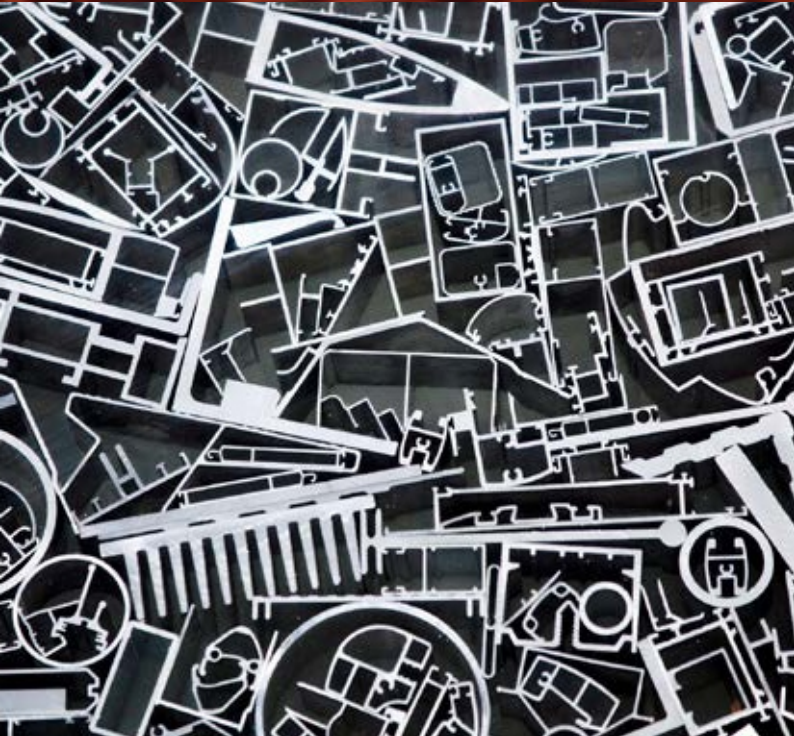


Hydro

UNIVERSAL
PORTÃO E GRADE





Hydro – A empresa de energia e alumínio

A Hydro é uma líder industrial que constrói negócios e parcerias para um futuro mais sustentável. Desenvolvemos indústrias que fazem a diferença para as pessoas e para a sociedade. Desde 1905, a Hydro transforma recursos naturais em produtos e negócios relevantes para as pessoas, criando um local de trabalho seguro e protegido para nossos 31.000 empregados*, em mais de 140 unidades, em 40 países. Hoje, possuímos e operamos vários negócios, além de investirmos em indústrias sustentáveis.

A Hydro, por meio de seus negócios, está presente em uma ampla gama de segmentos do mercado de alumínio, energia, reciclagem de metais, energias renováveis e baterias, oferecendo conhecimentos e competências únicas.

A Hydro está comprometida em liderar o setor na criação de um futuro mais sustentável, criando sociedades mais viáveis ao desenvolver recursos naturais em produtos e soluções de maneiras inovadoras e eficientes.

*Informação referente a data de fechamento do material.

Hydro Bauxita & Alumina

A Hydro Bauxita & Alumina inclui uma das maiores minas de bauxita do mundo e a maior refinaria de alumina fora da China, ambas no Brasil, representando dois elos importantes na cadeia de produção do nosso alumínio. Nossos mais de 4.000 empregados* trabalham nos escritórios do Brasil, na mina de Paragominas e na refinaria de alumina em Barcarena, no norte do país. Além disso, comercializamos alumina para clientes externos.



Hydro Energia

A Hydro Energia tem mais de 100 anos de experiência em energia hidrelétrica, sendo uma das três maiores operadoras de produção de energia na Noruega e empregando 200 pessoas*. Além disso, estamos envolvidos com energia eólica na Noruega e temos uma participação importante no mercado de energia na região nórdica e no Brasil.



Hydro Extrusão


A Hydro Extrusão é uma empresa líder mundial em extrusão de alumínio, com cerca de 100 unidades de produção, em 40 países, e empregando 20.000 pessoas. Por meio de uma combinação exclusiva de

experiência local, rede global e recursos de P&D incomparáveis, podemos oferecer desde perfis padronizados até desenvolvimento e fabricação avançados para a maioria das indústrias.



Portfólio Hydro

Para todos os tipos e padrões de obras.

<p>Linhas Comerciais</p>	<p>ECO  ² FAÇADE</p> <p>UNIT</p> <p>CITTÀ</p> <p>ELEGANCE MIRROR</p>
<p>Linhas Residenciais</p>	<p>SKYLINE</p> <p>UNICA</p> <p>PRODUTIVA25</p> <p>NOVA GOLD</p> <p>INOVA</p> <p>GOLD Slim</p> <p>MASTER</p>
<p>Complementos de Arquitetura</p>	<p>ESPLENDOOR</p> <p>MIRANTE</p> <p>UNIVERSAL VARANDA E GRADIL</p> <p>UNIVERSAL PORTÃO E GRADE</p>



UNIVERSAL

PORTÃO E GRADE

Universal Portão – Portões de Alumínio

A Universal Portão concilia segurança com tecnologia e versatilidade. Com design moderno, possui portões de correr, de giro e basculantes, com montagem a 45° ou 90°, além de grades de alumínio. Os perfis vêm preparados para receber anodização ou pintura eletrostática a pó, ganhando maior vida útil e diferenciais estéticos.

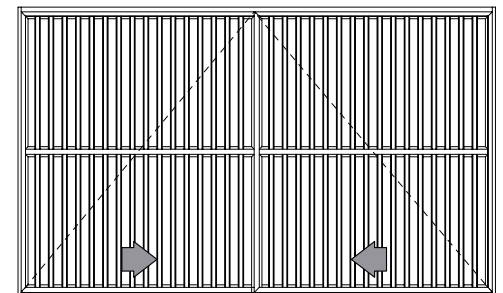
O sistema também oferece o Portão Fit, mais leve e competitivo. Essa tipologia entrega rapidez na fabricação e simplicidade na montagem em função do número reduzido de perfis, permite poucas usinagens, não requer utilização de estampos e pode integrar a porta social ao portão.



