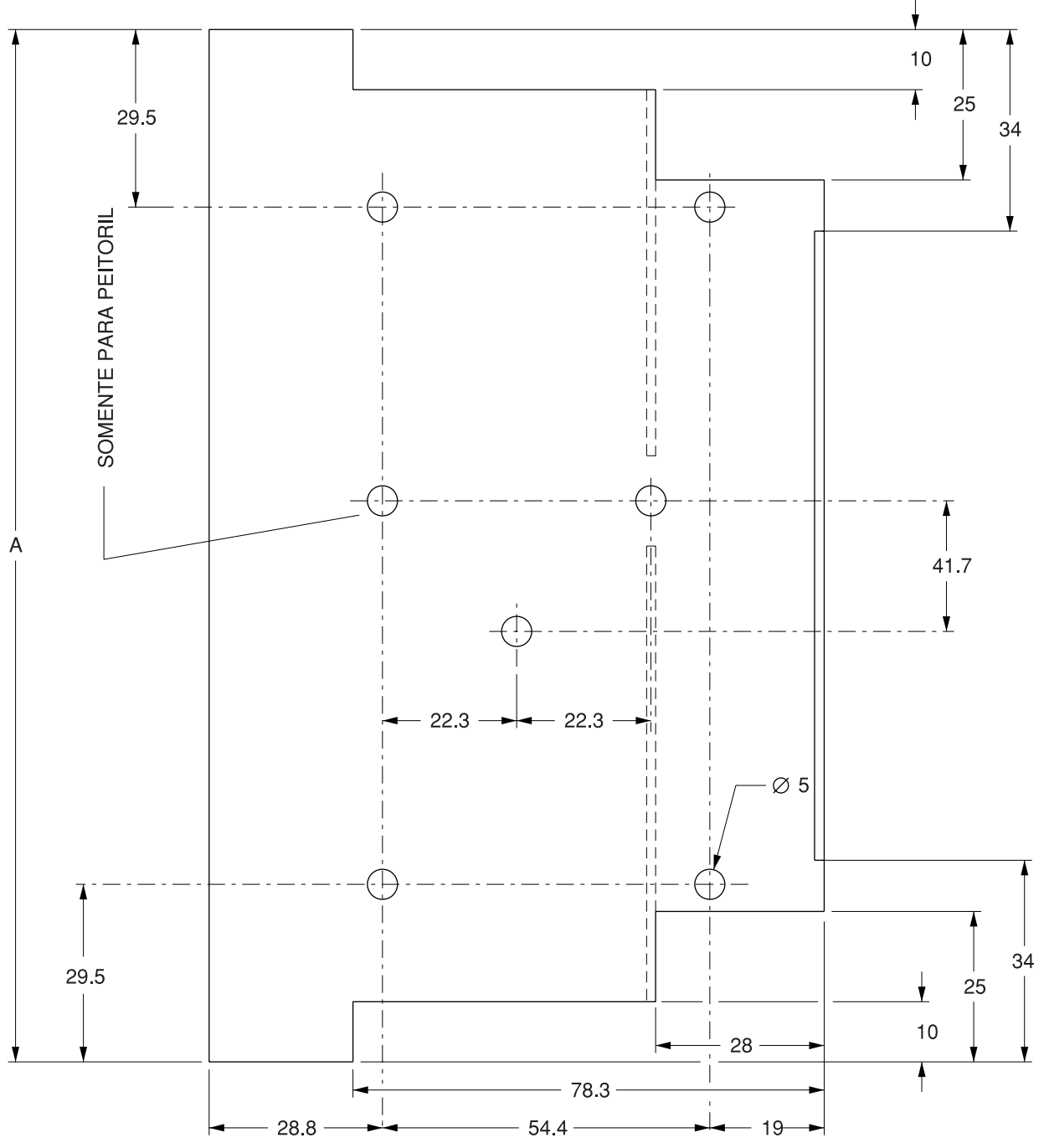
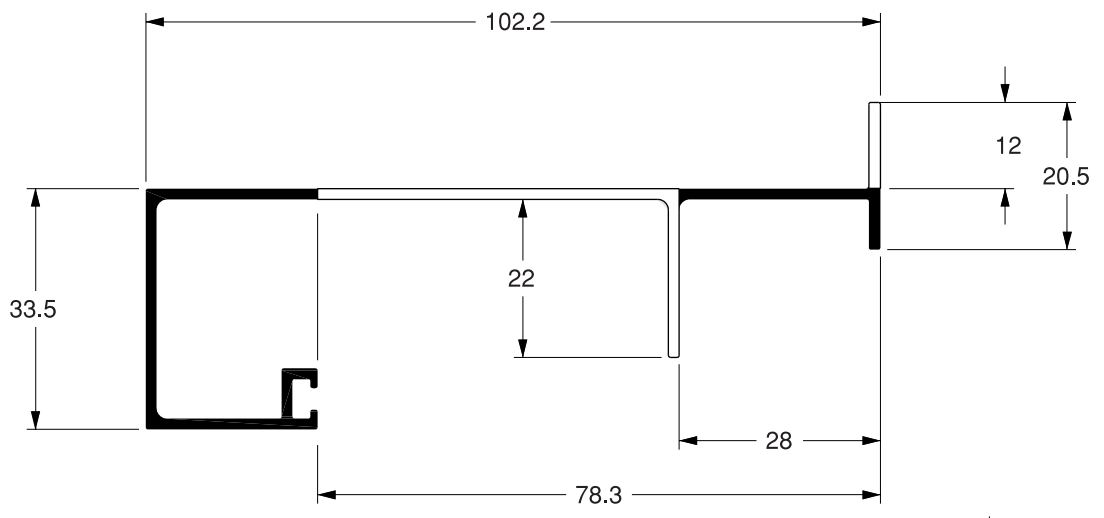
## LG-025

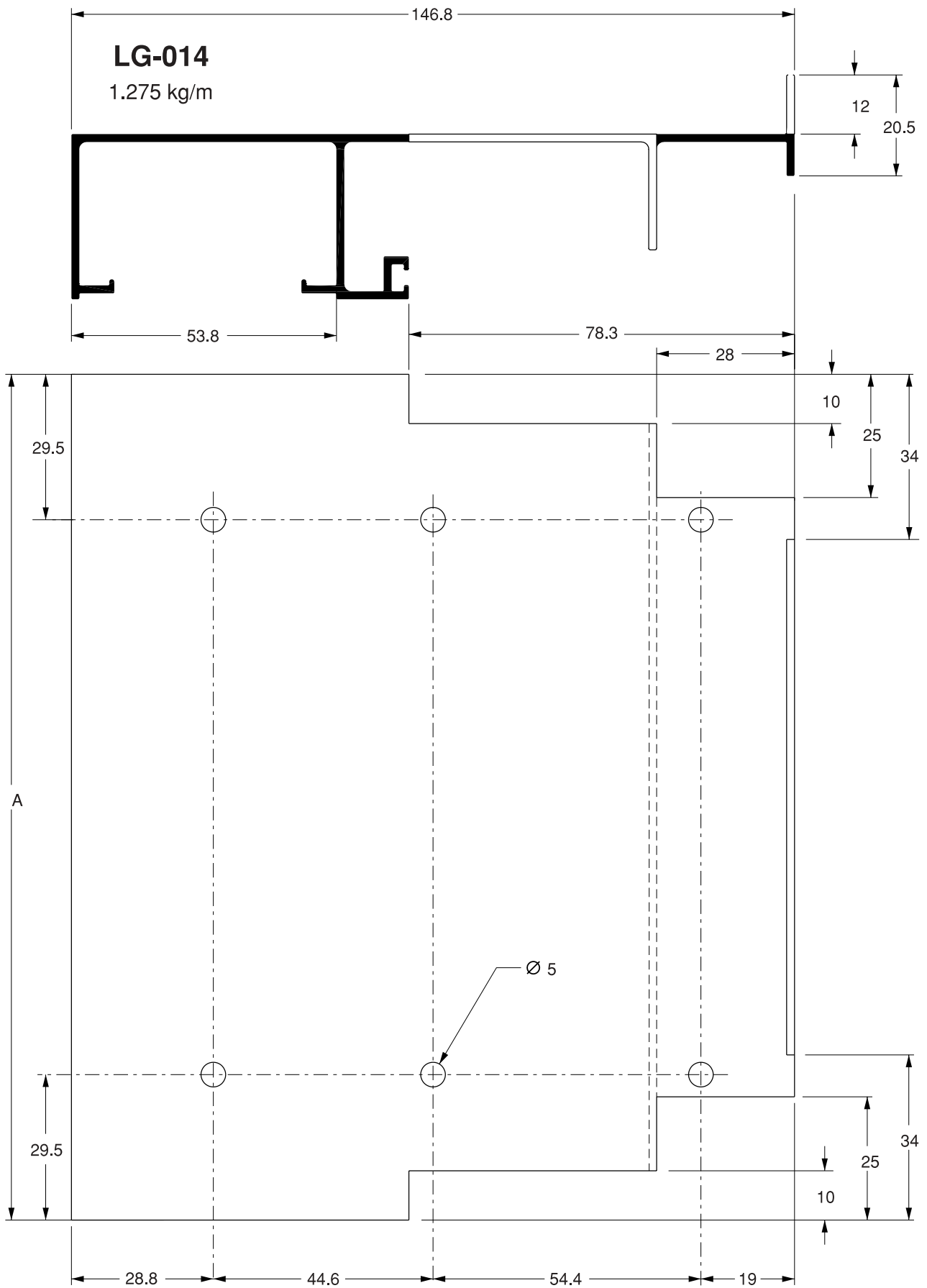
1.533 kg/m



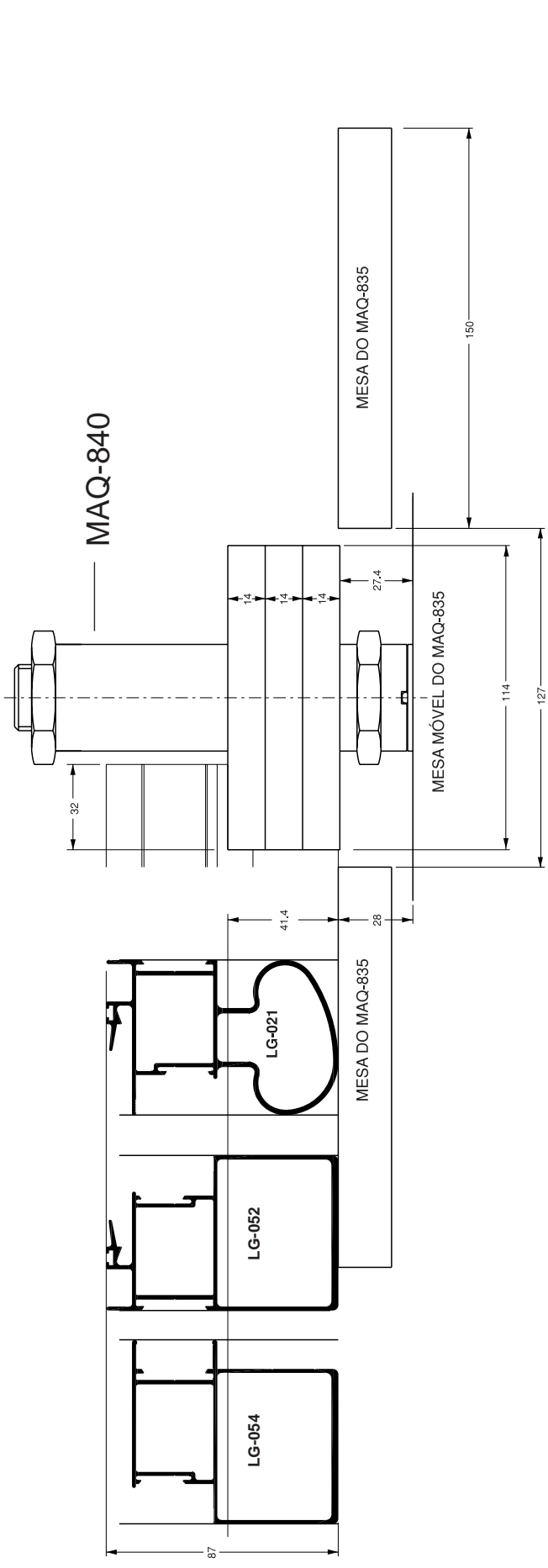
**LG-010**

0.863 kg/m

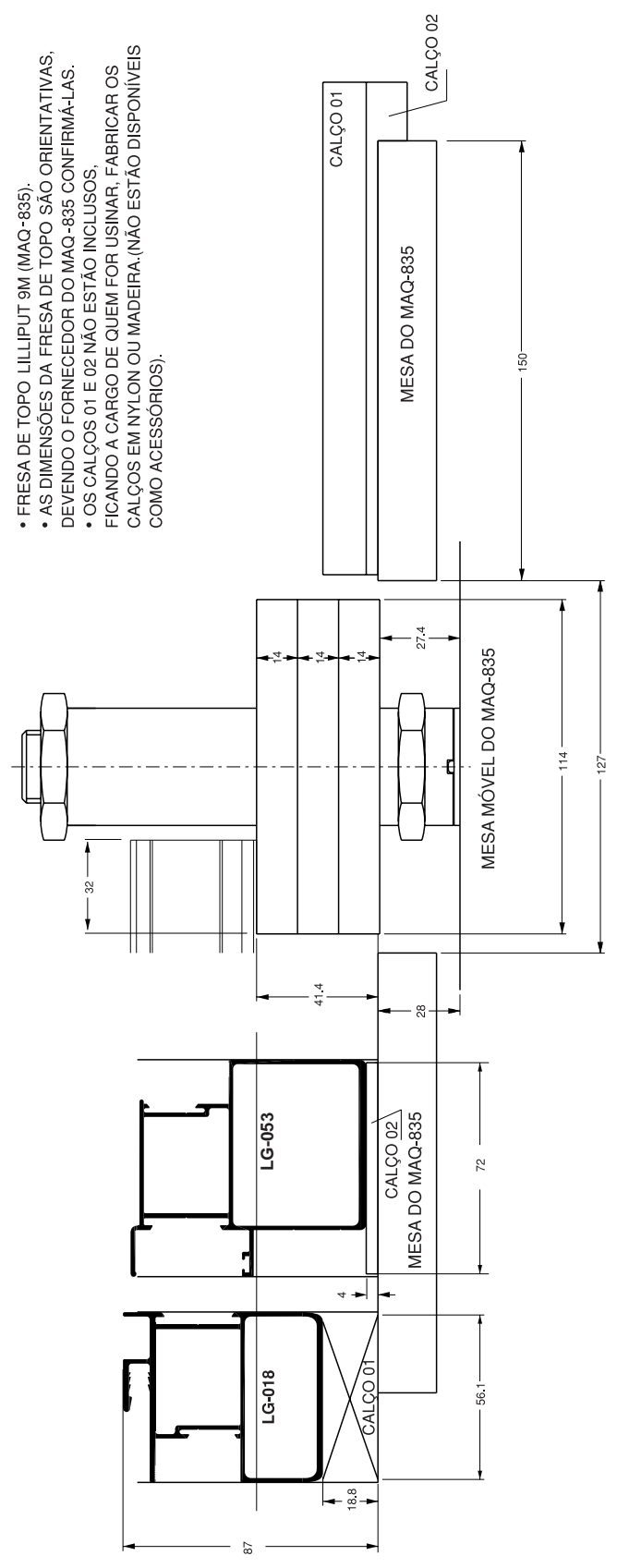




# Fresa - MAQ-840



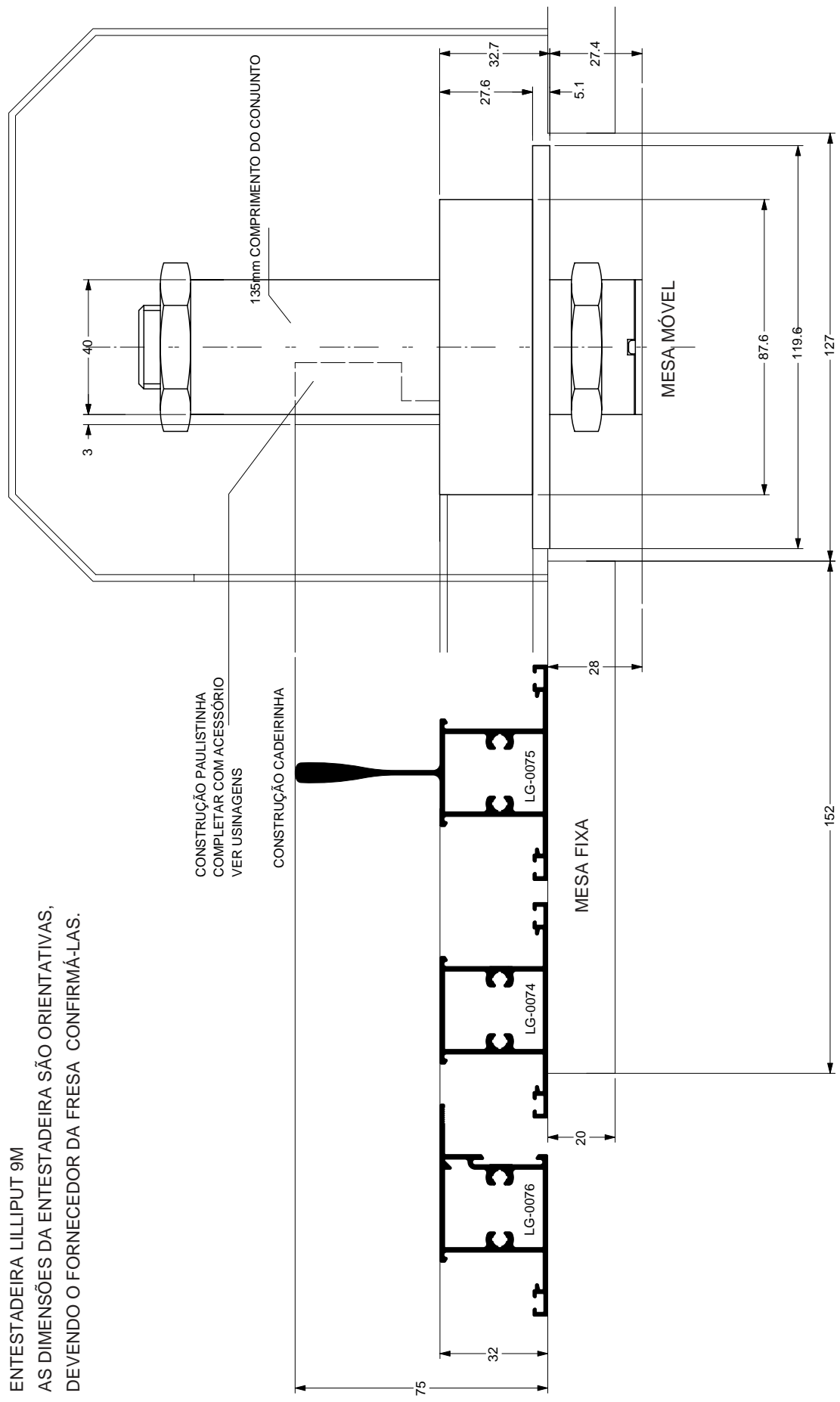
- FRESA DE TOPO LILLIPUT 9M (MAQ-835).
- AS DIMENSÕES DA FRESA DE TOPO SÃO ORIENTATIVAS, DEVENDO O FORNECEDOR DO MAQ-835 CONFIRMÁ-LAS.
- OS CALÇOS 01 E 02 NÃO ESTÃO INCLUSOS, FICANDO A CARGO DE QUEM FOR USINAR, FABRICAR OS CALÇOS EM NYLON OU MADEIRA. (NÃO ESTÃO DISPONÍVEIS COMO ACESSÓRIOS).





# Fresa - MAQ-849

ENTEStADEIRA LILLIPUT 9M  
 AS DIMENSÕES DA ENTEStADEIRA SÃO ORIENTATIVAS,  
 DEVENDO O FORNECEDOR DA FRESA CONFIRMÁ-LAS.