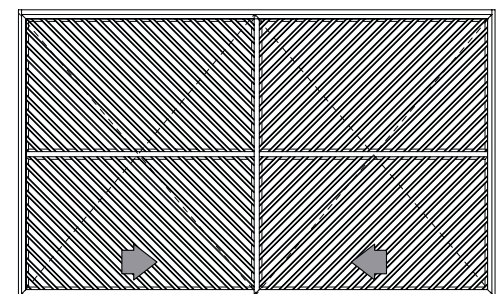
Tipologias	B-01 B-04
Diagramas	C-01 C-03
Perfis	D-01 D-16
Componentes	E-01 E-03
Usinagens	F-01 F-05
Detalhes Construtivos	G-01 G-05
Projetos de Montagem	H-01 H-24

Portões de Correr Universal e FIT

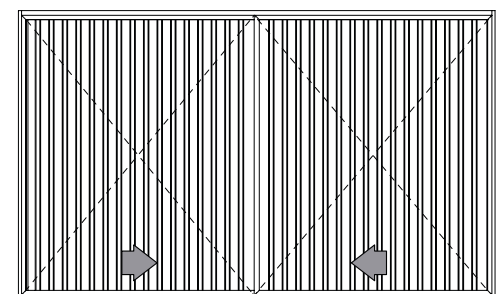
Portão com barrotes verticais 2 folhas de correr



Portão com barrotes inclinados 2 folhas de correr



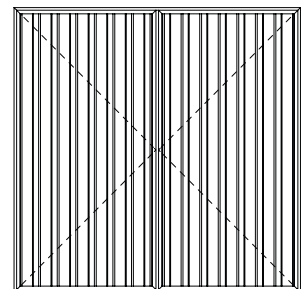
Portão com lambris verticais 2 folhas de correr



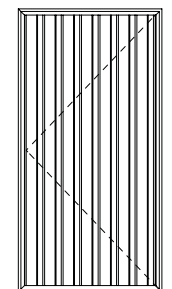
Nota: Estas tipologias poderão ser fabricadas com portão social

Portões de Giro Universal

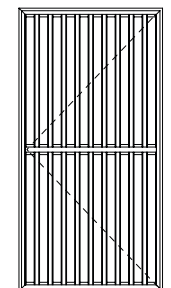
Portão com lambris verticais 2 folhas de giro



Portão com lambris verticais 1 folha de giro

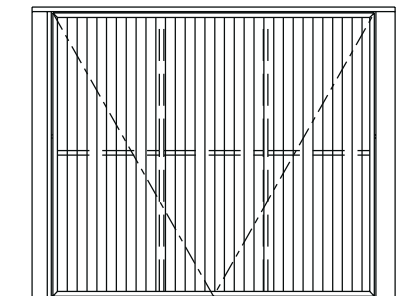
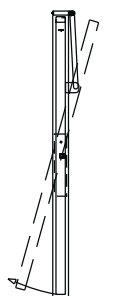


Portão com barrotes verticais 1 folha de giro

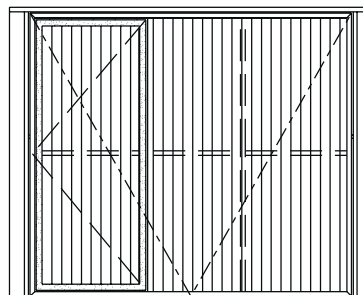


Portão Basculante

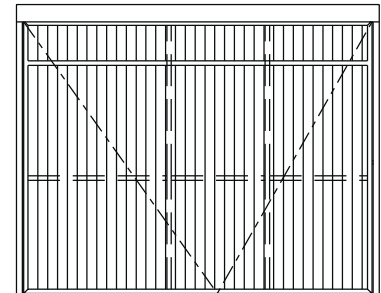
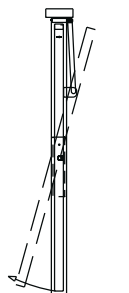
Basculante - Folha normal



Basculante - Folha com porta social

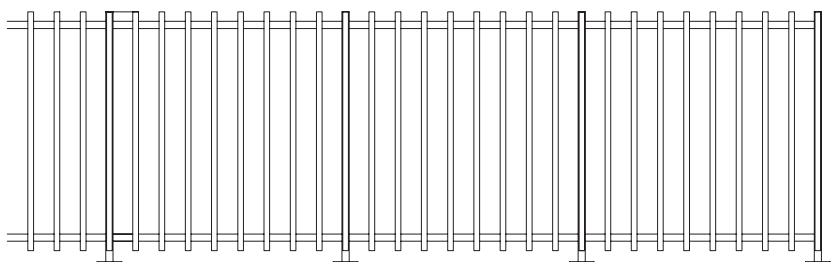


Basculante - Folha com bandeira

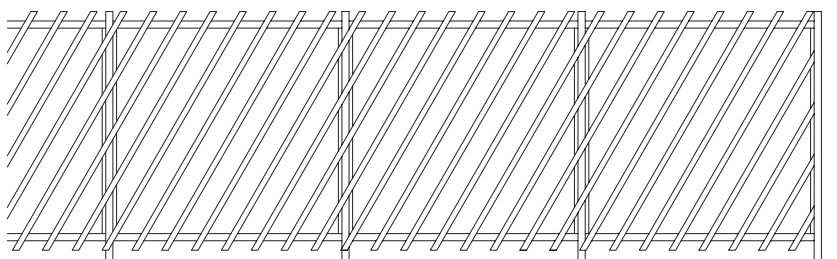


Grade Universal

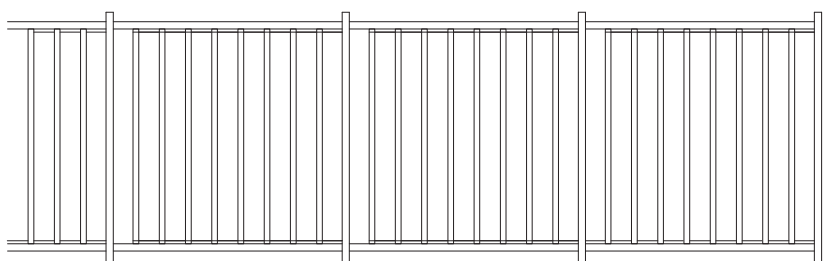
Grade com barrotes verticais



Grade com barrotes inclinados



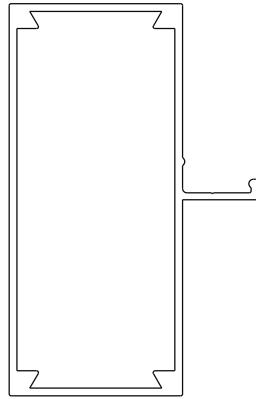
Grade com barrotes verticais entre travessas