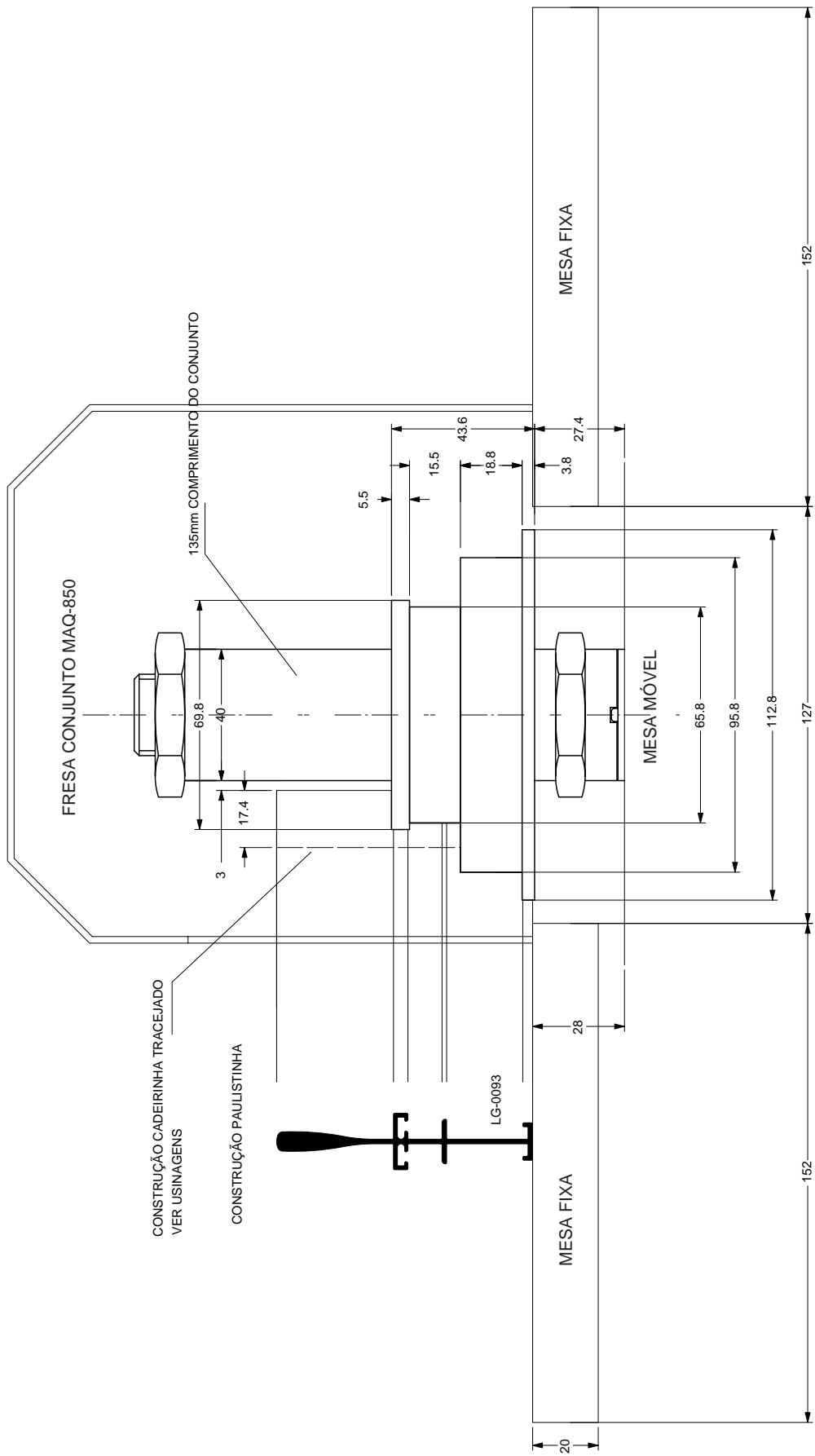


FRESAS E CALÇOS PARA LG-0074/75/76

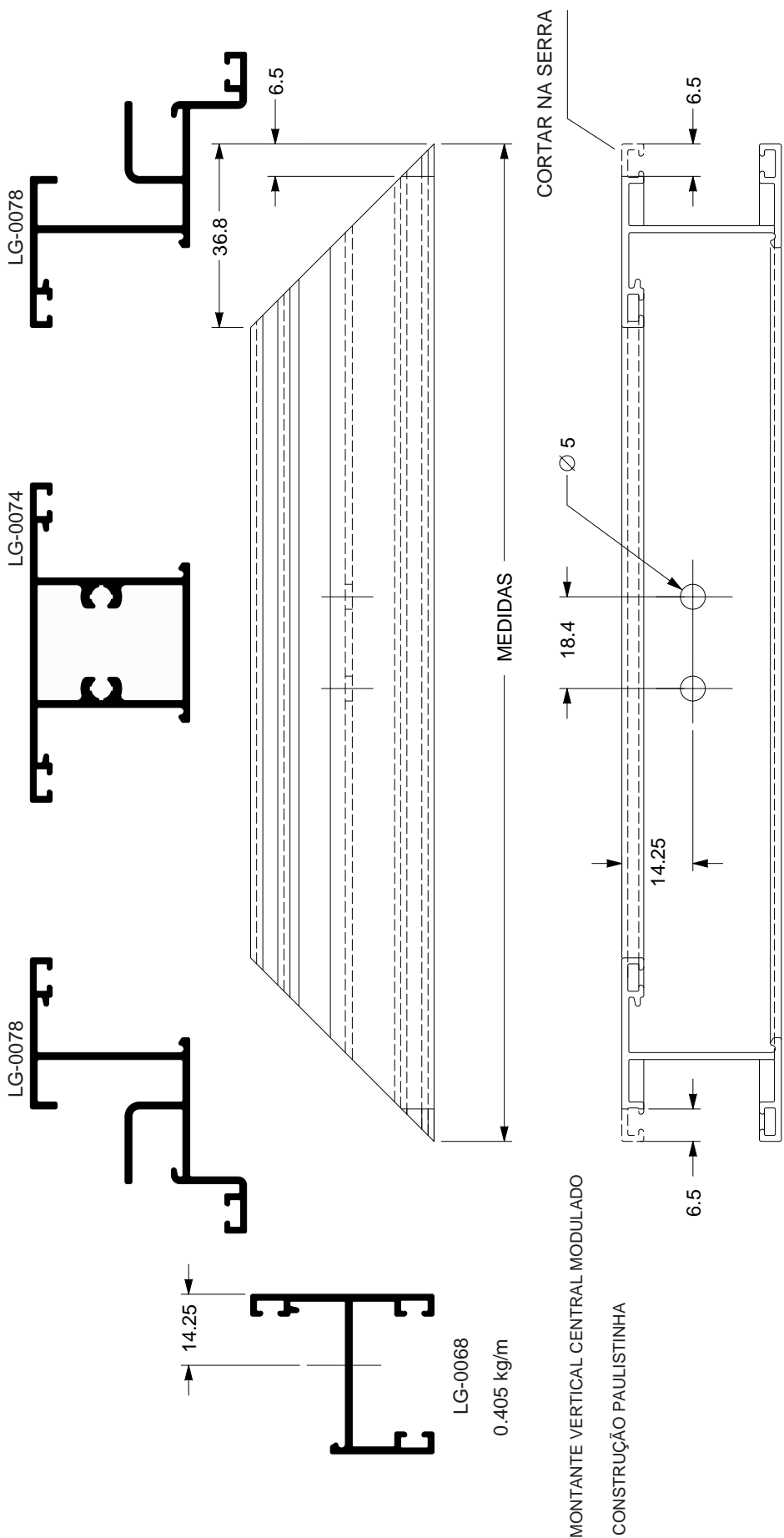


# Fresa - MAQ-850

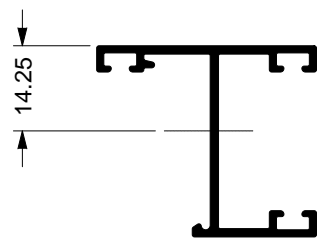
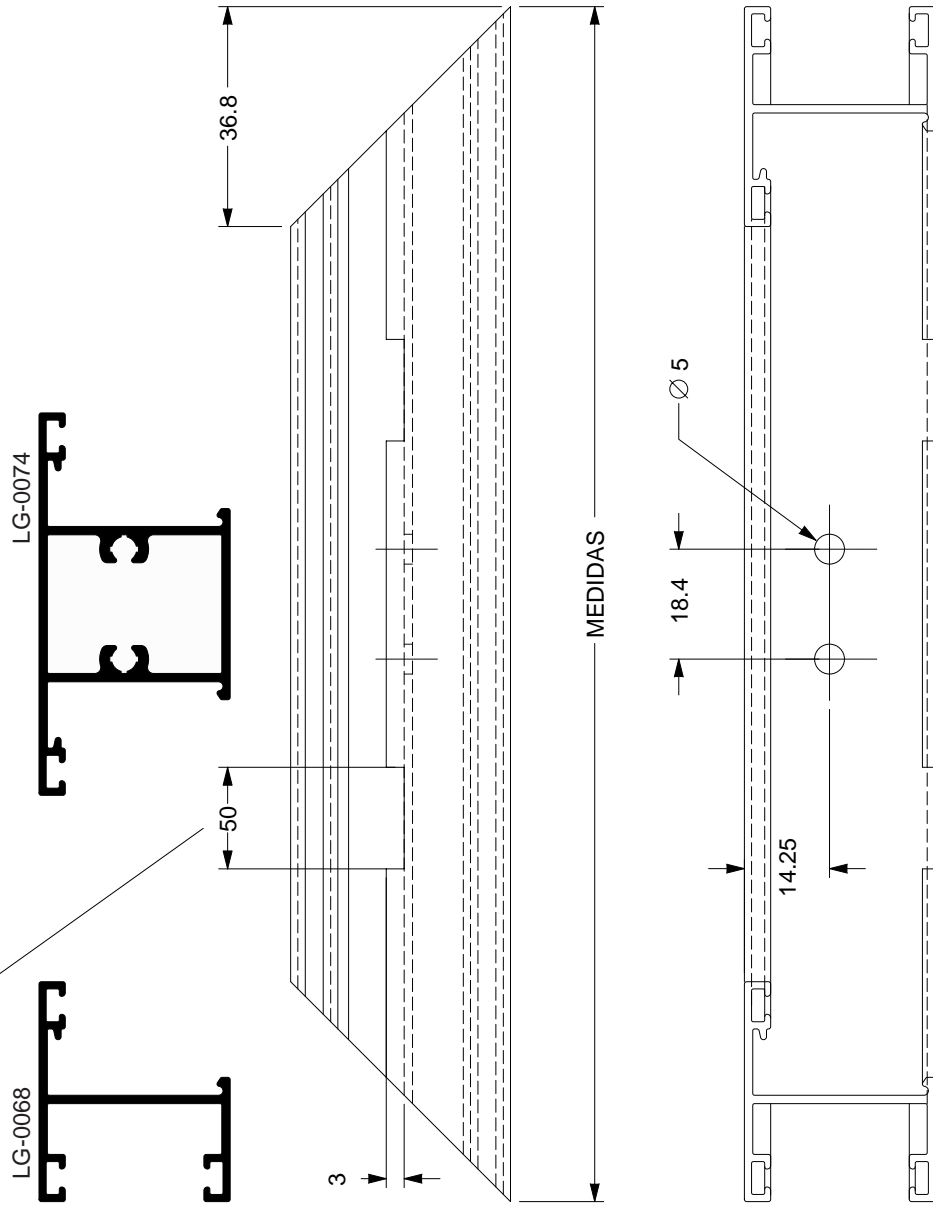
ENTESTADEIRA LILLIPUT 9M  
 AS DIMENSÕES DA ENTESTADEIRA SÃO ORIENTATIVAS,  
 DEVENDO O FORNECEDOR DA FRESA CONFIRMÁ-LAS.



FRESAS E CALÇOS PARA LG-0093

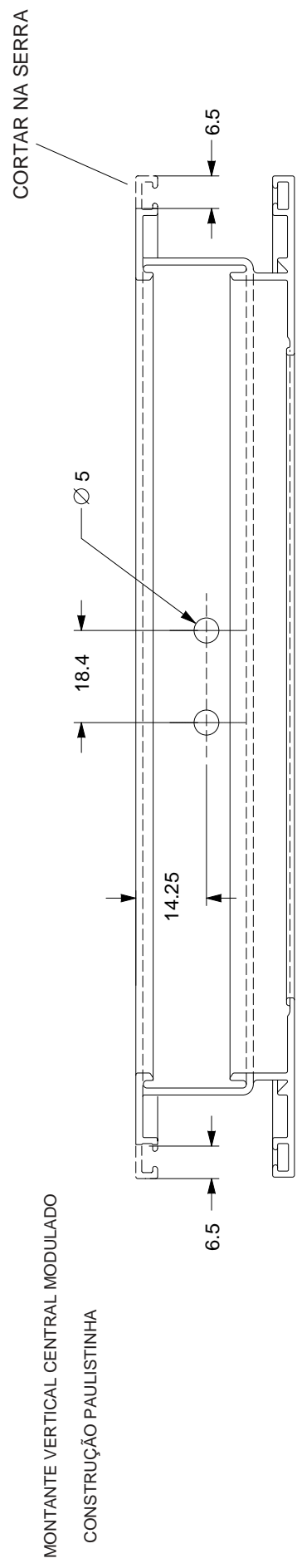
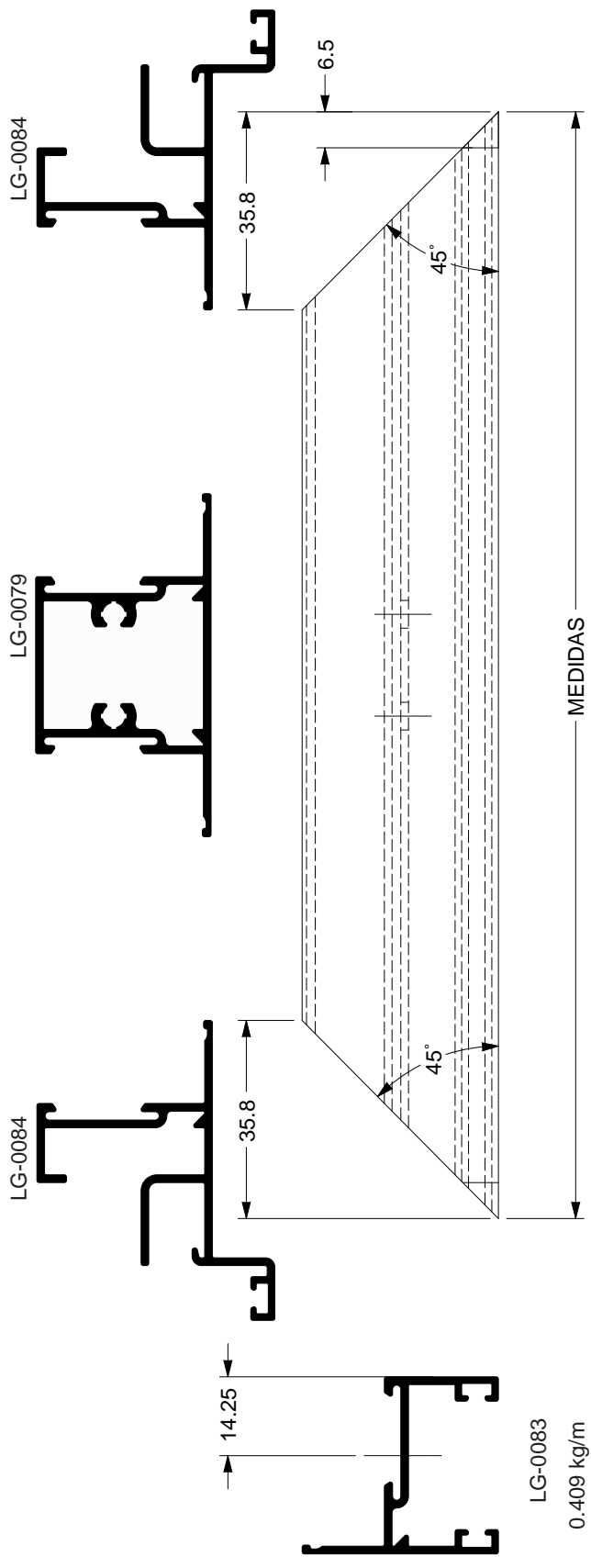


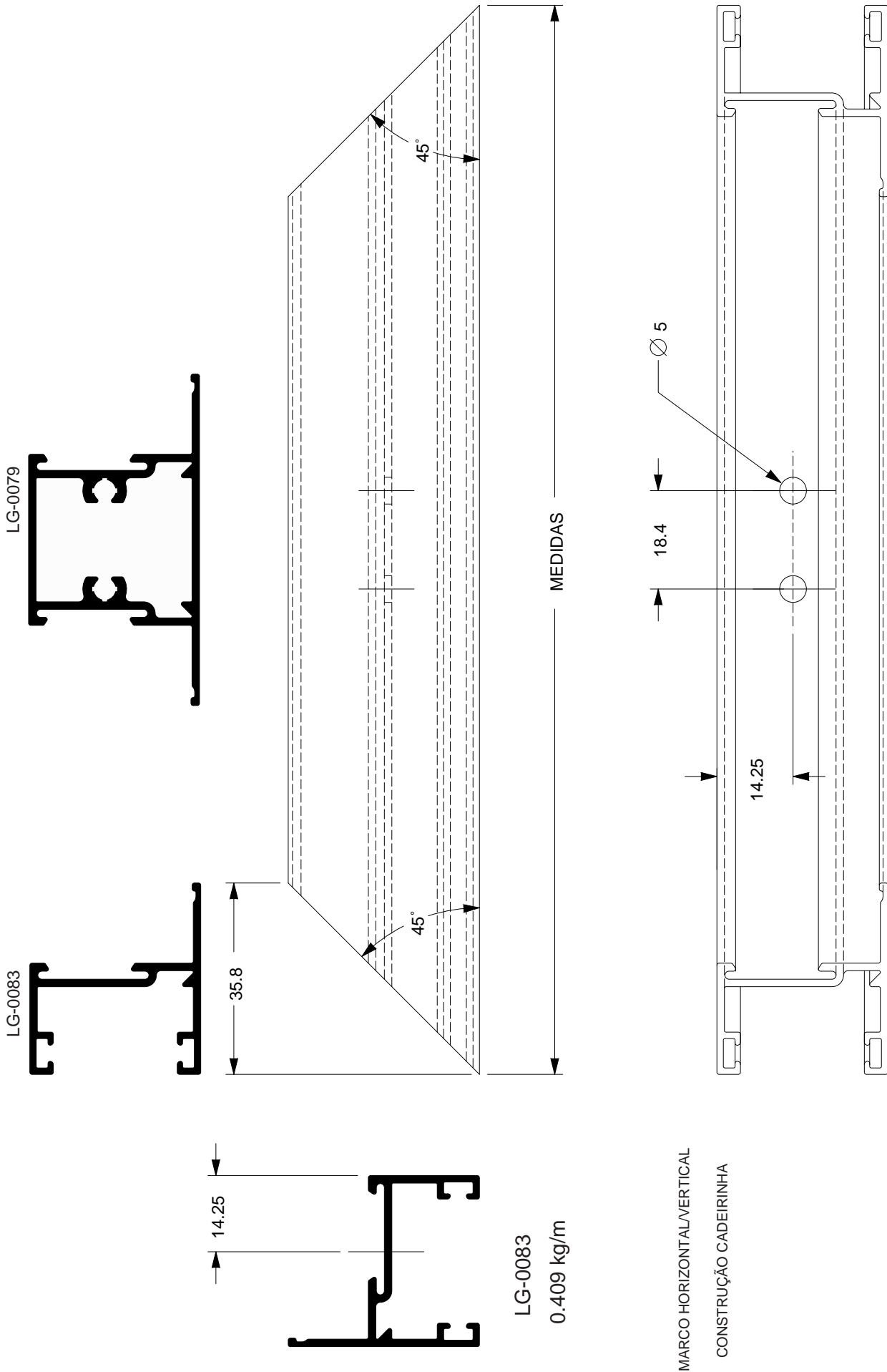
USAR EST-581 NA MESMA USINAGEM DO LG-0056 (SI-0319)  
 RASGOS DE 50 x 3 mm SOMENTE NO MARCO INFERIOR



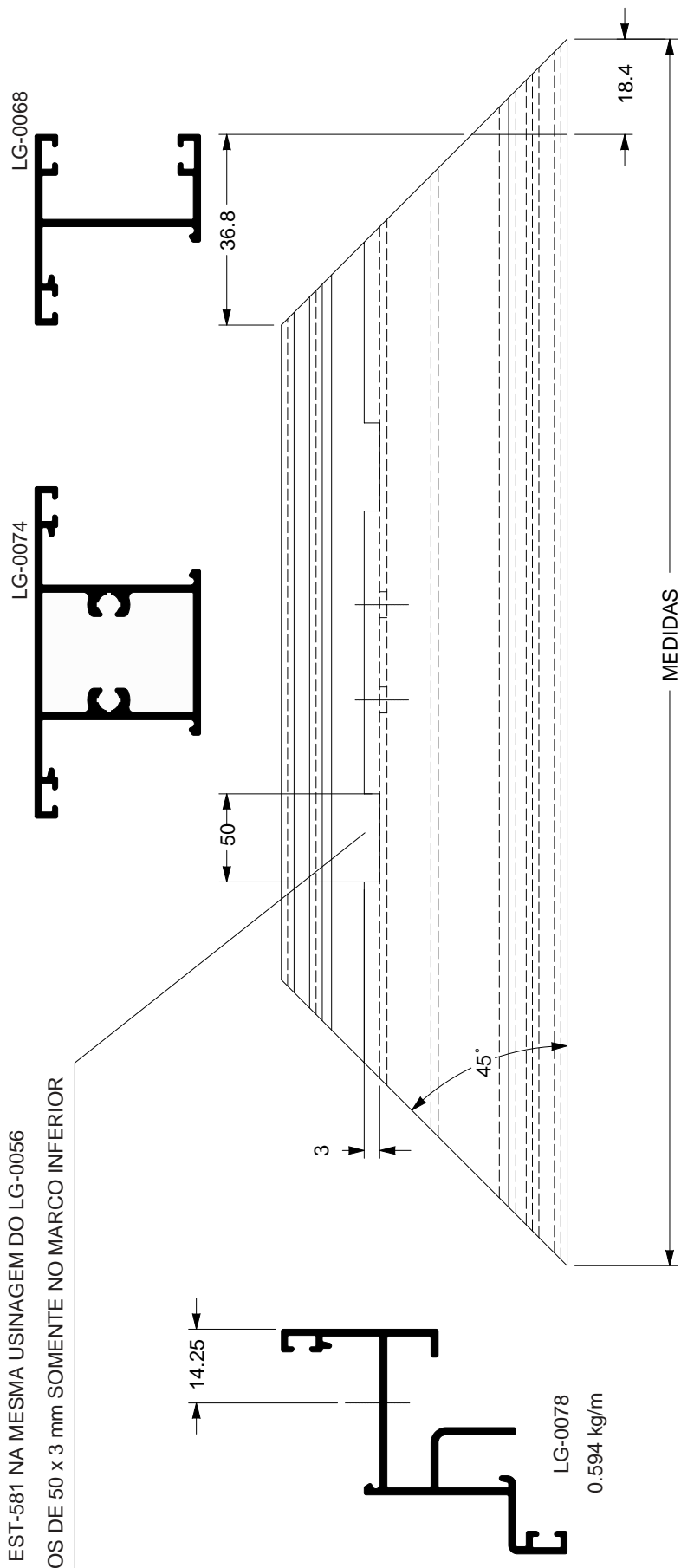
LG-0068  
 0.405 kg/m

MARCO VERTICAL/HORIZONTAL  
 CONSTRUÇÃO CADEIRINHA

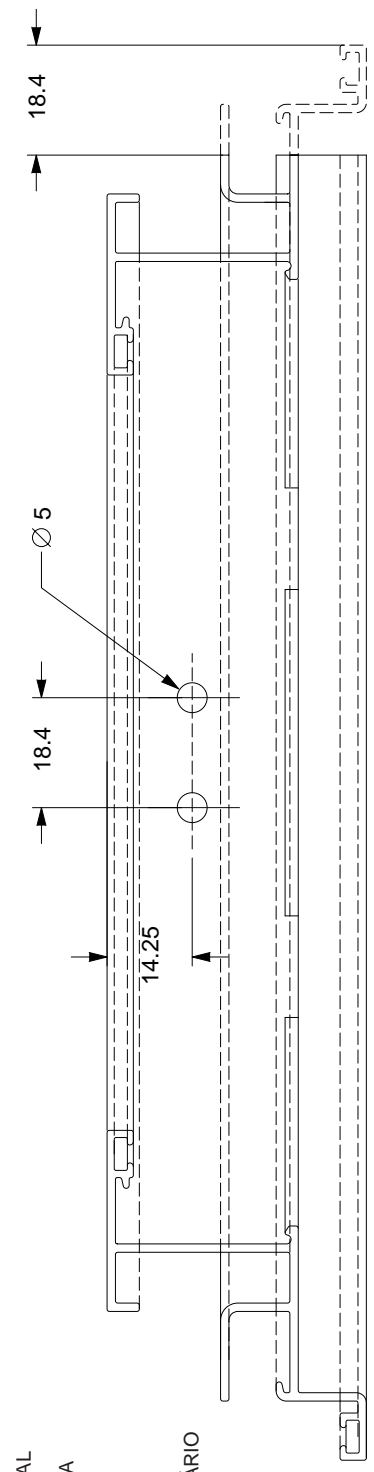




USAR EST-581 NA MESMA USINAGEM DO LG-0056  
 RASGOS DE 50 x 3 mm SOMENTE NO MARCO INFERIOR



MARCO VERTICAL/HORIZONTAL  
 CONSTRUÇÃO PAULISTINA  
 MÓDULOS LATERAIS  
 USINAGEM CONFORME E CONTRÁRIO



USINAGEM LATERAL

USINAGEM CENTRAL  
 MODULADO

LG-0083

LG-0079

LG-0084

14.25

35.8

18.4

MEDIDAS

18.4

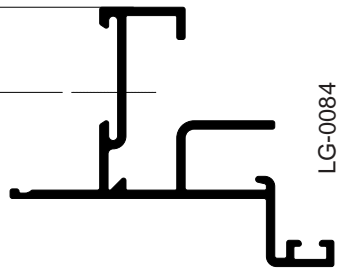
Ø 5

18.4

USINAGEM CONFORME E CONTRÁRIO

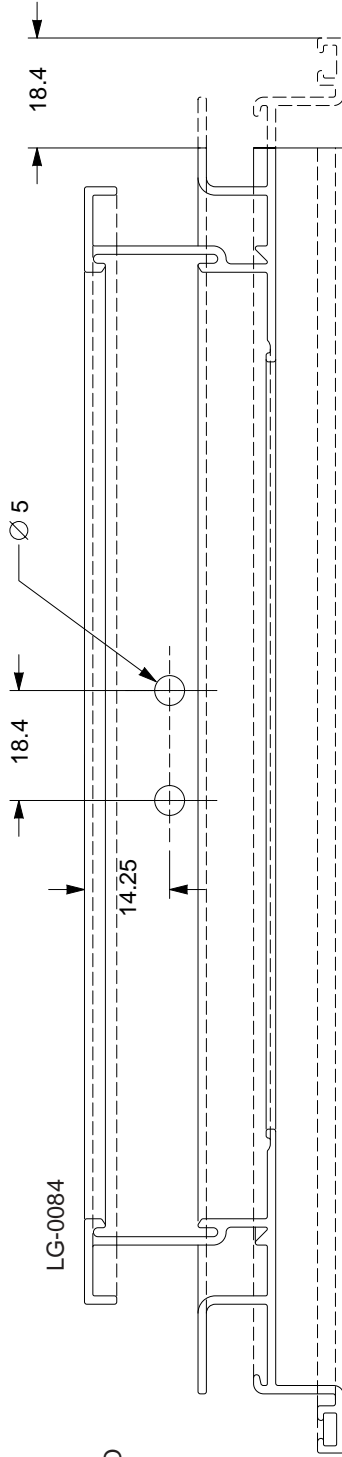
USINAGEM CENTRAL  
 MODULADO

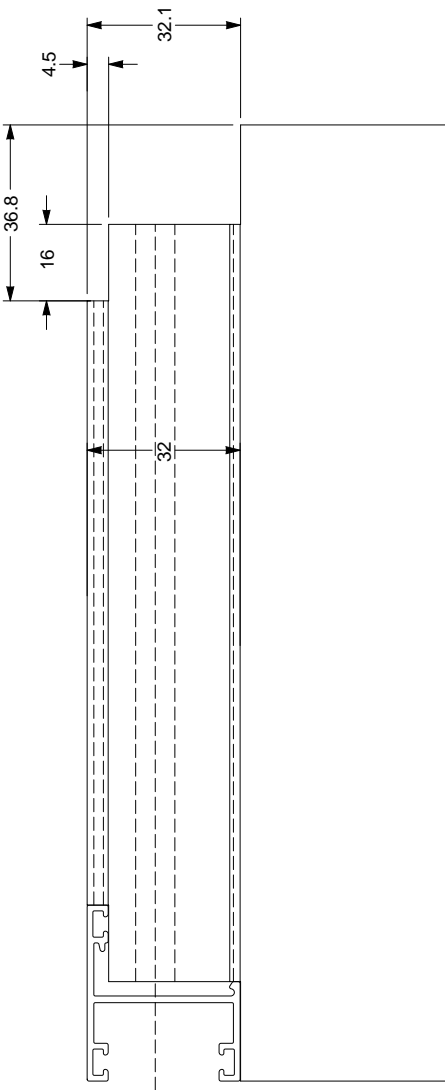
USINAGEM LATERAL



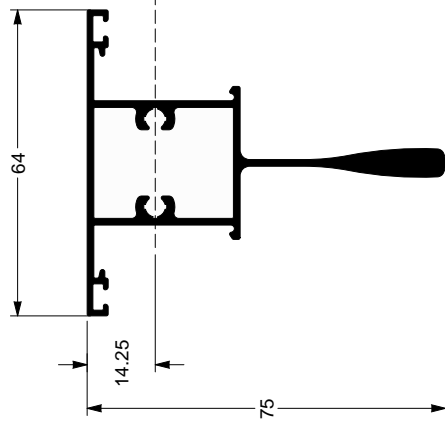
LG-0084  
 0.597 kg/m

MARCO HORIZONTAL  
 SUPERIOR/INFERIOR  
 MÓDULOS LATERAIS



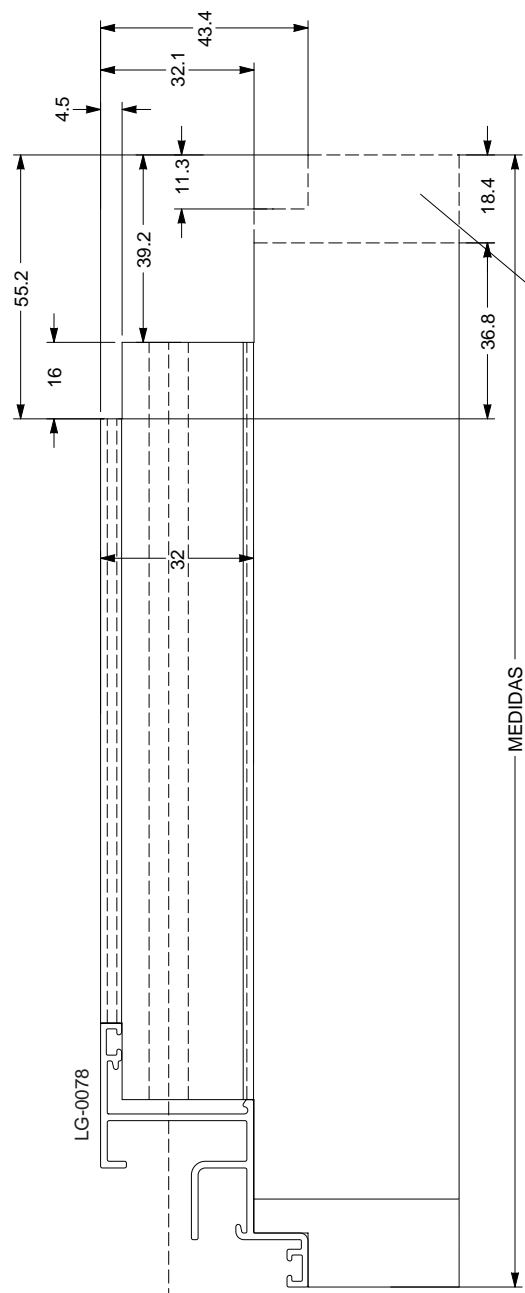


VER MAQ-849 pag. 131

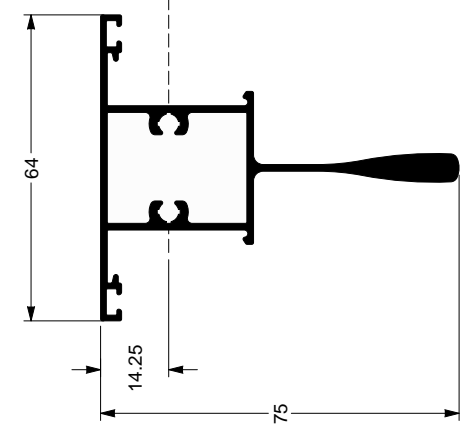


LG-0075  
 1.153 kg/m

CONSTRUÇÃO CADEIRINHA



VER MAQ-849 pag. 135  
 DEVERÁ SER COMPLETADO  
 COM ACESSÓRIO EM NYLON NYL-449

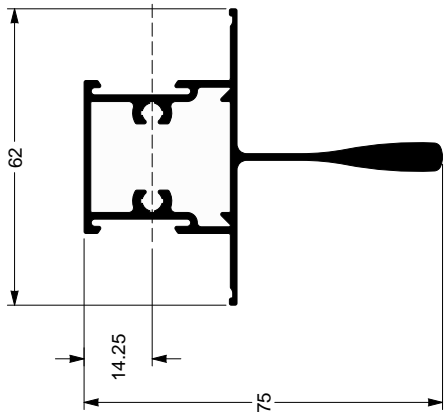
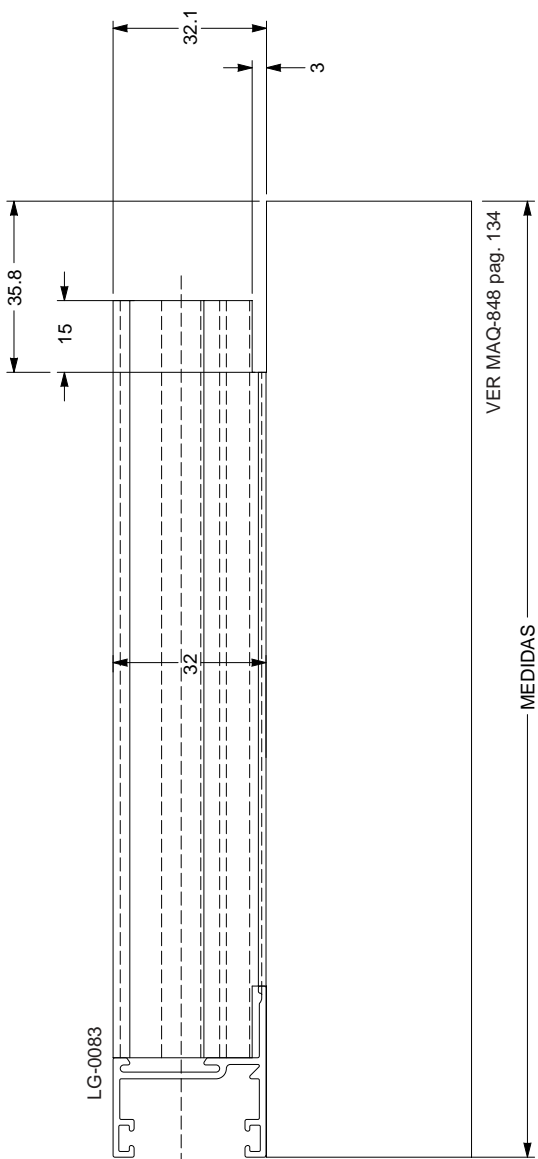


LG-0075  
 1.153 kg/m

CONSTRUÇÃO PAULISTINHA

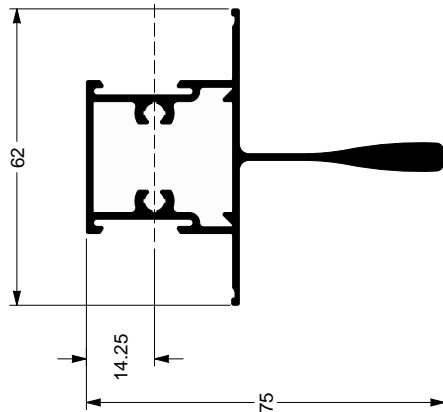
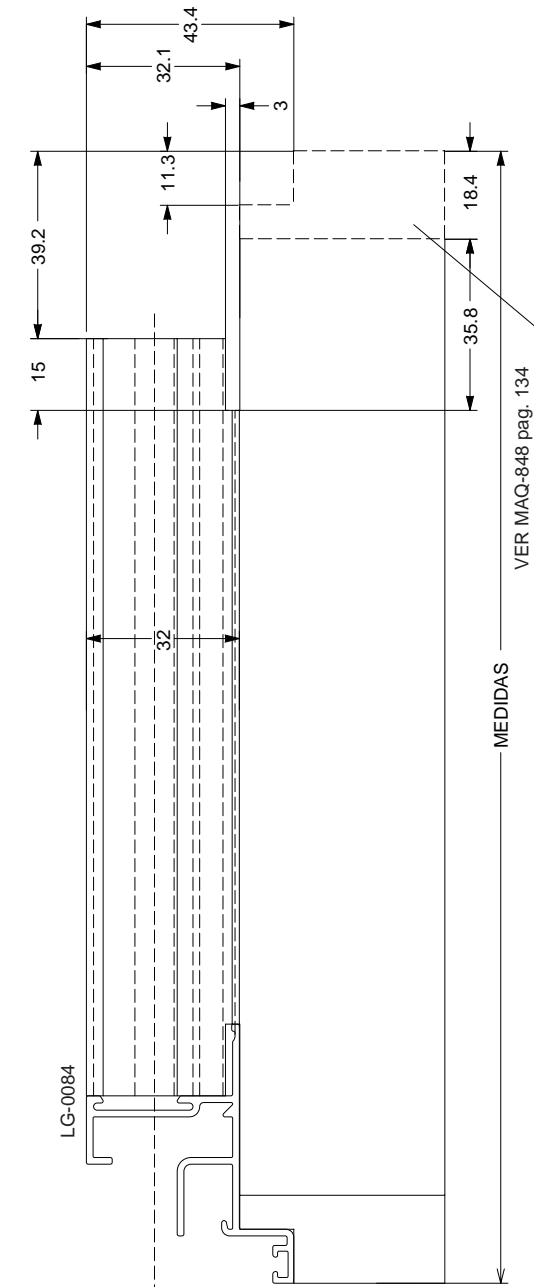
MEDIDAS