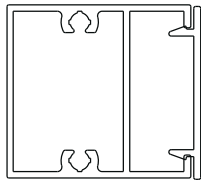
Diagramas de Dimensões

Portão Basculante 3 Metros

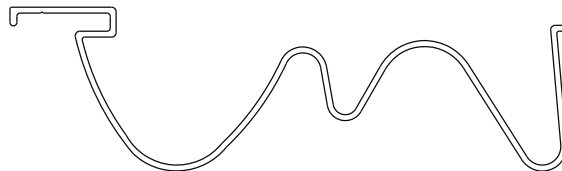
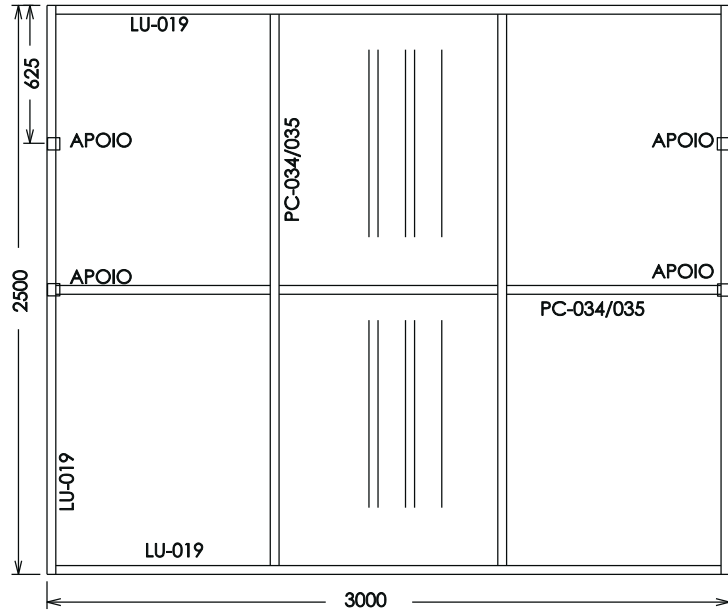
LU-019
 Area = 501 mm²
 Peso = 1.36 kg/m
 Jx = 483918 mm⁴
 Jy = 146961 mm⁴
 Wx = 11207 mm³
 H = 86.4 mm
 B = 67.8 mm
 1:1



PC-034/035
 Area = 265 mm²
 Peso = 0.918 kg/m
 Jx = 61046 mm⁴
 Jy = 39509 mm⁴
 Wy = 1745 mm³
 H = 38 mm
 B = 45.2 mm

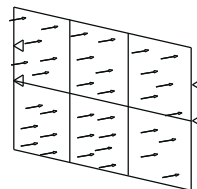


LIGA 6060 T5 - TENSÃO ADM = 7 kg/mm²
 Lr = 15 kg/mm² Le = 11 kg/mm²

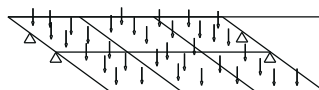


LAMBRI
 Area = 348 mm²
 Jx = 40412 mm⁴
 Wx = 2028 mm³
 H = 39.8 mm
 Peso = 0.94 kg/m

1) PRESSÃO DE ENSAIO = 50 kg/m²
PORTÃO FECHADO



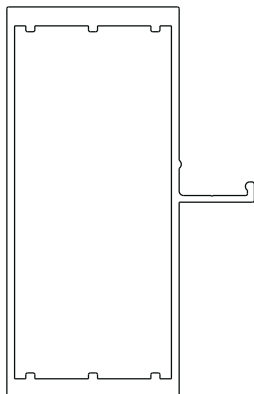
2) PESO PRÓPRIO = 13 kg/m²
PORTÃO ABERTO



Portão Basculante 5 Metros

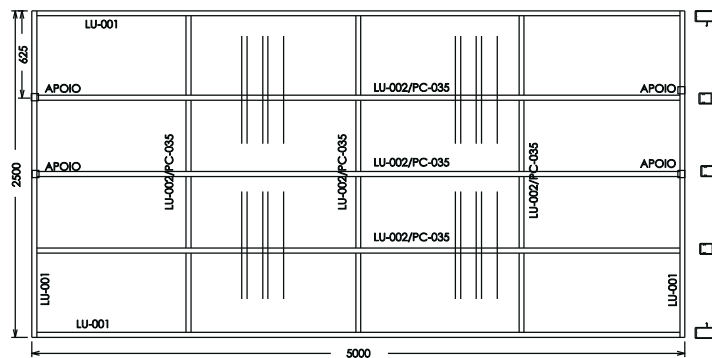
LU-001

Area = 629 mm²
 Peso = 1.7 kg/m
 Jx = 692255 mm⁴
 Jy = 151629 mm⁴
 Wx = 16042 mm³
 H = 86.3 mm
 B = 68.4 mm



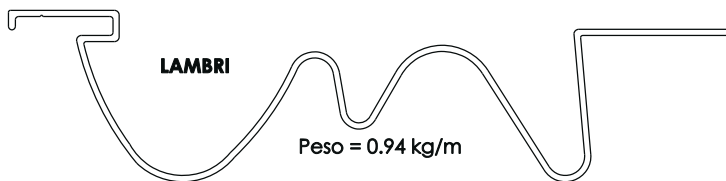
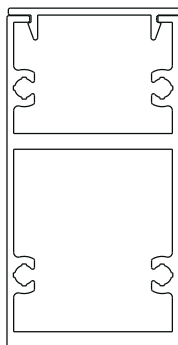
LIGA 6060 T5 - TENSÃO ADM = 7 kg/mm²

Lr = 15 kg/mm² Le = 11 kg/mm²



LU-002/PC-035

Area = 558 mm²
 Peso = 1.71 kg/m
 Jx = 291303 mm⁴
 Jy = 120542 mm⁴
 Wx = 6994 mm³
 H = 83.3 mm
 B = 38 mm