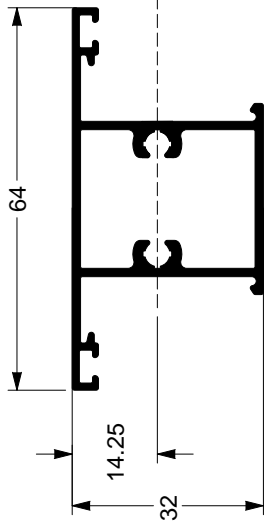
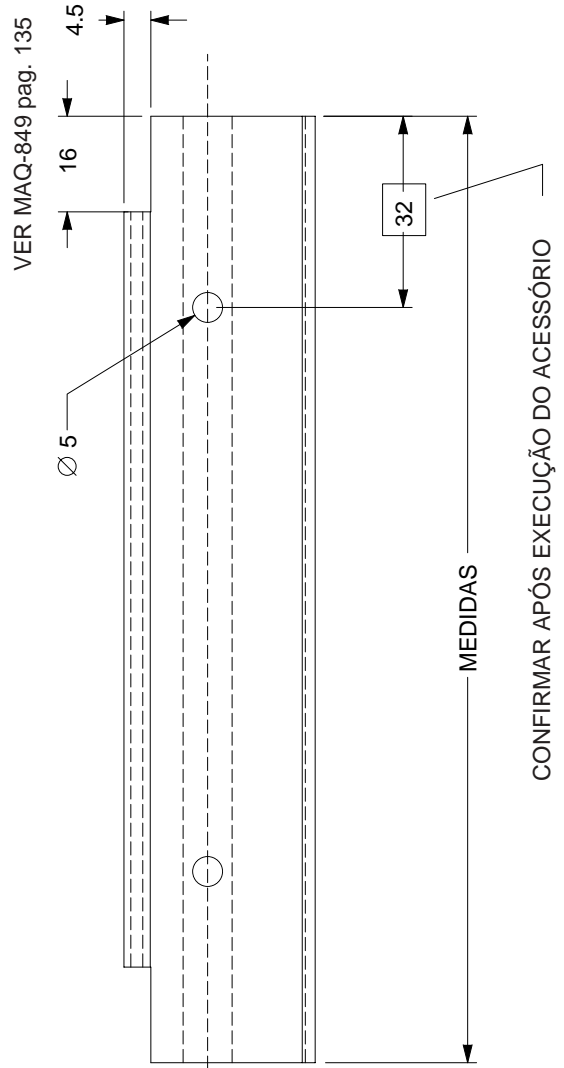
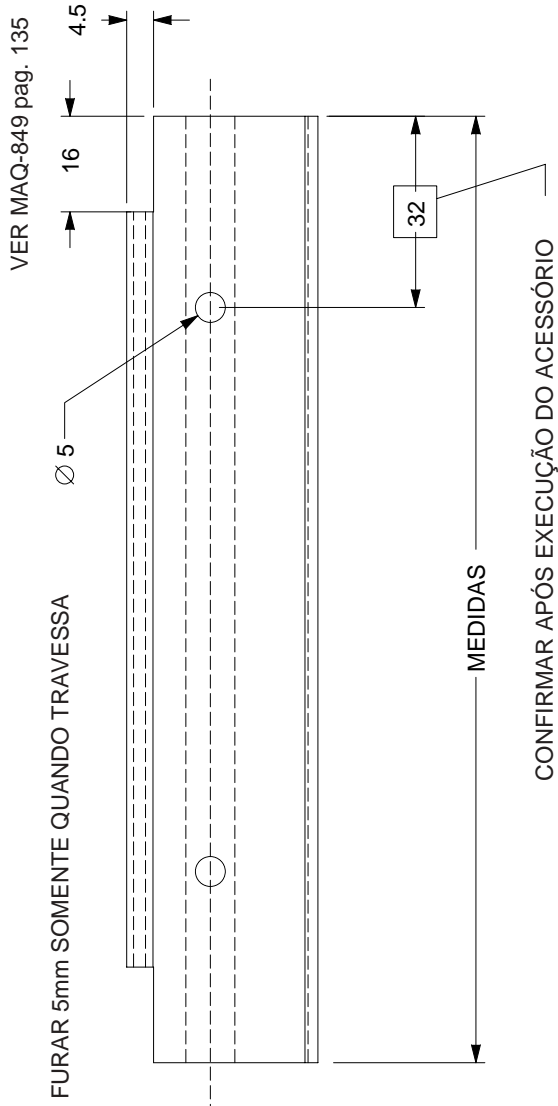
LG-0080  
 1.160 kg/m

CONSTRUÇÃO CADEIRINHA

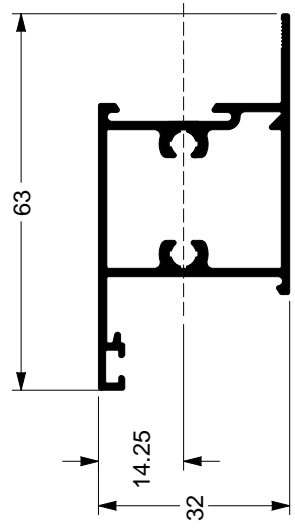


LG-0080  
 1.160 kg/m

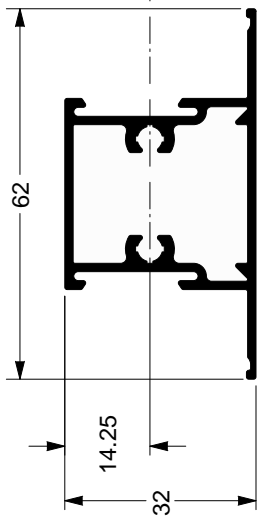
CONSTRUÇÃO PAULISTINHA



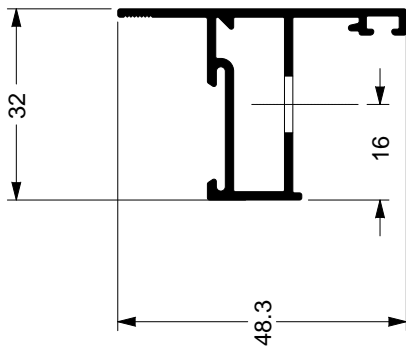
LG-0074  
 0.760 kg/m



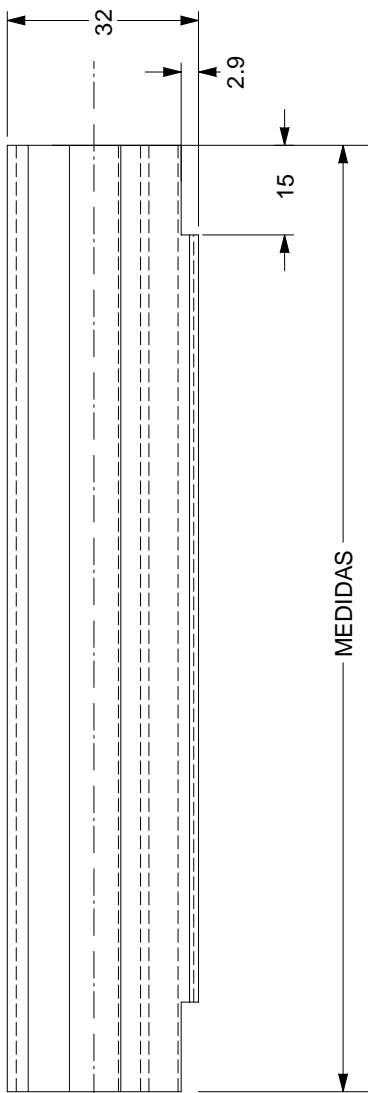
LG-0076  
 0.765 kg/m



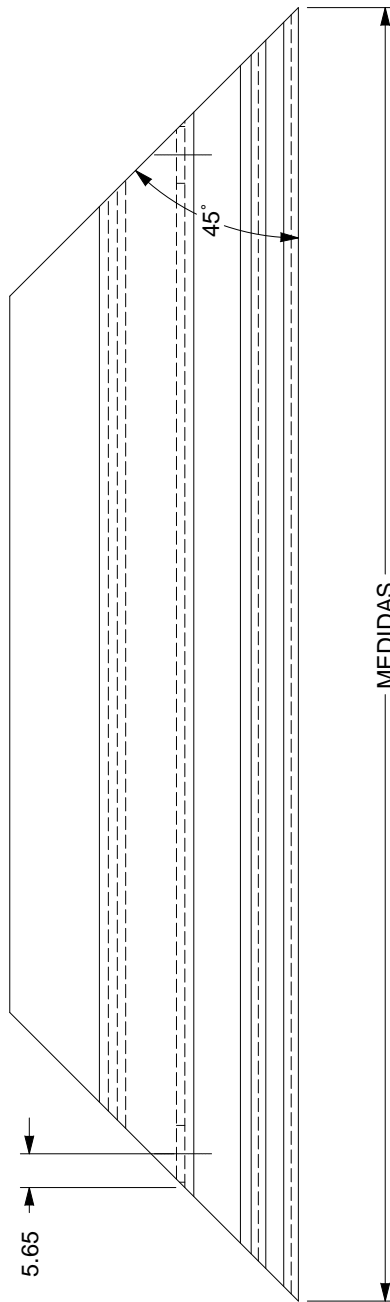
LG-0079  
 0.770 kg/m



LG-0085  
 0.529 kg/m

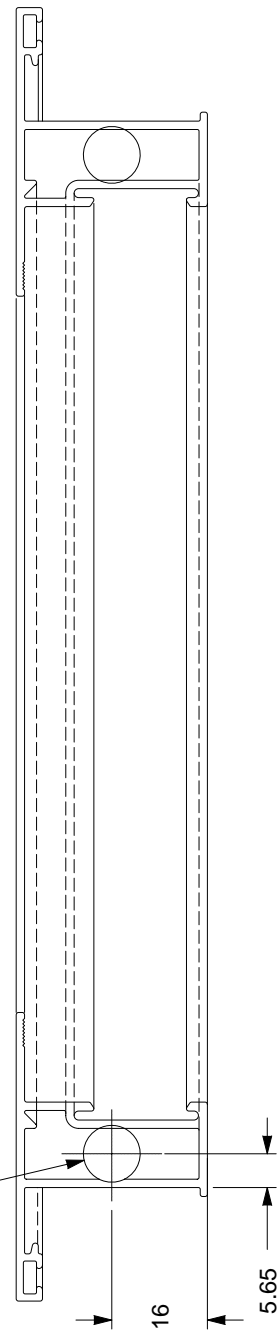


MEDIDAS



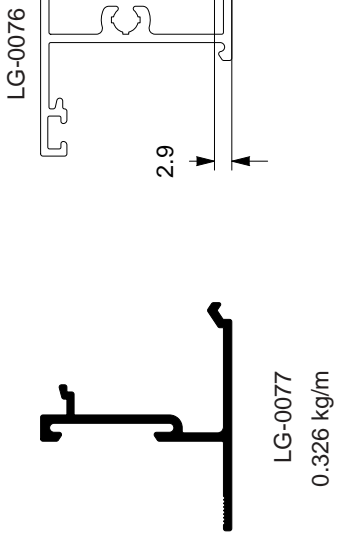
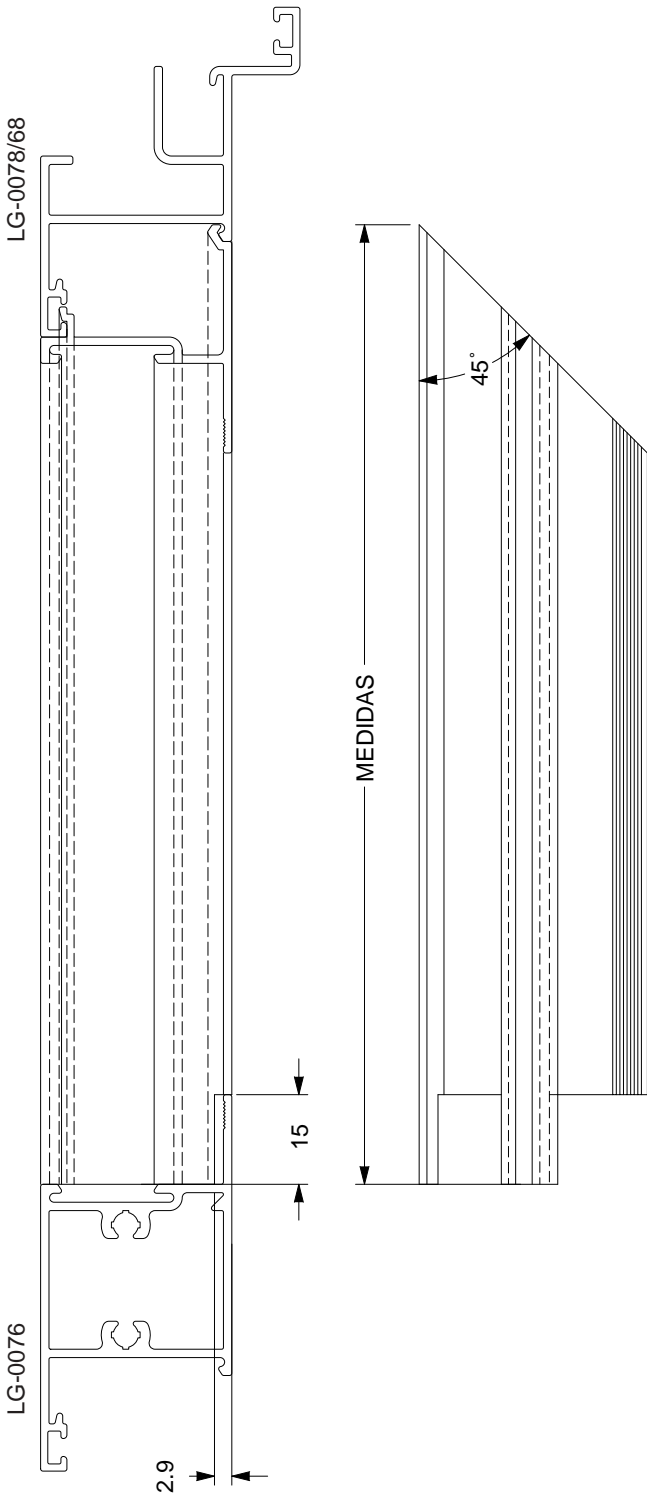
MEDIDAS

Ø 9.5 APÓS FECHAR QUADRO USAR NYL-042



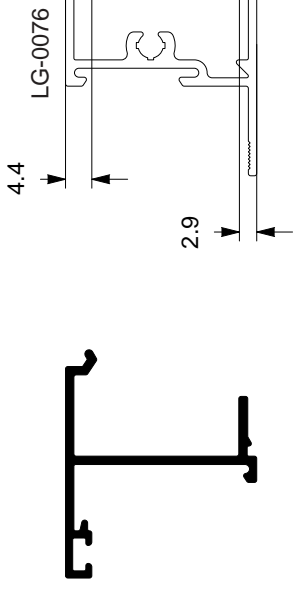
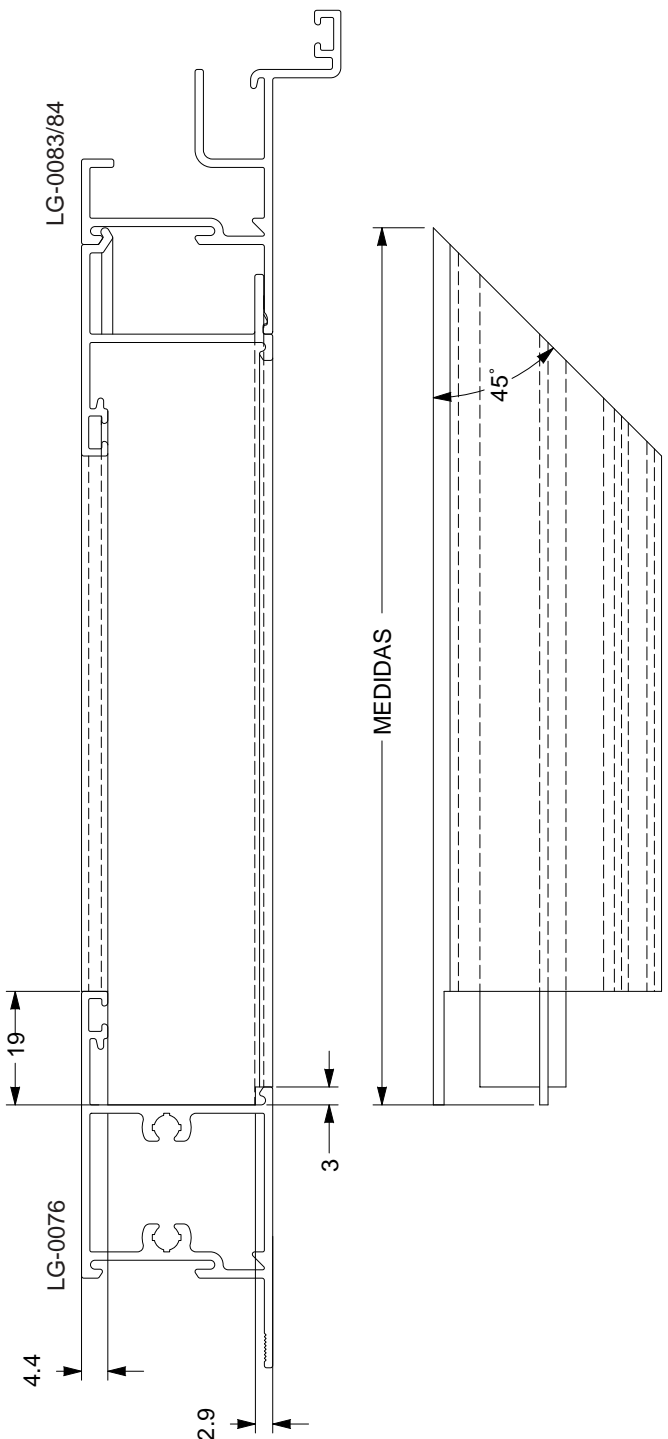
FAZER FUIROS PARA BATER CUNHA  
 SOMENTE NAS TRAVESSAS

NOS CASOS DOS FECHOS, VERIFICAR  
 FORNECEDOR PARA RESOLVER USINAGEM



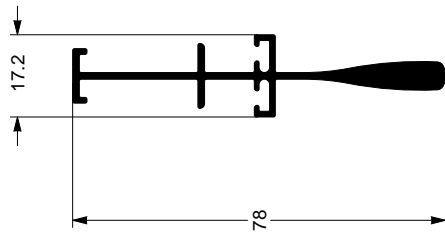
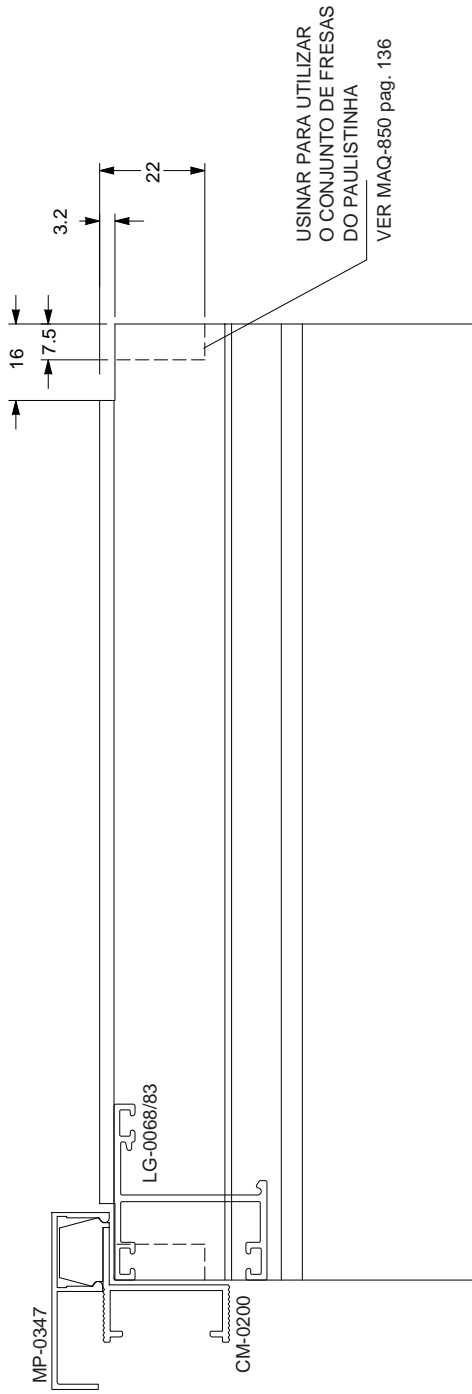
LG-0077  
 0.326 kg/m