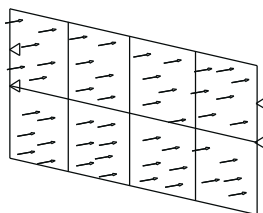


LAMBRI

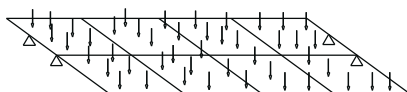
Peso = 0.94 kg/m

Area = 348 mm²
 Jx = 40412 mm⁴
 Wx = 2028 mm³
 H = 39.8 mm

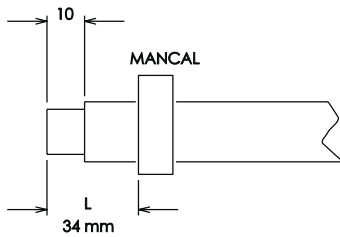
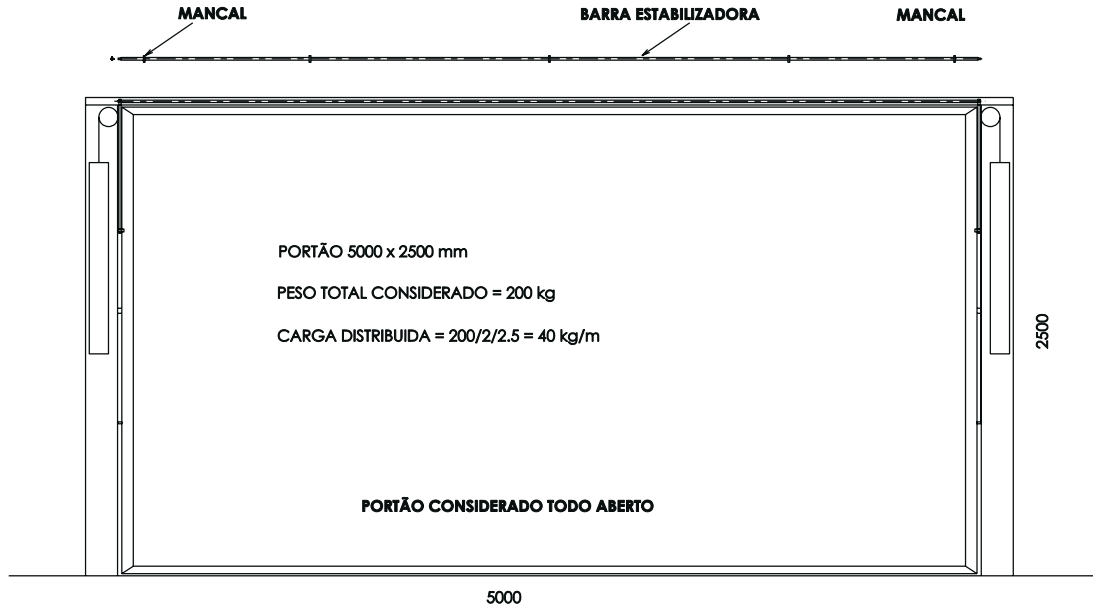
**1) PRESSÃO DE ENSAIO = 50 kg/m²
PORTÃO FECHADO**



**2) PESO PRÓPRIO = 13 kg/m²
PORTÃO ABERTO**



Barra Estabilizadora



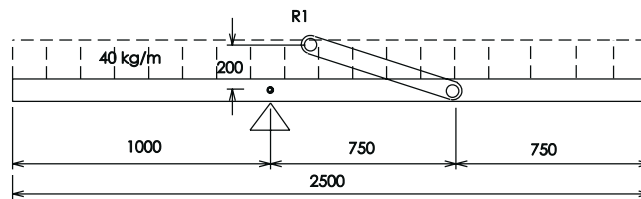
$M = 115 \times L$

$W = 383 \text{ mm}^3$

$TENSÃO = \frac{115 \times L = 10}{383}$

L MÁXIMO = 34 mm

$TENSÃO \text{ CIS} = 115/196 = 0.59 \text{ kg/mm}^2$



REAÇÃO MÁXIMA EM R1 = 115 kg

BARRA ESTABILIZADORA



Area = 196 mm²

J = 3060 mm⁴

Jt = 6118 mm⁴

W = 383 mm³

LIGA 6063 T6

$L_r = 205 \text{ MPa}$ $L_e = 170 \text{ MPa}$ $L_{cis} = 125 \text{ MPa}$

TENSÃO ADM = 10 kg/mm²

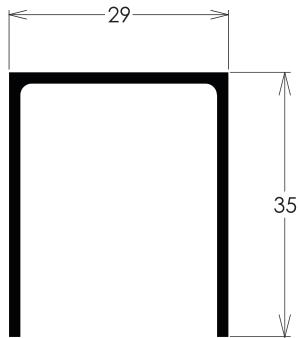
Perfis

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30044	D-01-D-02-D-03
CB296	D-02
CL006	D-16
CL009	D-16
CL010	D-16
CL011	D-16
CM175	D-06
FT013	D-02
FT014	D-02
FT015	D-02
FT016	D-02
FT017	D-02
IN044	D-03
IN205	D-15
LB038	D-08
LB050	D-08
LB071	D-08
LB072	D-09
LB073	D-09
LB074	D-09
LB075	D-10
LB076	D-10
LB077	D-10
LB079	D-11
LB080	D-11
LB081	D-11
LB082	D-12
LB088	D-12
LB089	D-12
LU001	D-05
LU002	D-07
LU011	D-06
LU012	D-06
LU017	D-05
LU018	D-07
LU019	D-05
LU020	D-05
LU021	D-07
LU022	D-07
LU023	D-07

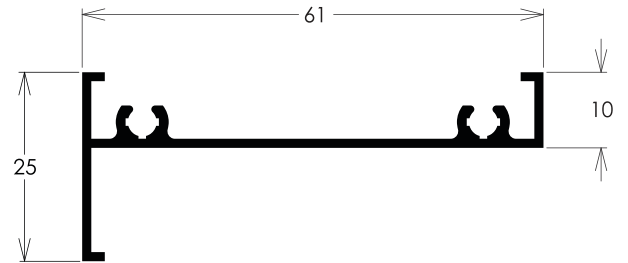
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LU027	D-07
LU028	D-05
LU029	D-05
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LU033	D-14
LU035	D-07
LU067	D-14
LU072	D-14
LU073	D-15
LU074	D-15
LU083	D-15
PC027	D-03
PC031	D-01
PC032	D-01
PC032	D-04
PC033	D-16
PC034	D-04
PC034	D-07
PC035	D-04
PC035	D-07
PC036	D-01
PC037	D-04
PC039	D-04
PC040	D-04
PC041	D-16
PC042	D-16
PC043	D-01
PC044	D-16
PC045	D-04
PC047	D-01
PC063	D-03
PC064	D-03
PC065	D-03
PC639	D-03
PU639	D-01
PU639	D-02
RM013	D-01
RM013	D-03

Portões de Correr

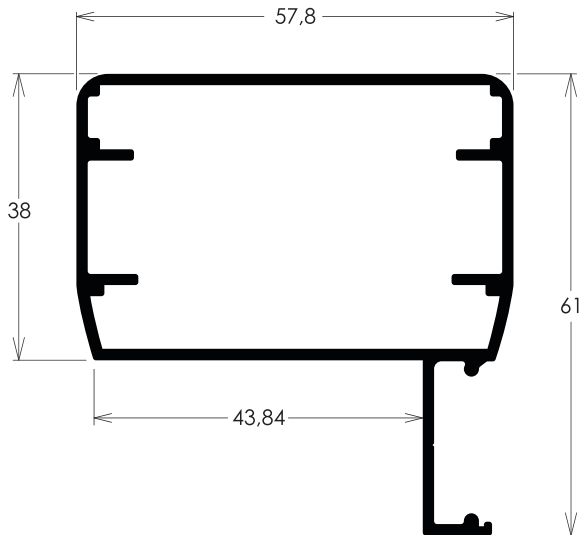
PU639 0,392 Kg/m



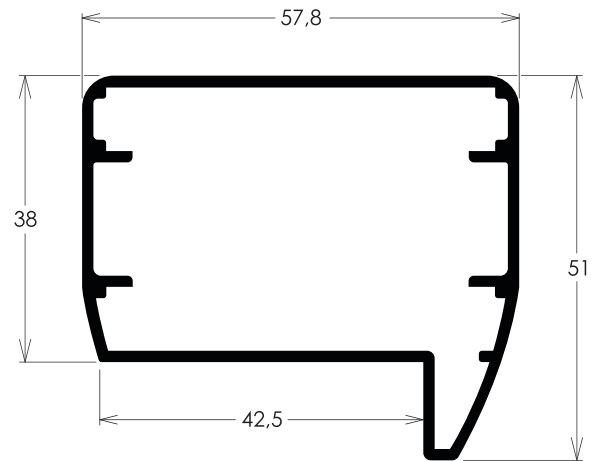
PU036 0,442 Kg/m



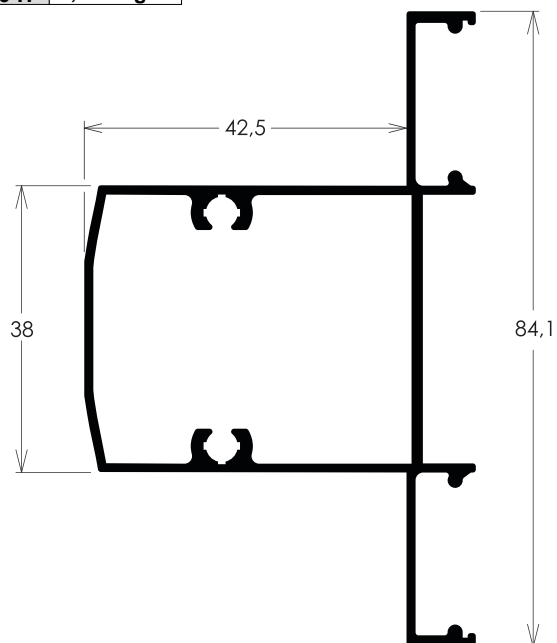
PU031 0,807 Kg/m



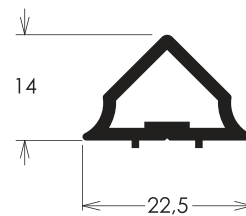
PU043 0,761 Kg/m



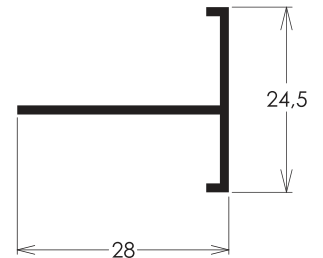
PU047 0,946 Kg/m



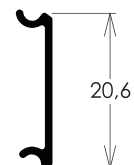
RM013 0,178 Kg/m



30044 0,255 Kg/m

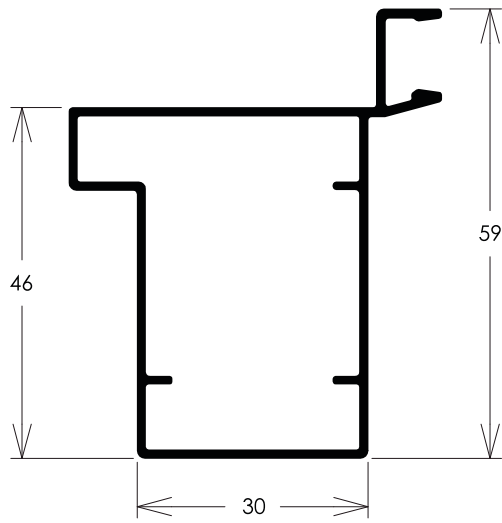


PC032 0,080 Kg/m

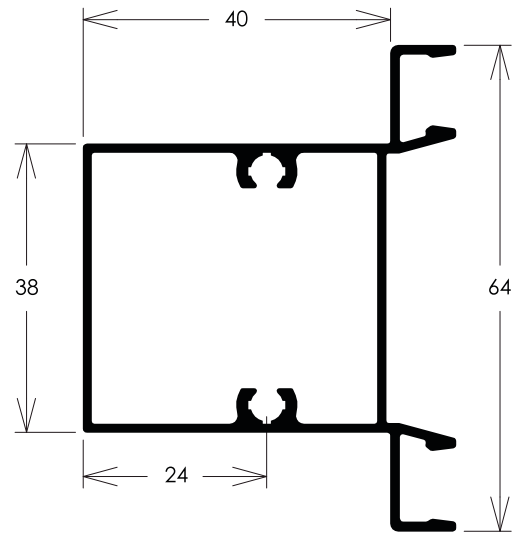


Portões Fit

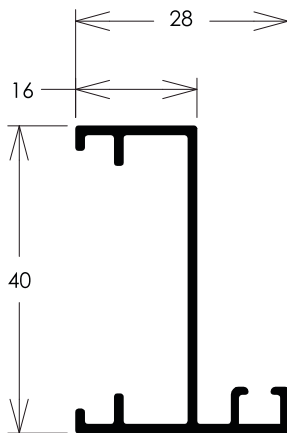