CONFORME E CONTRARIO



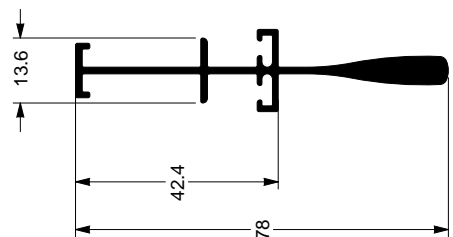
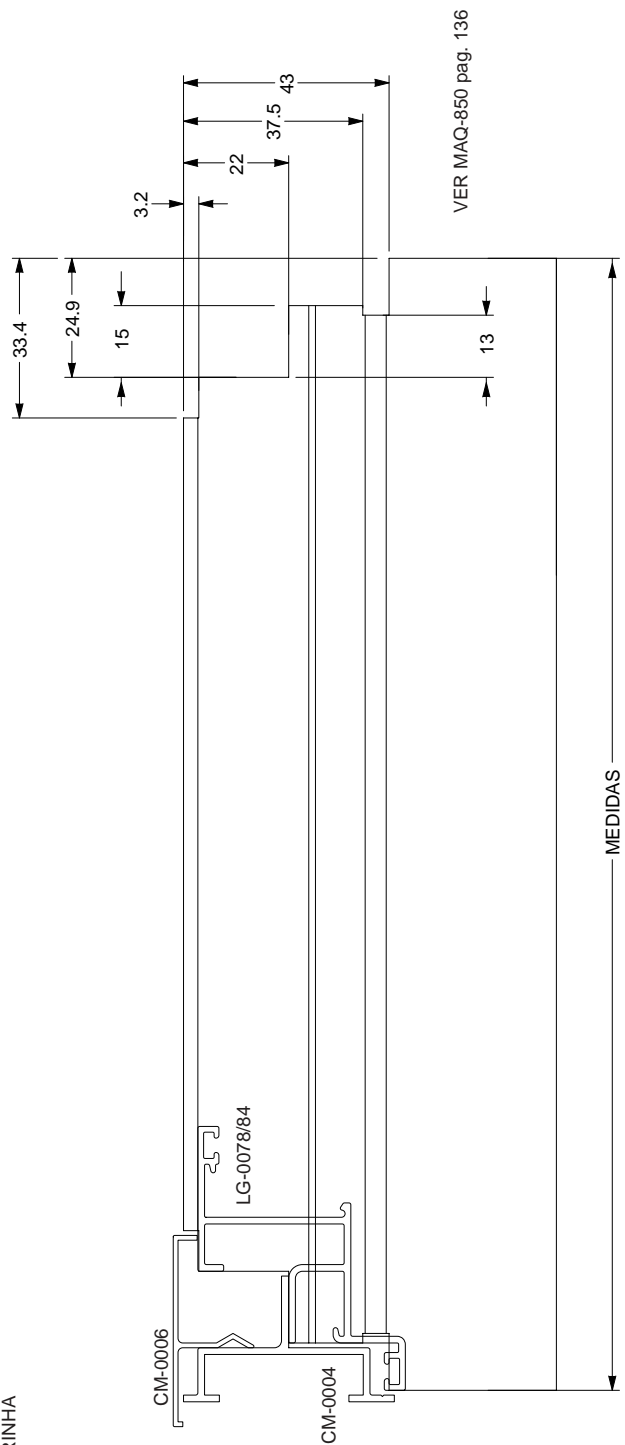
LG-0082  
 0.356 kg/m

CONFORME E CONTRARIO



LG-0093  
 0.706 kg/m

CONSTRUÇÃO CADEIRINHA



LG-0093  
 0.706 kg/m

CONSTRUÇÃO PAULISTINHA

MEDIDAS



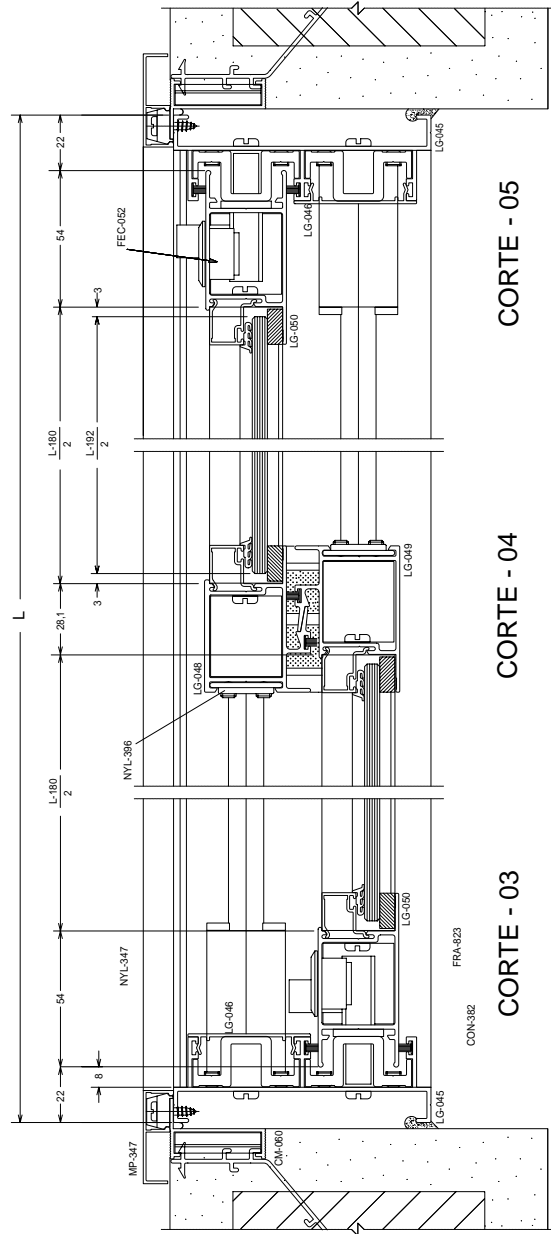
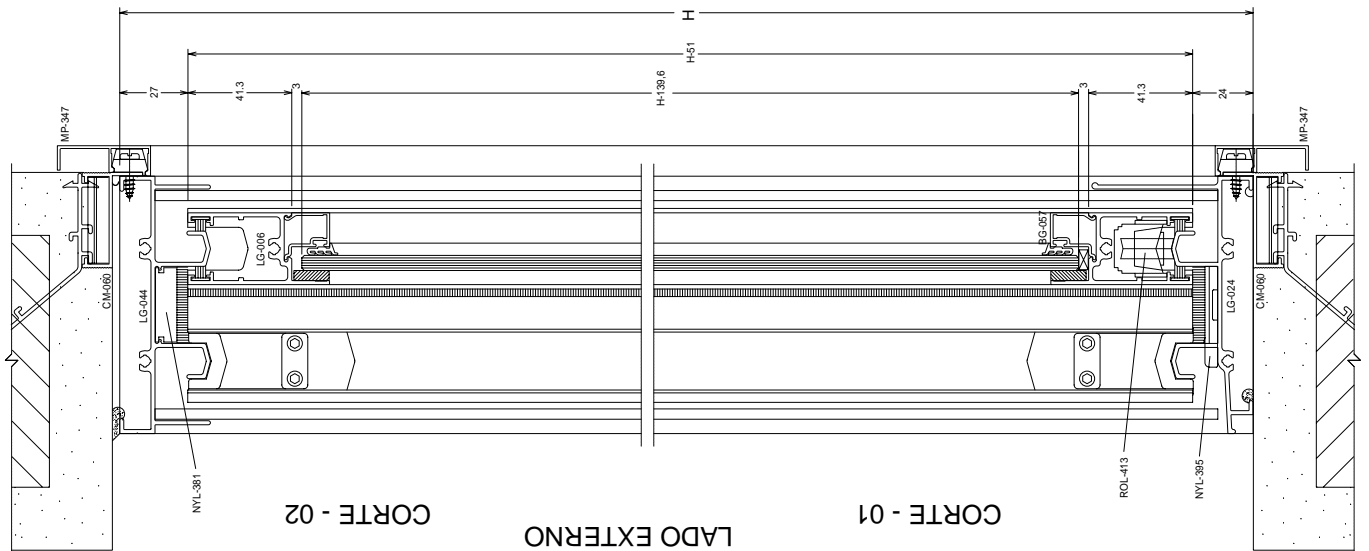
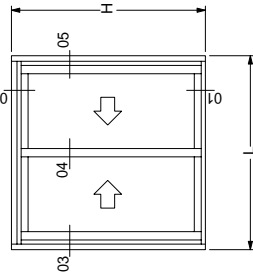
## Capítulo 8

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# Janela de correr 2 folhas

ELEVAÇÃO VISTA EXTERNA

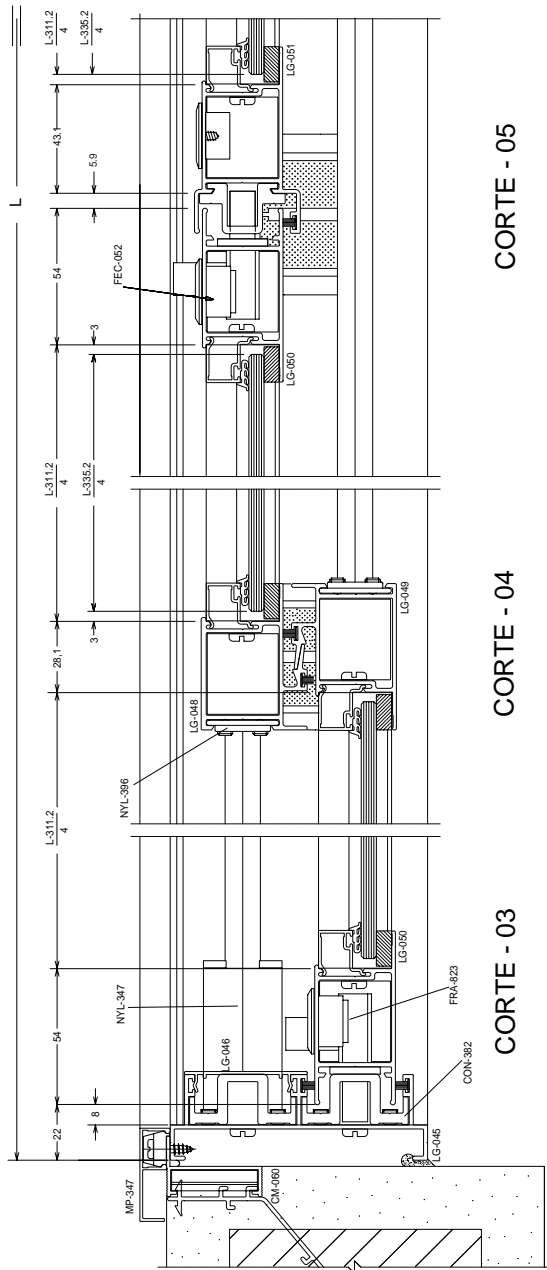
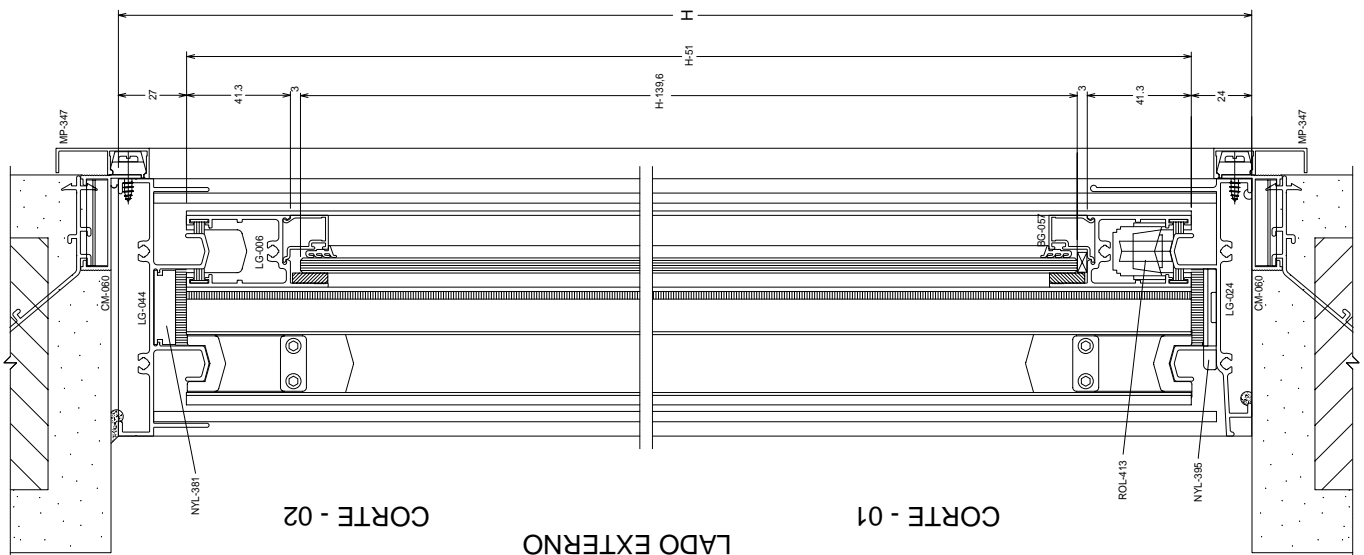
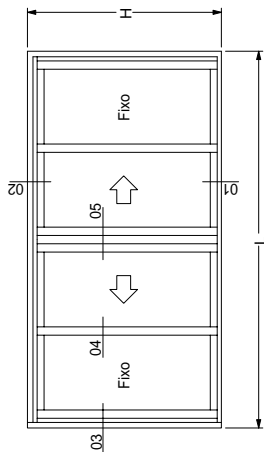


JC-2F



# Janela de correr 4 folhas

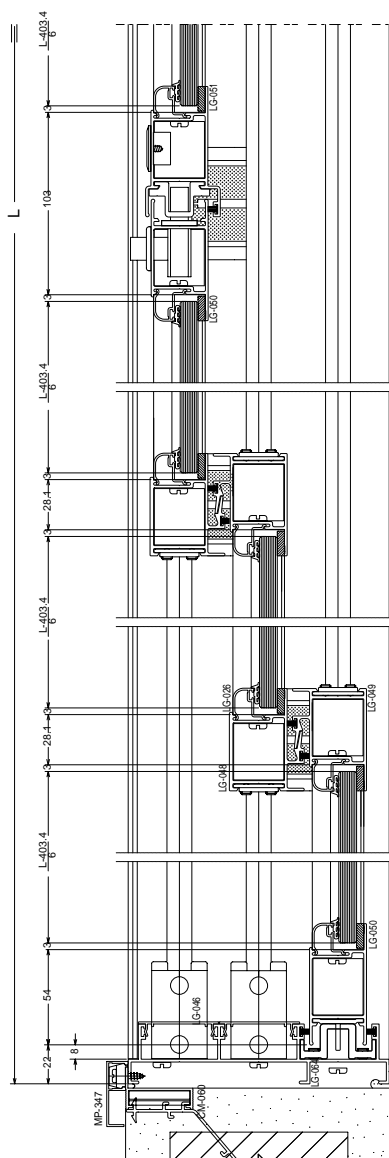
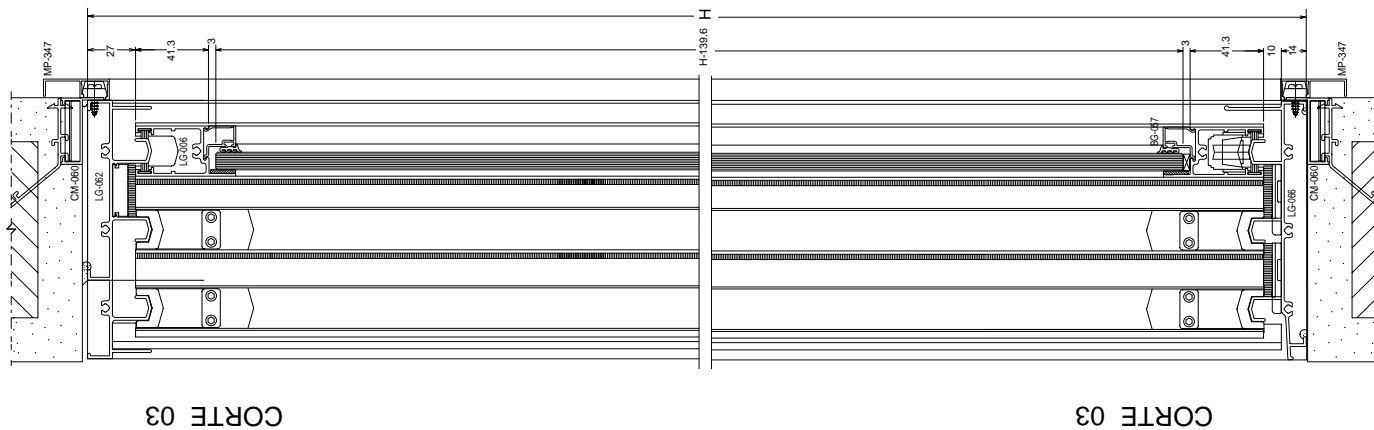
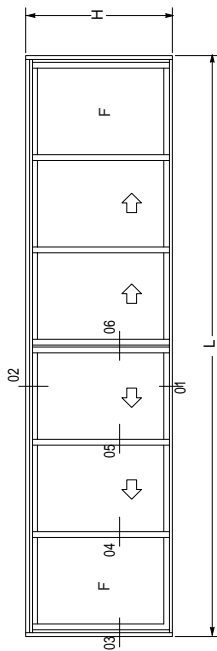
ELEVAÇÃO VISTA EXTERNA