FT015 0,680 Kg/m



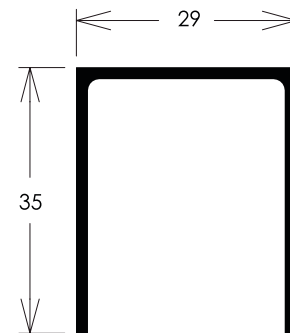
FT016 0,820 Kg/m



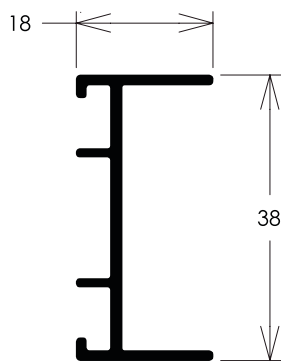
FT014 0,338 Kg/m



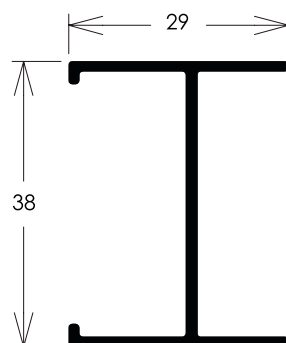
PU639 0,392 Kg/m



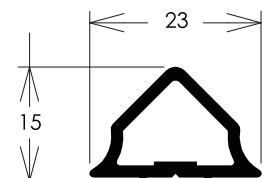
FT017 0,307 Kg/m



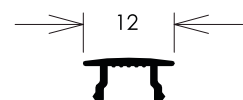
FT013 0,362 Kg/m



30044 0,242 Kg/m

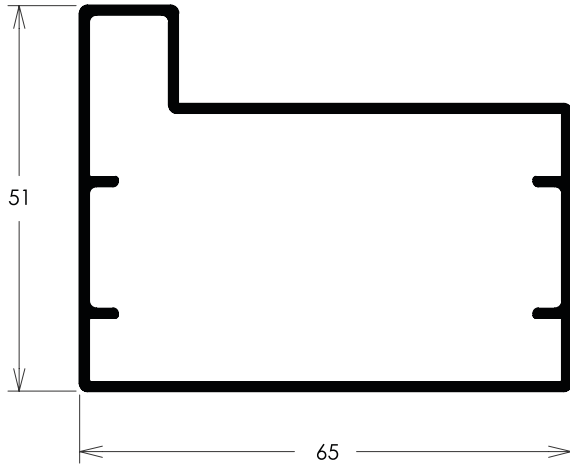


CB296 0,056 Kg/m

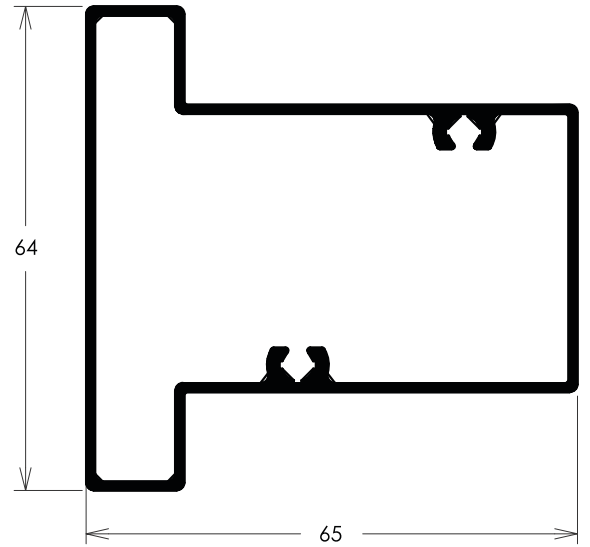


Portões Diversos

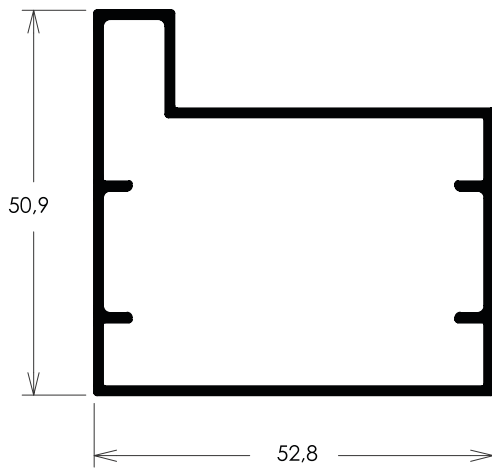
PC027 0,788 Kg/m



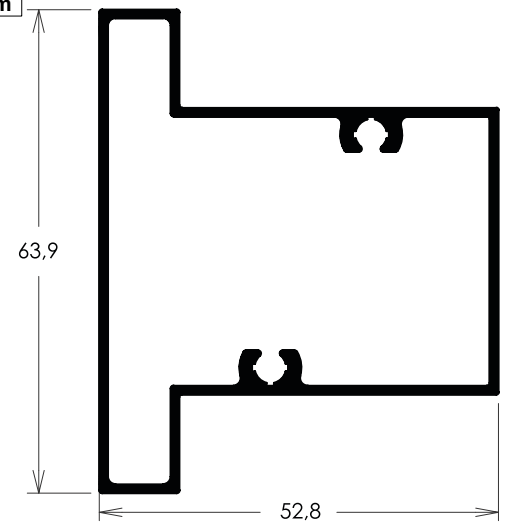