JC-4F

# Janela de correr 6 folhas

ELEVAÇÃO VISTA EXTERNA



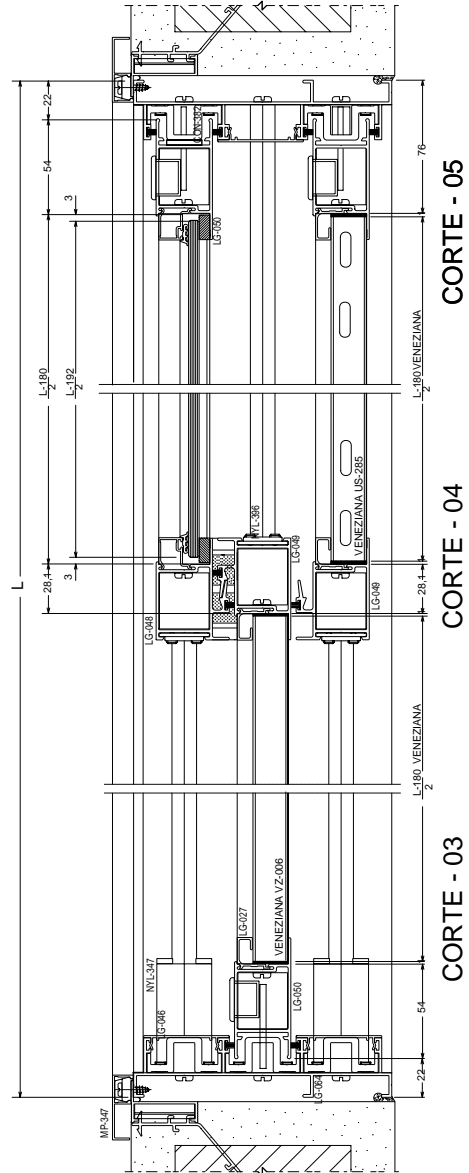
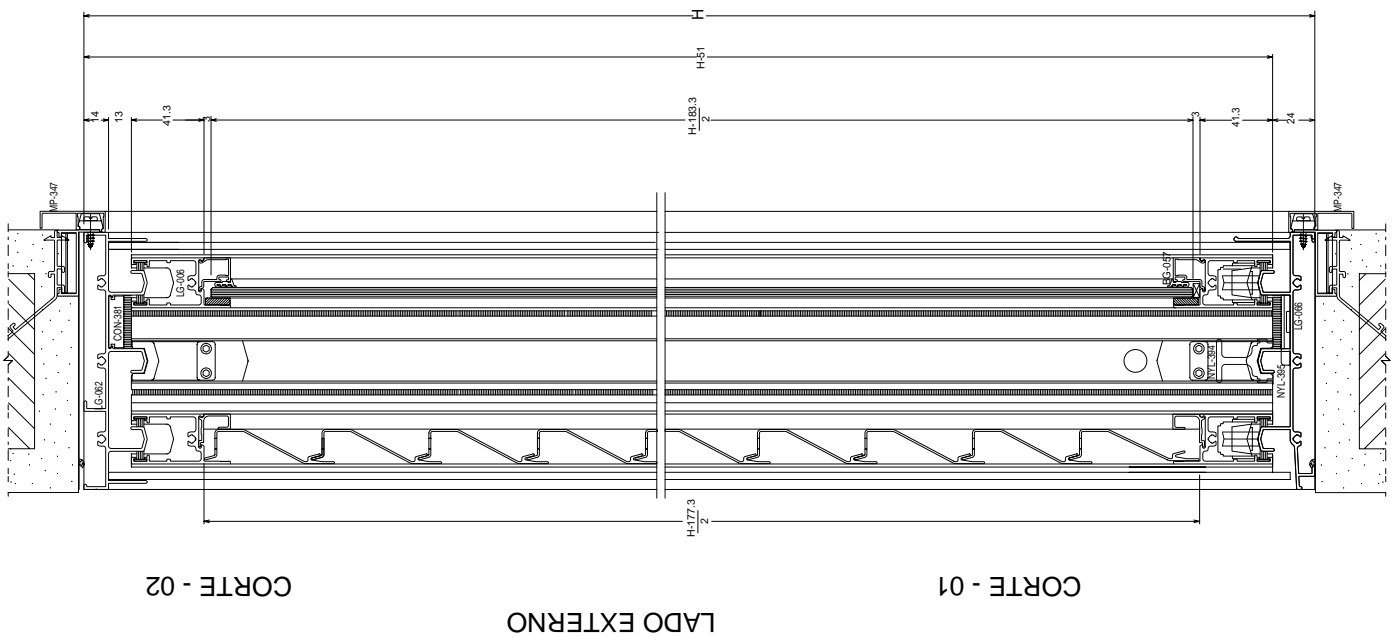
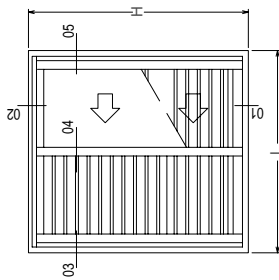
CORTE 03      CORTE 04      CORTE 05      CORTE 06

LADO EXTERNO

JC-6F

# Janela de correr 3 folhas com veneziana

ELEVAÇÃO VISTA EXTERNA

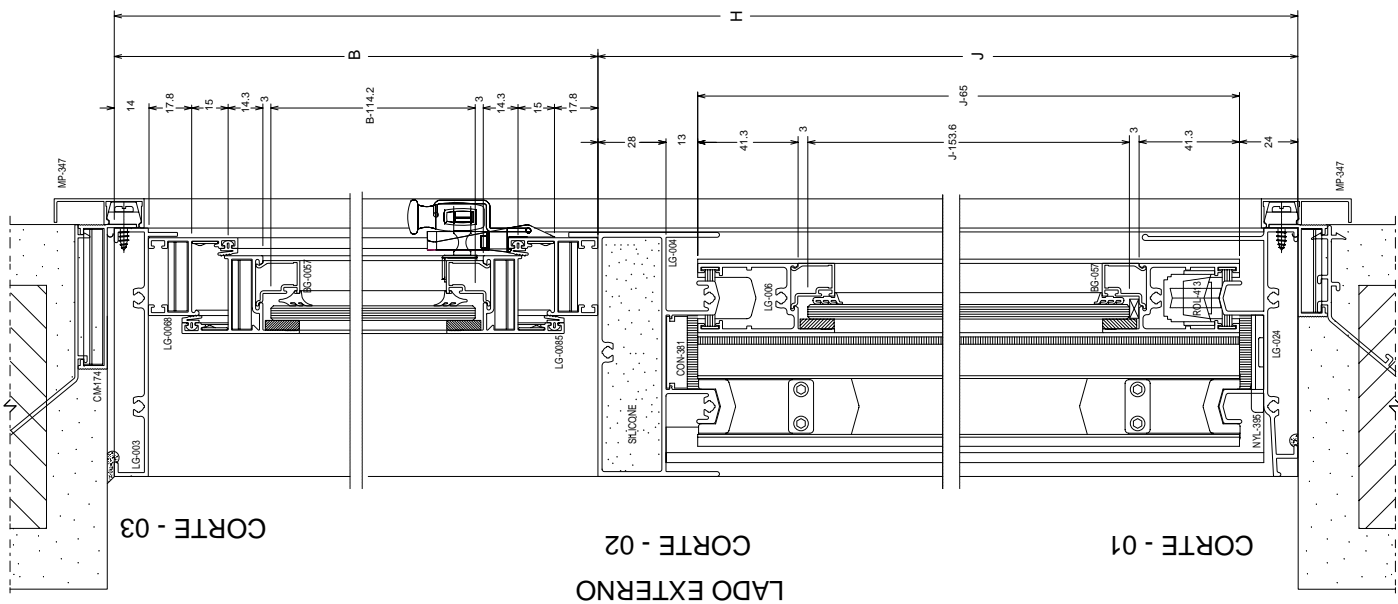
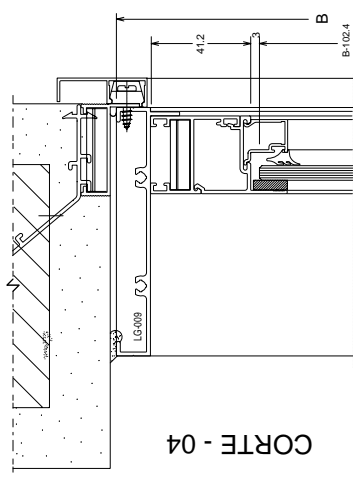
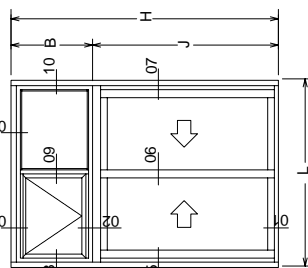


LADO EXTERNO

JC-3FVZ

# Janela de correr 2 folhas com bandeira móvel e fixa

ELEVAÇÃO VISTA EXTERNA



CORTE - 03

LADO EXTERNO  
 CORTE - 02

CORTE - 01

CORTE - 04

CORTE - 8

CORTE - 9

CORTE - 10

CORTE - 05

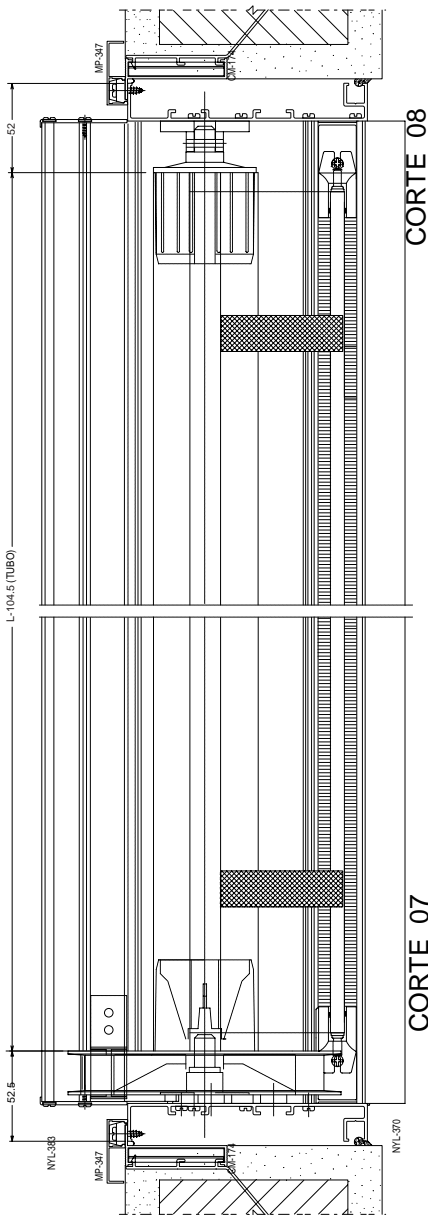
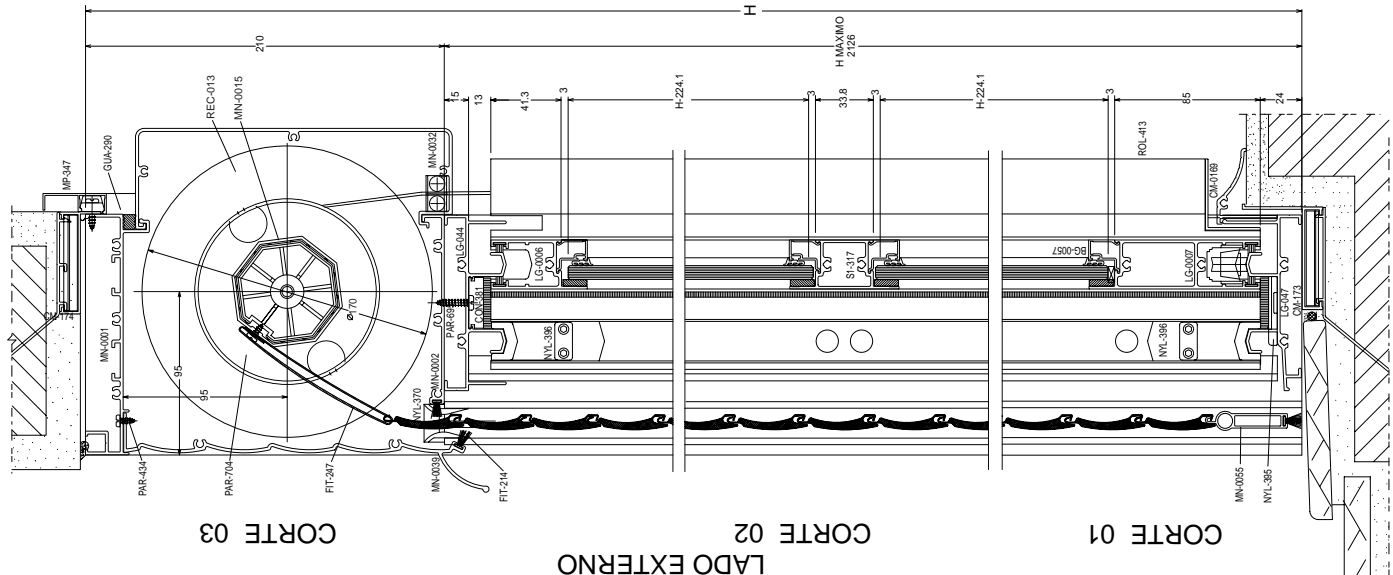
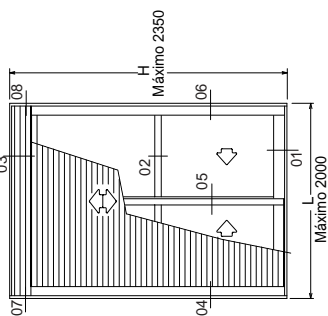
CORTE - 06  
 LADO EXTERNO

CORTE - 07

JC-2FBMF

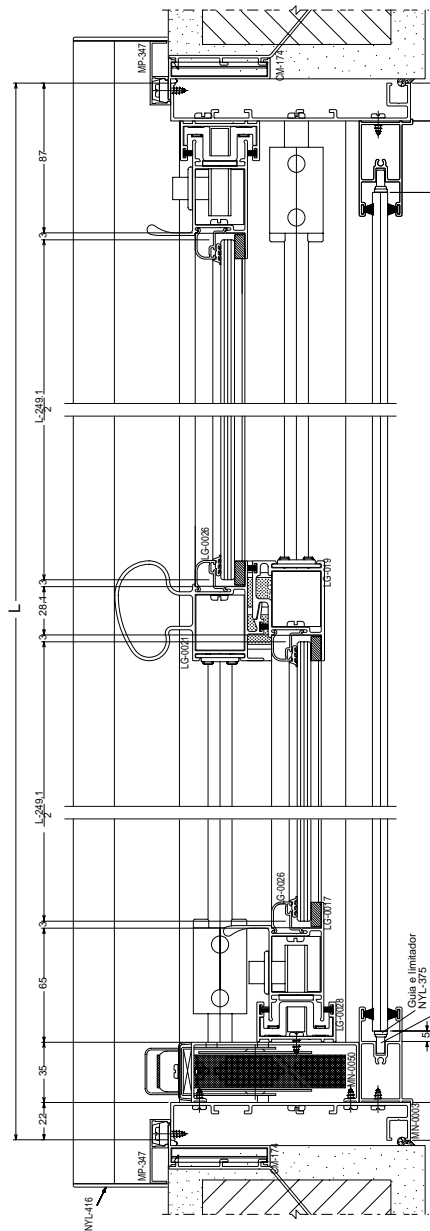
# Porta de correr 2 folhas com persiana de enrolar

ELEVAÇÃO VISTA EXTERNA



CORTE 07

CORTE 08



CORTE 04

CORTE 06

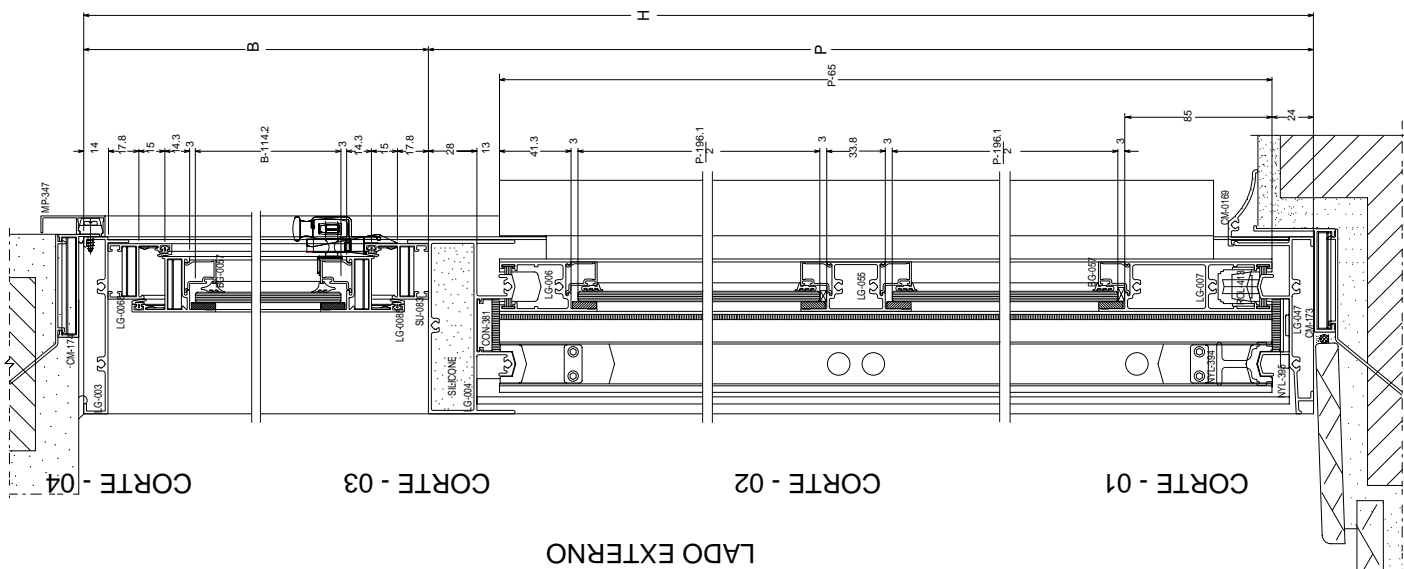
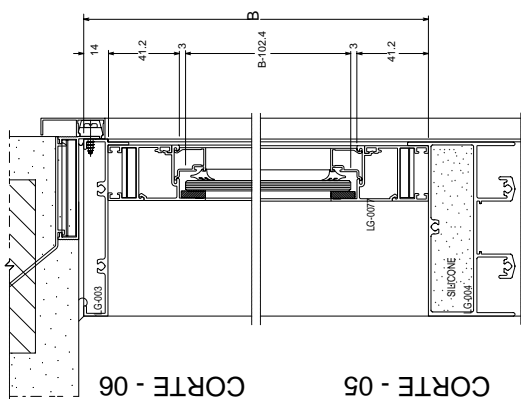
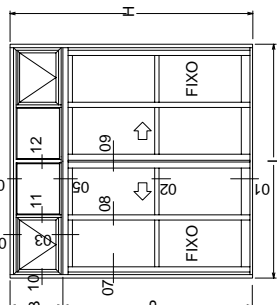
CORTE 05  
 LADO EXTERNO

PC-2FPE



# Porta de correr 4 folhas com bandeira móvel e fixa

ELEVAÇÃO VISTA EXTERNA



LADO EXTERNO

CORTE - 06

CORTE - 05

CORTE - 04

CORTE - 03

CORTE - 02

CORTE - 01

CORTE - 10

CORTE - 11

CORTE - 12

CORTE - 07

CORTE - 08

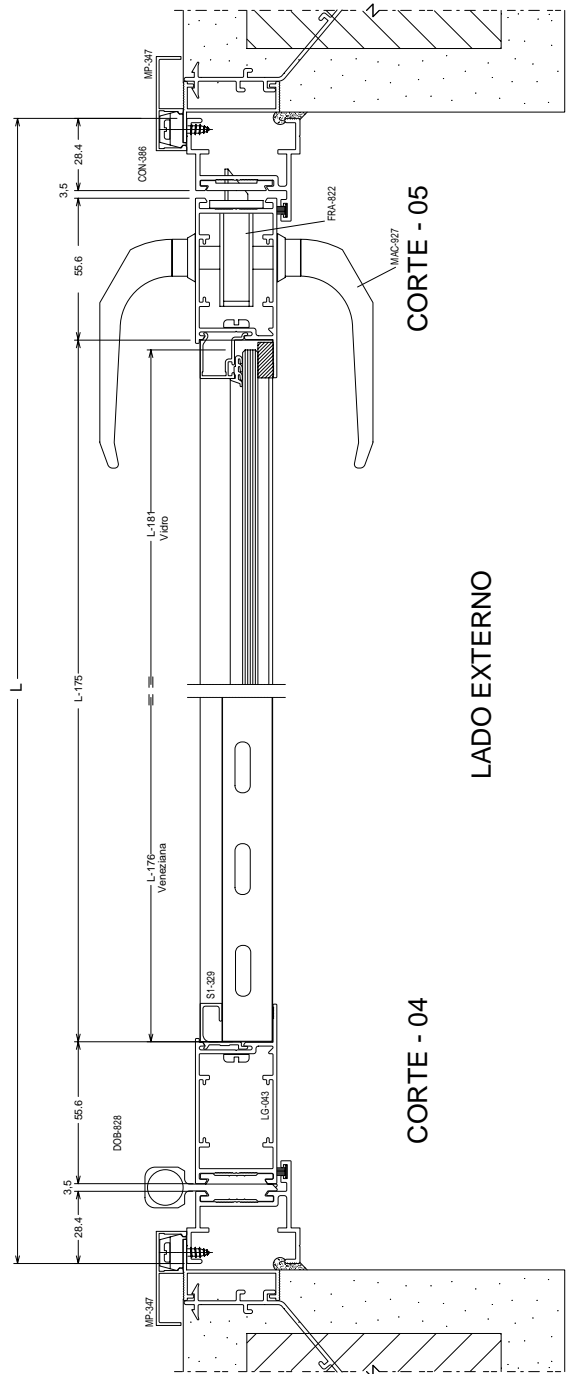
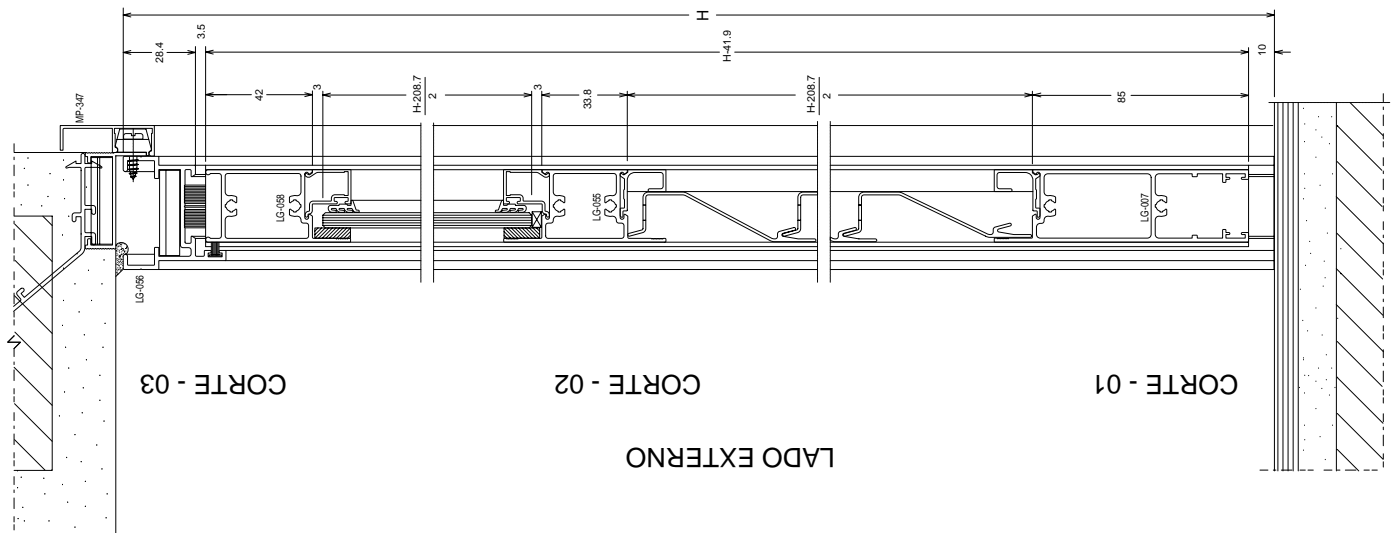
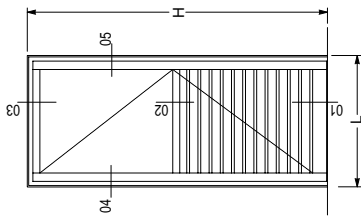
CORTE - 09