PC063 0,938 Kg/m



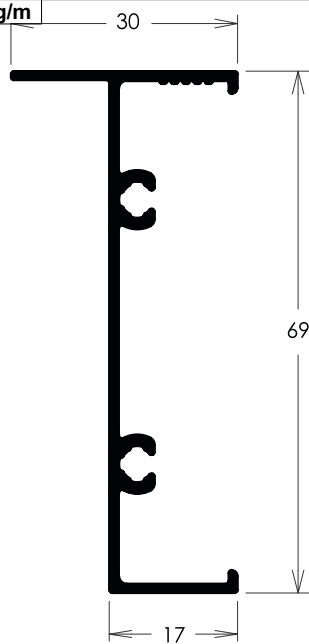
PC064 0,684 Kg/m



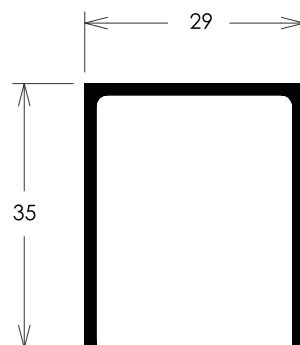
PC065 0,832 Kg/m



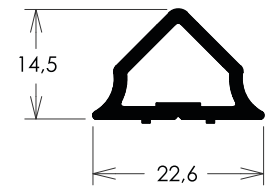
IN044 0,507 Kg/m



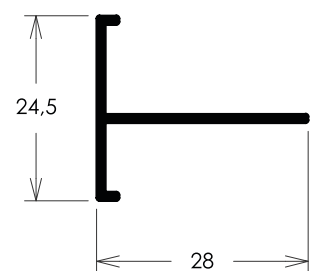
PC639 0,392 Kg/m



30044 0,242 Kg/m



RM013 0,177 Kg/m



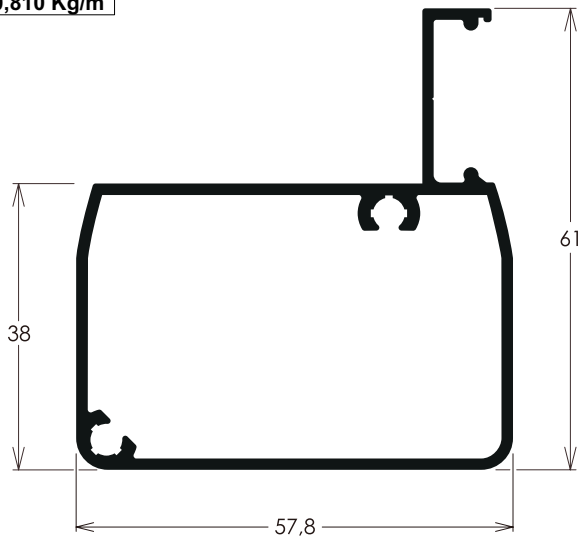
PC037 0,579 Kg/m



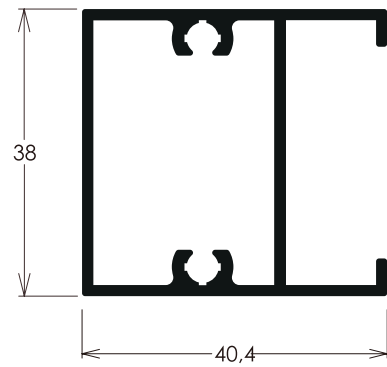
PC039 0,615 Kg/m



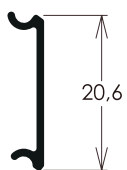
PC045 0,810 Kg/m



PC034 0,718 Kg/m



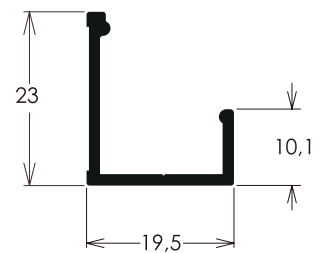