LADO EXTERNO

PC4F-BMF

# Porta de giro 1 folha com veneziana e vidro

ELEVAÇÃO VISTA EXTERNA

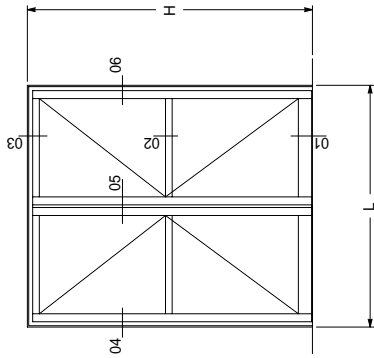


PGR1-FVZ

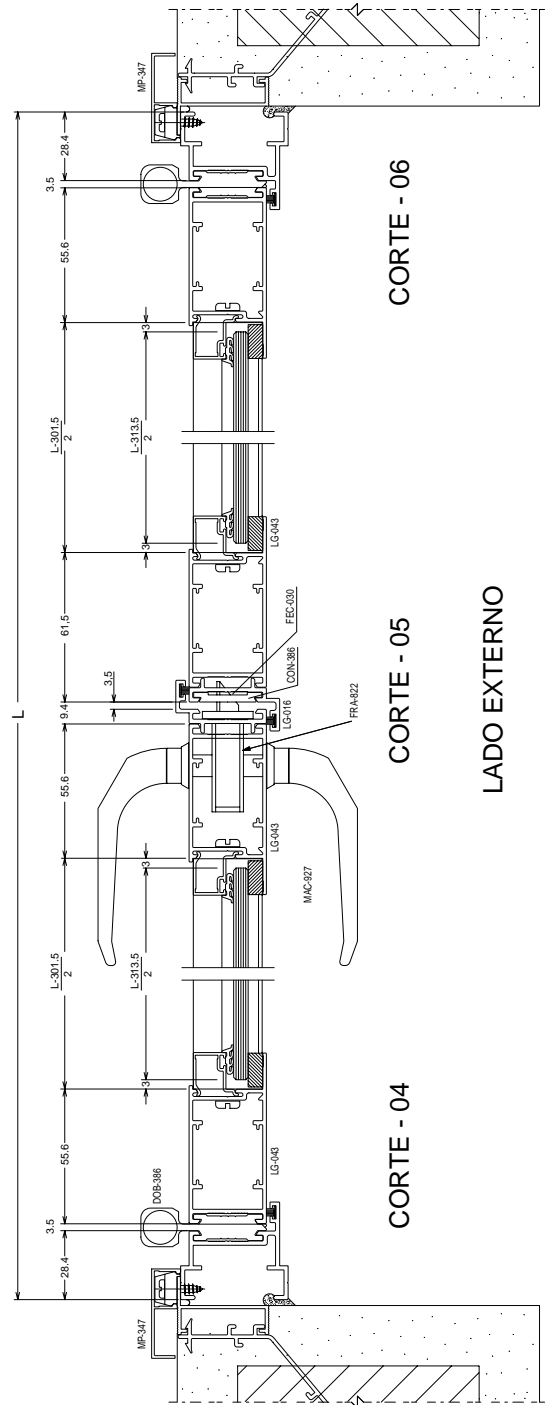
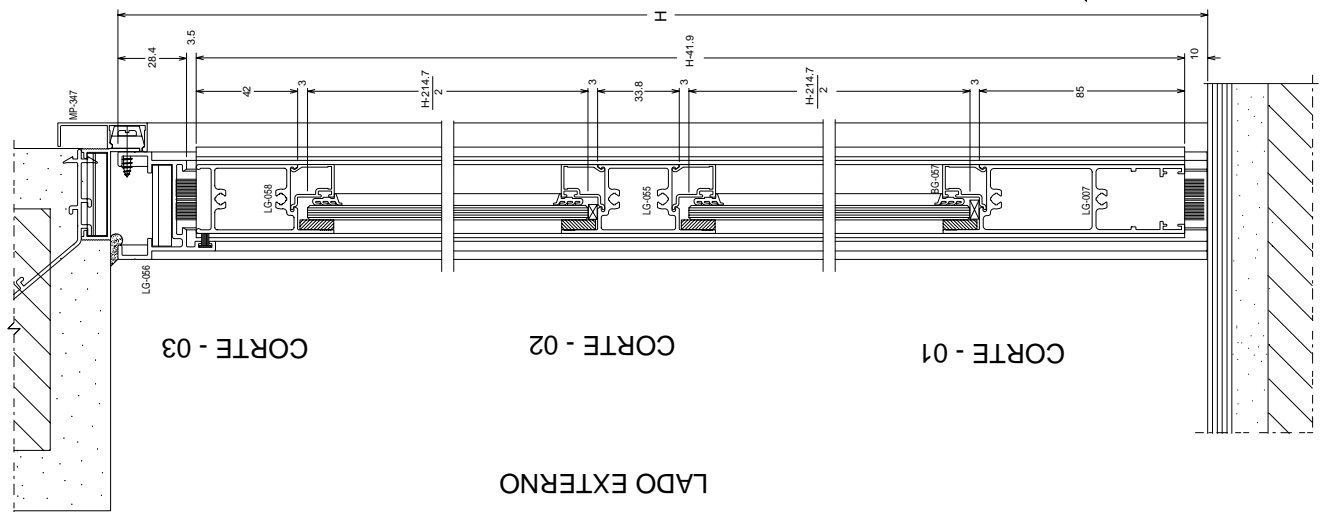


# Porta de giro 2 folhas

ELEVAÇÃO VISTA EXTERNA



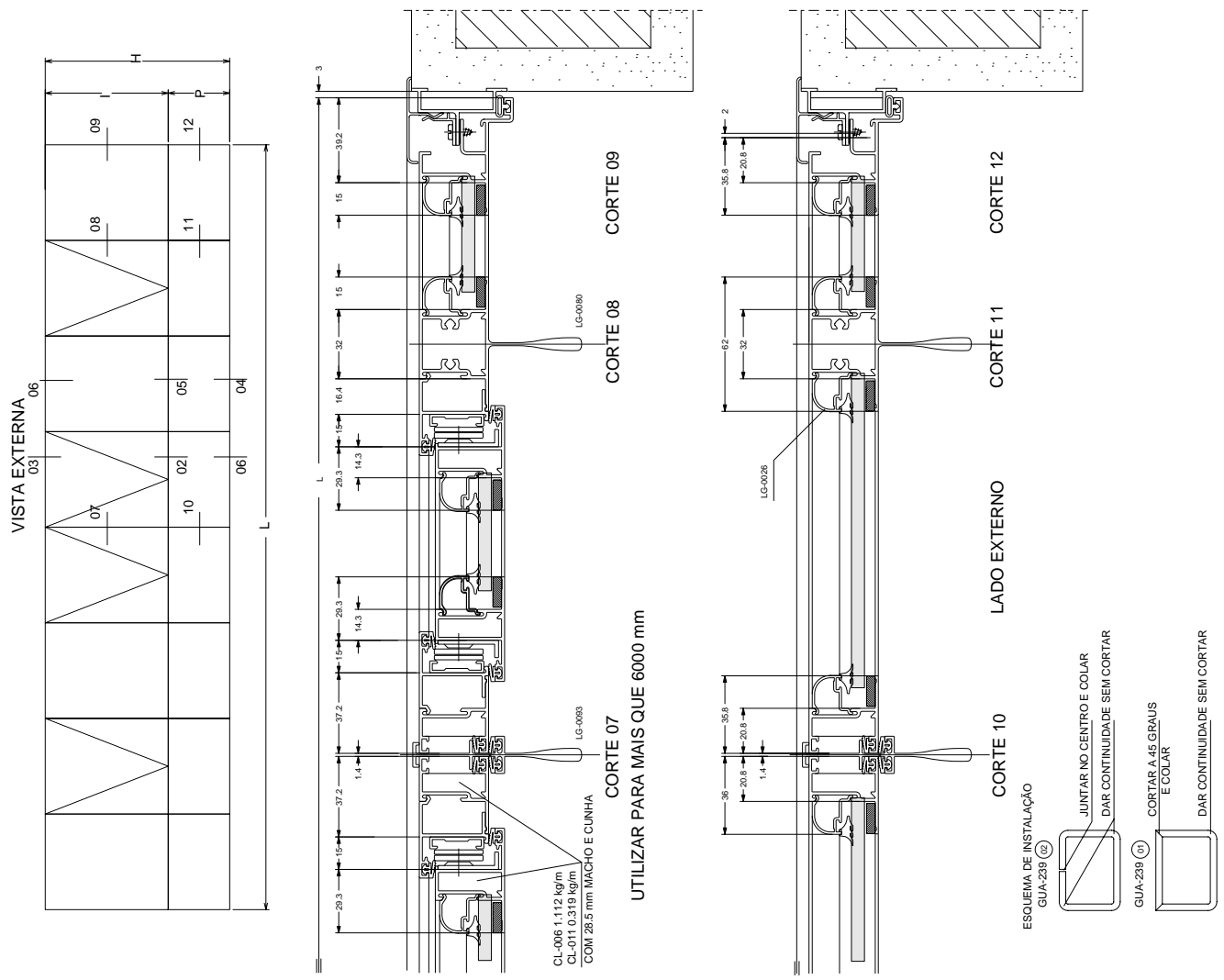
LADO EXTERNO



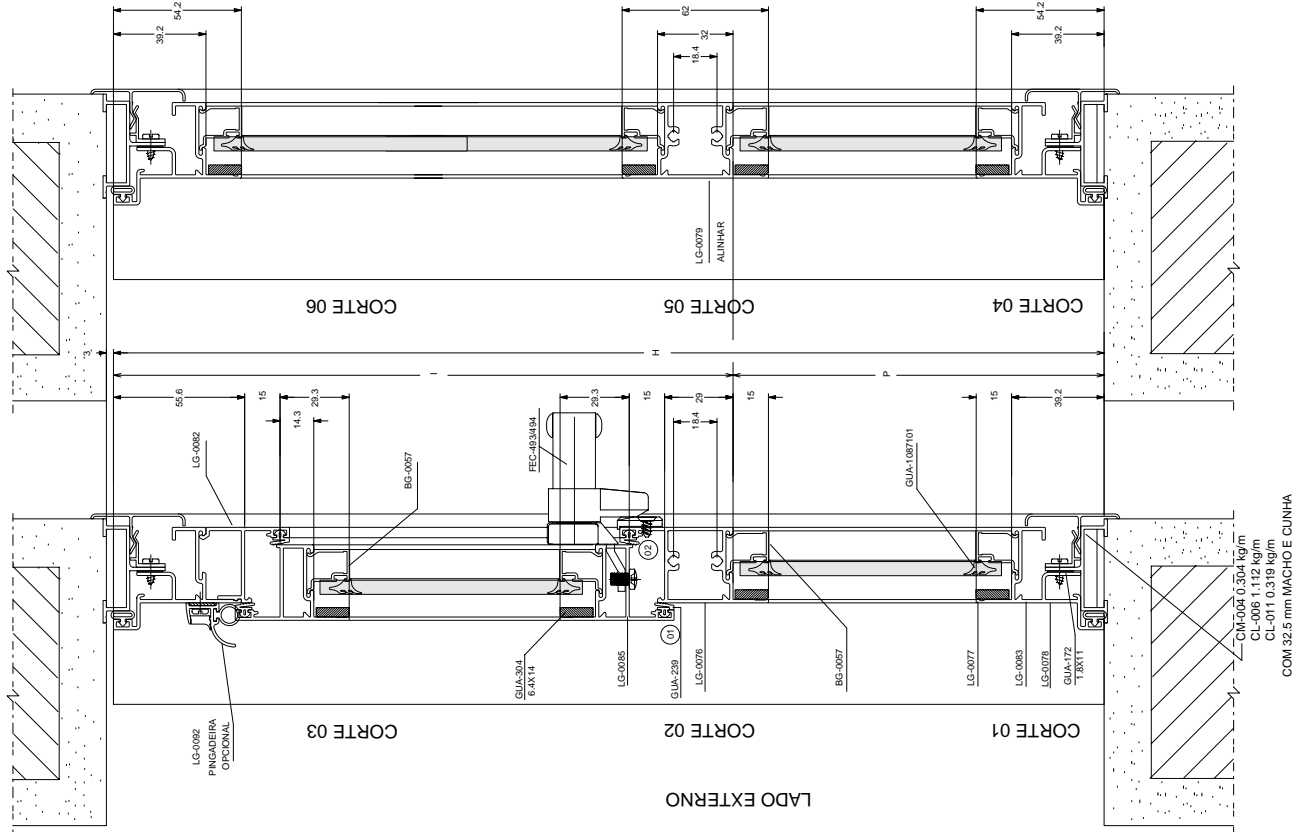
LADO EXTERNO

PGR -2F

# Janela maxim-ar c/ peitoril fixo contramarca convencional

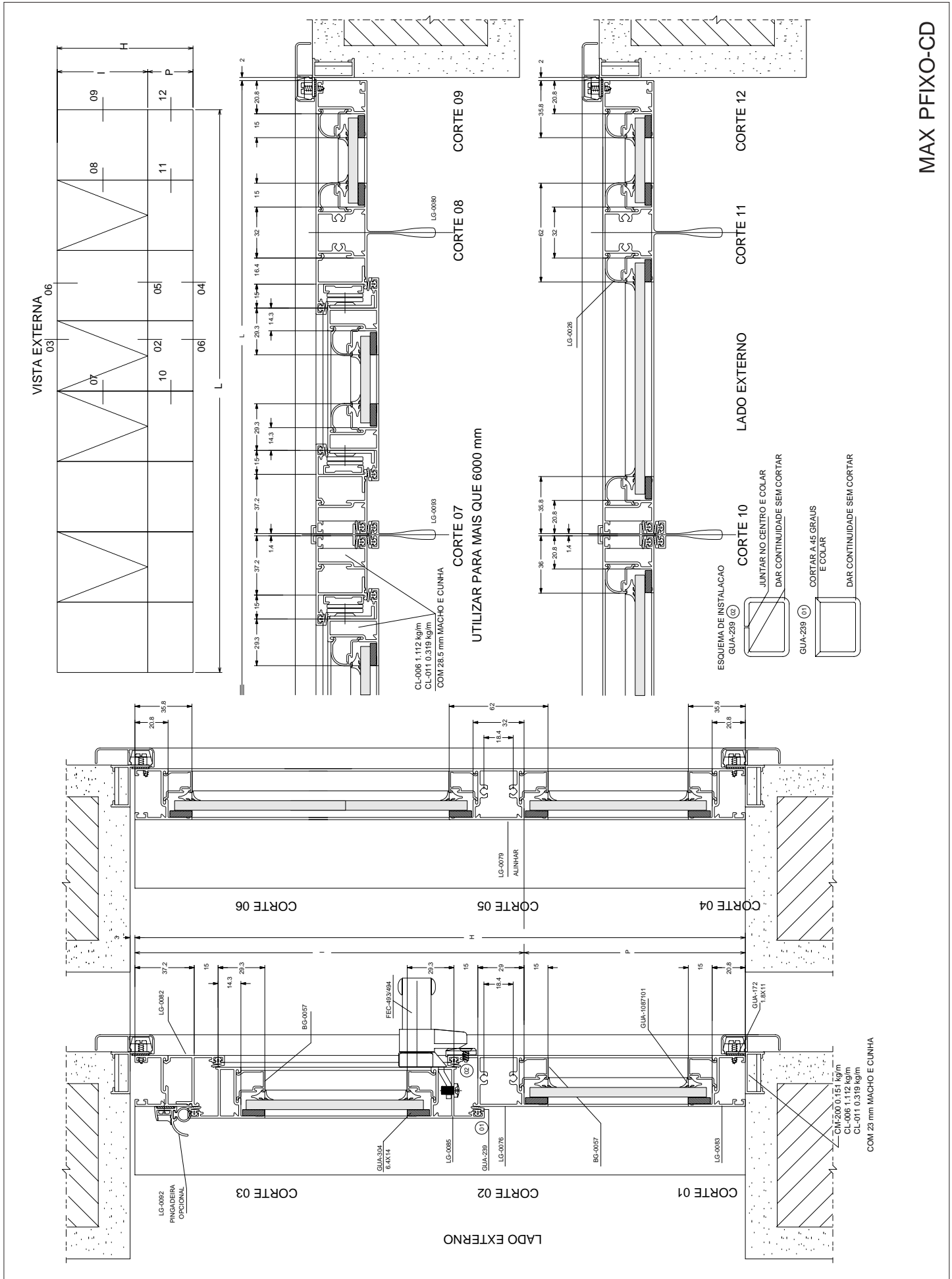


MAX PFI-XO-CC

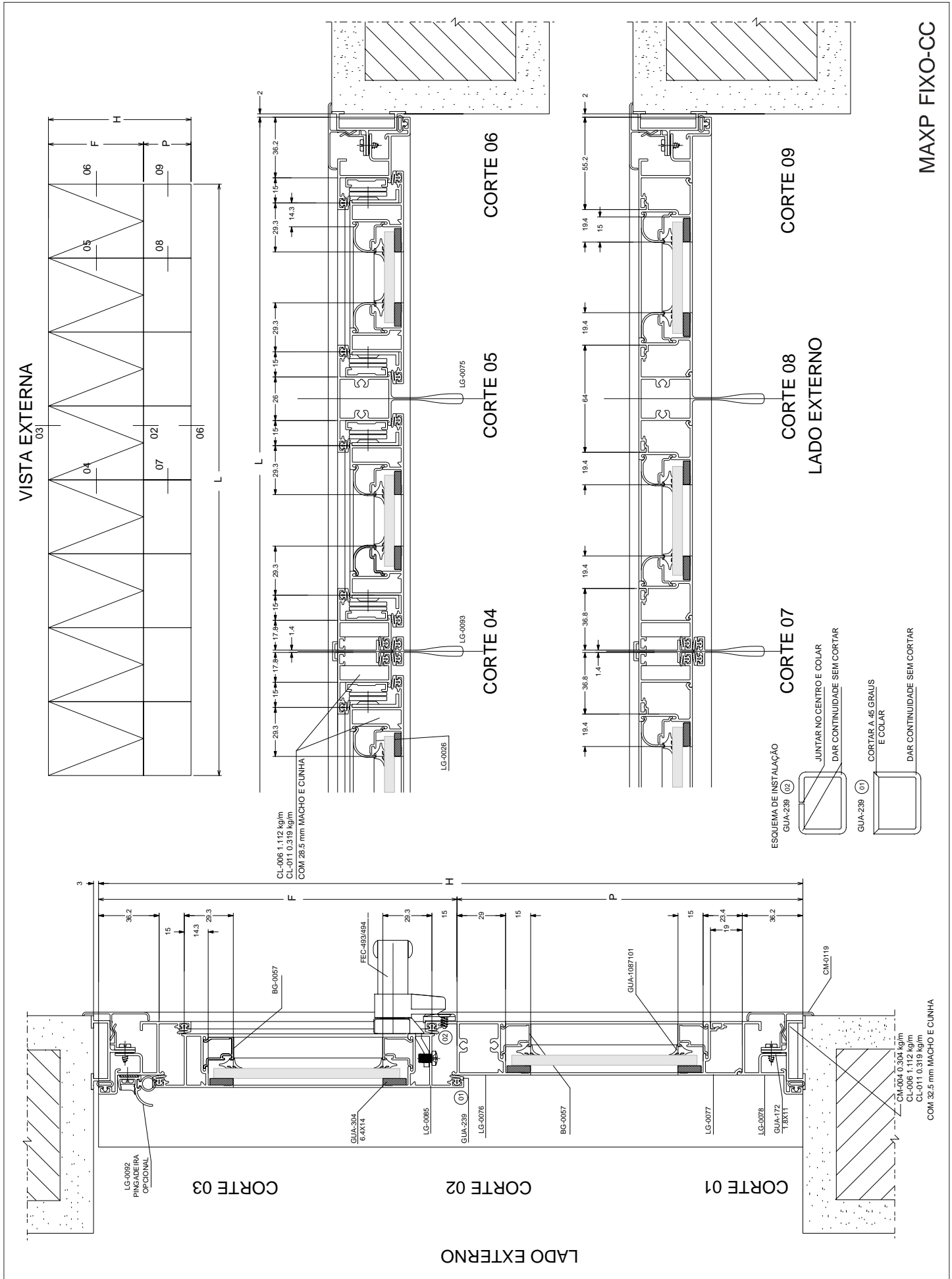


# Janela maxim-ar c/ peitoril e painel fixo - com cadeirinha

MAX PFIJO-CD

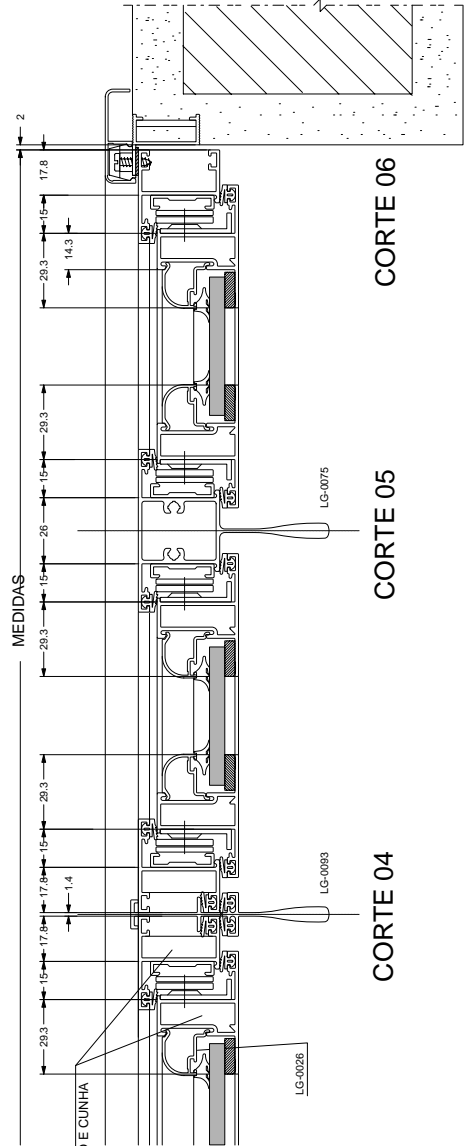
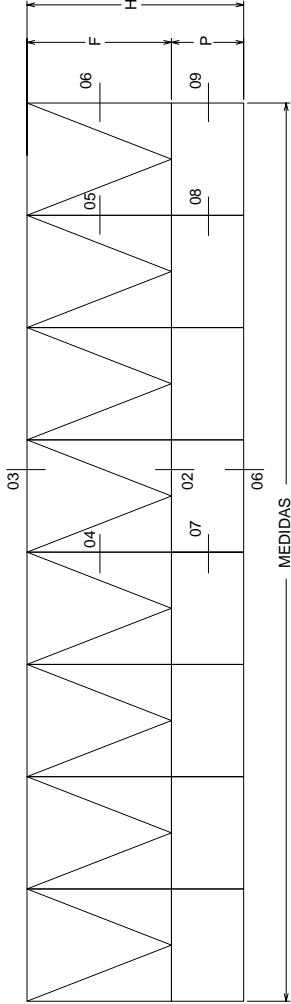


# Janela maxim-ar c/ peitoril fixo contramarco convencional

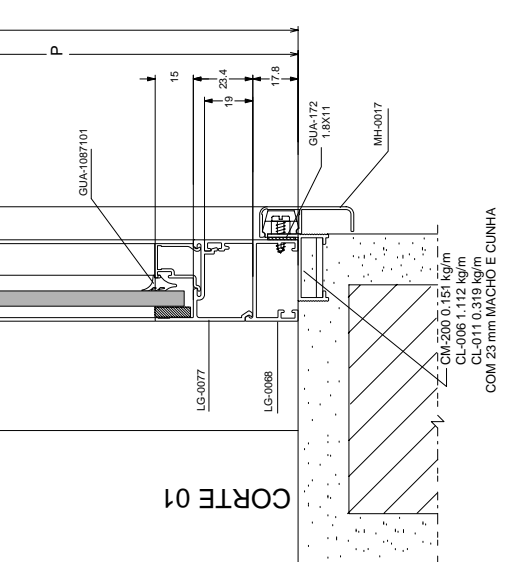
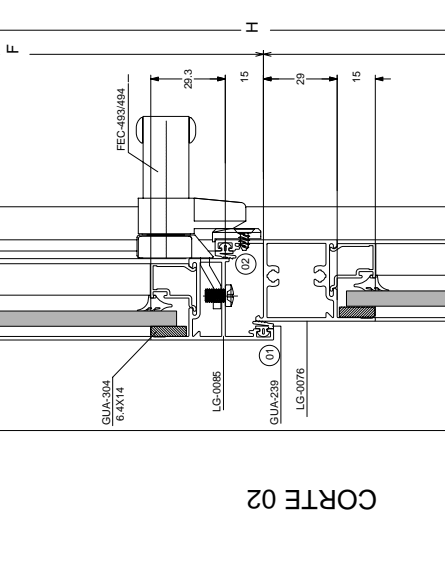
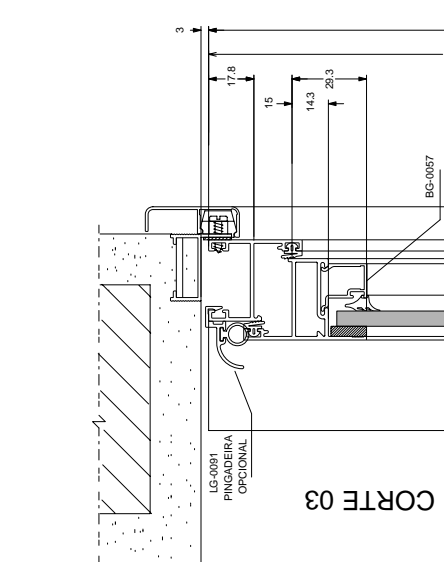
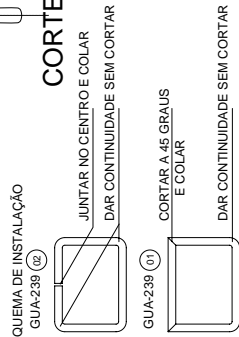
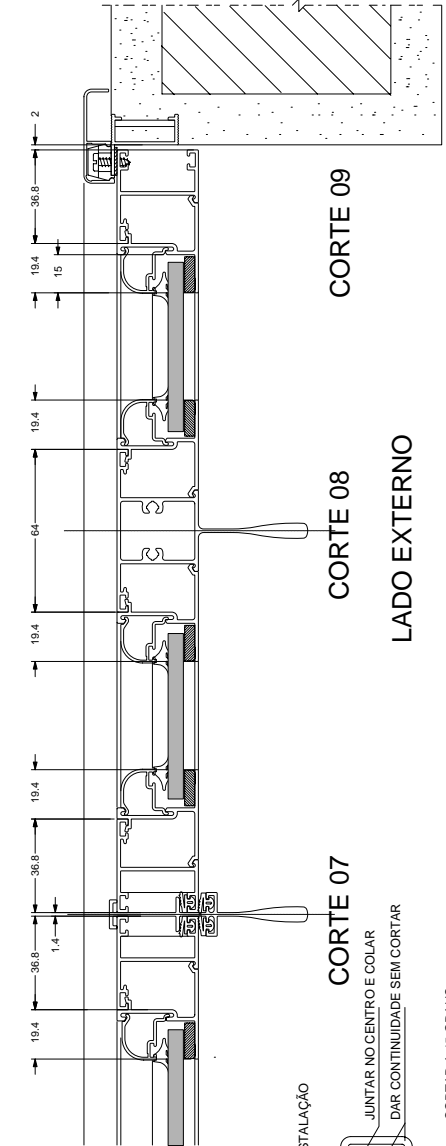


# Janela maxim-ar com peitoril fixo - contramarco cadeirinha

## VISTA EXTERNA



CL-006 1.112 kg/m  
 CL-011 0.319 kg/m  
 COM 28.5 mm MACHO E CUNHA

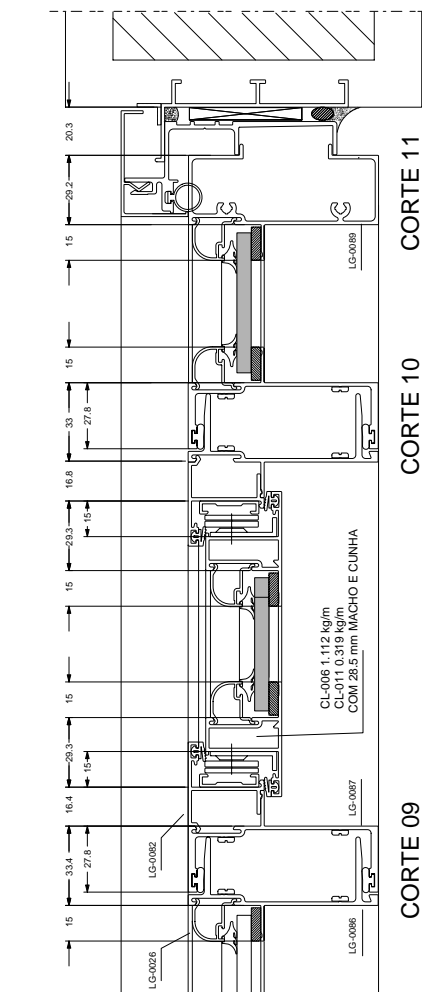
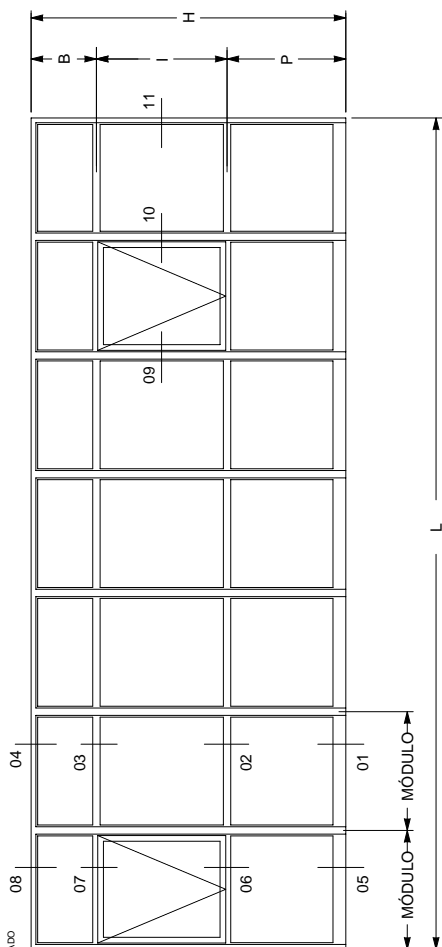


MAXP FIXO-CD

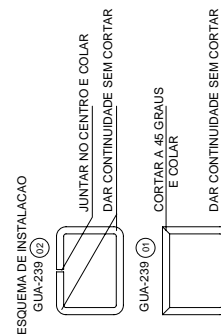


# Janela maxim-ar conjugada com fixo

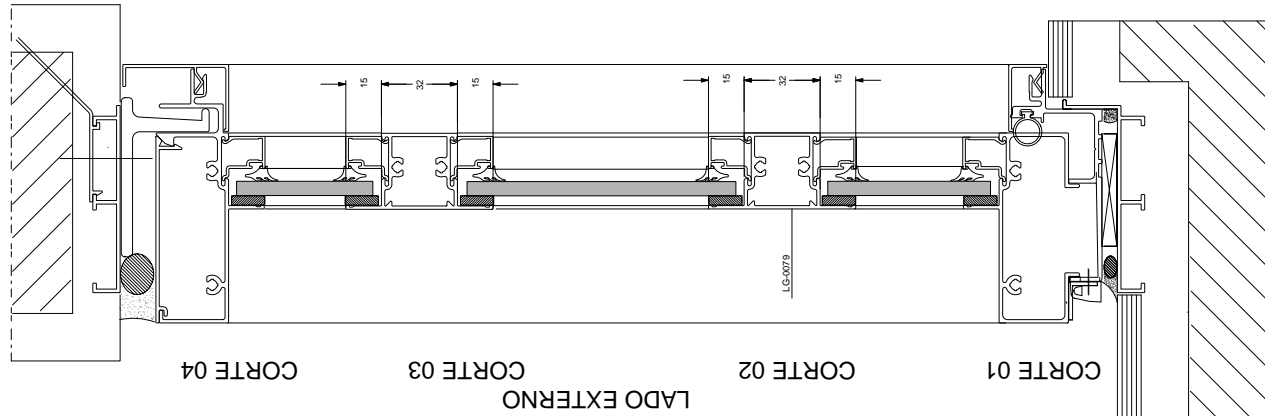
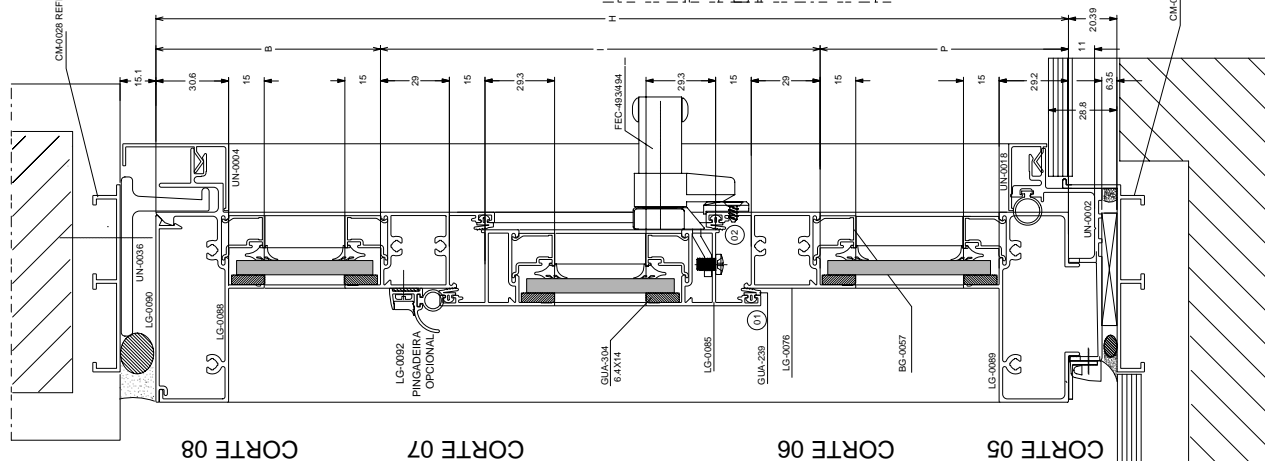
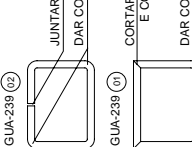
VISTA EXTERNA



LADO EXTERNO



ESQUEMA DE INSTALACAO

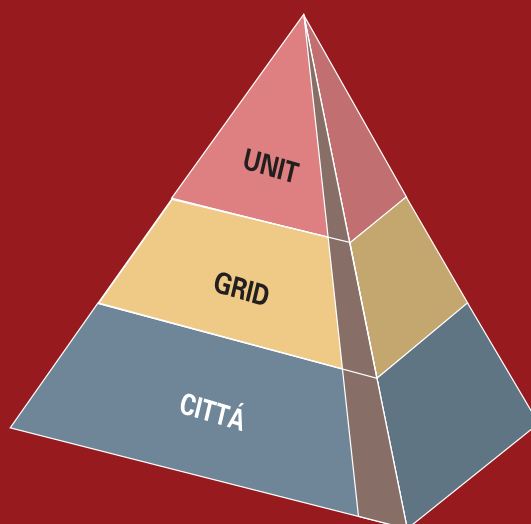


LADO EXTERNO

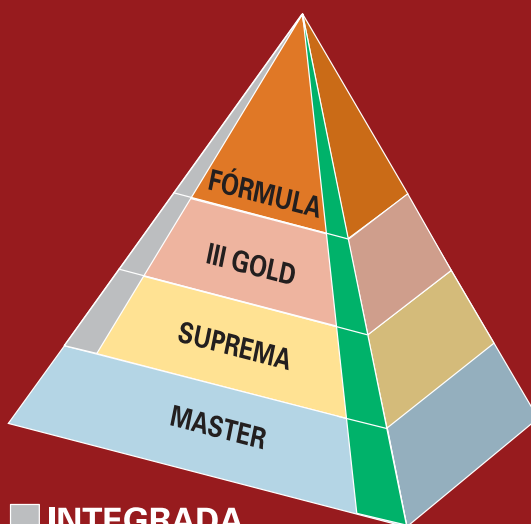


## PRINCIPAIS VANTAGENS DA LINHA GOLD

- Ótima estanqueidade ao ar e a água.
- Deslizamento suave.
- Excelente comportamento estrutural.
- Possibilidade de instalação de vidros duplos ou laminados.
- Baixa transmissão de calor e ruído.
- Travas externas de segurança.
- Persianas com acionamento manual ou motorizado.



■ REYNOBOND



■ INTEGRADA  
■ GRADIL/PORTÃO

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versão GMPE 015 SET 04

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