PC032 0,080 Kg/m



PC035 0,199 Kg/m

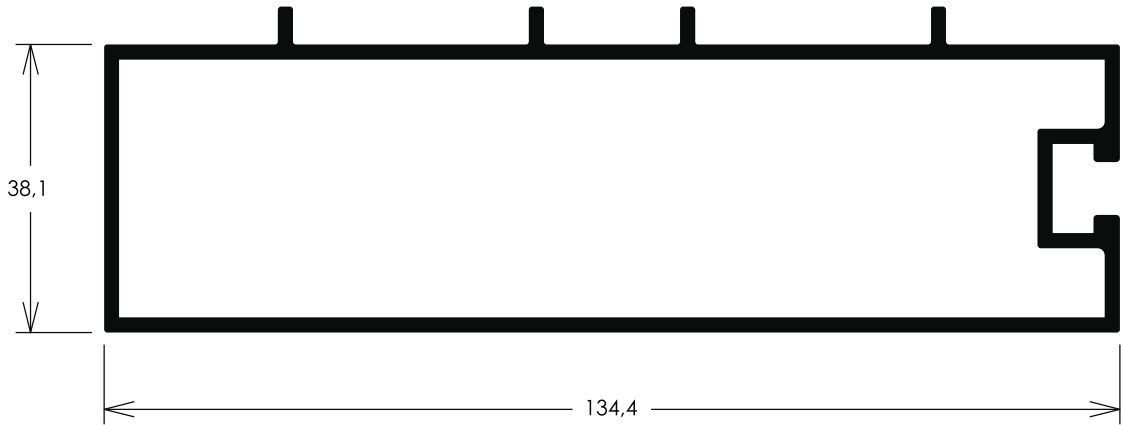


PC040 0,202 Kg/m

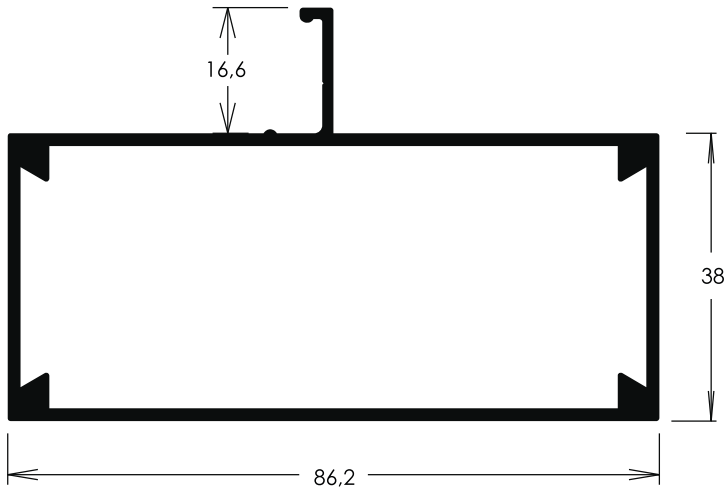


Portões Basculantes

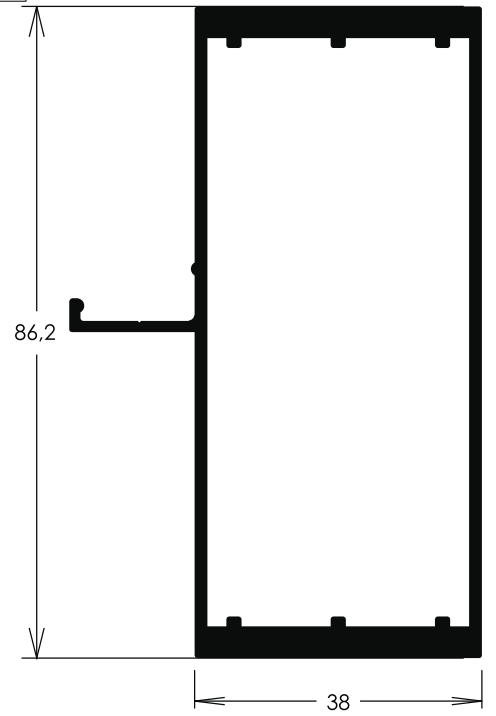
LU017 2,095 Kg/m



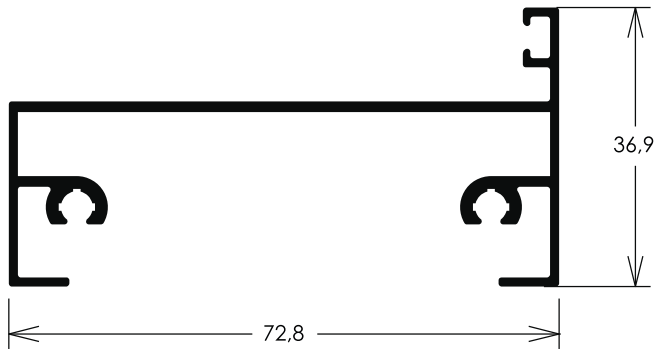
LU019 1,363 Kg/m



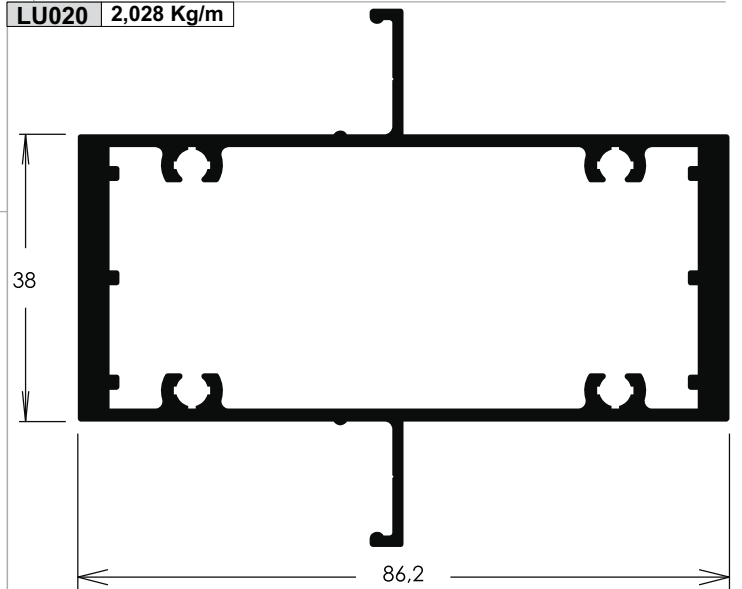
LU001 1,712 Kg/m



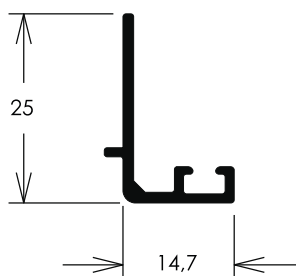
LU028 0,741 Kg/m



LU020 2,028 Kg/m

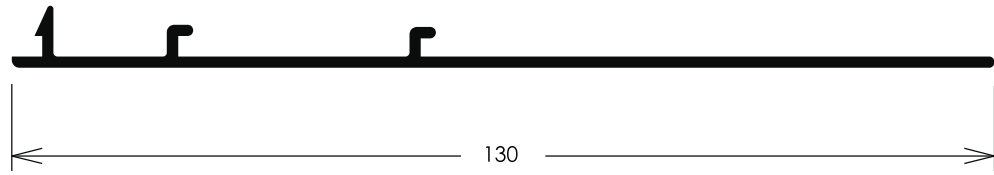


LU029 0,181 Kg/m

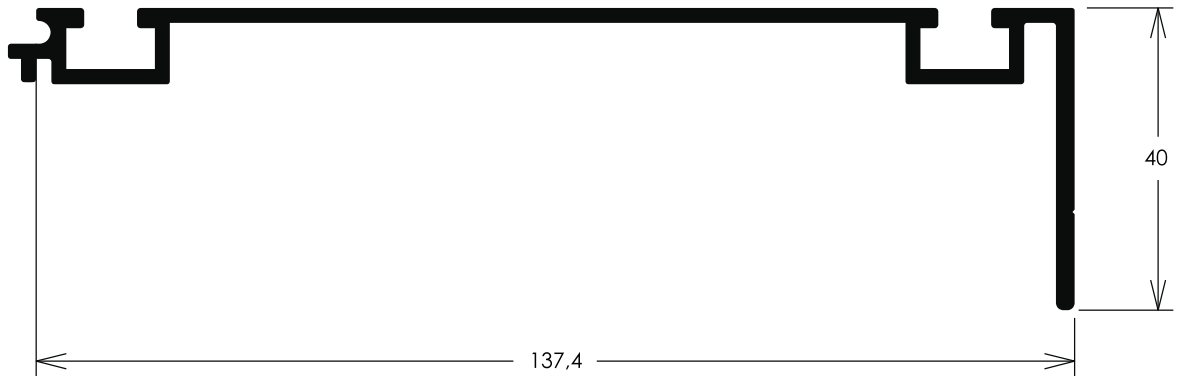


Portões Basculantes

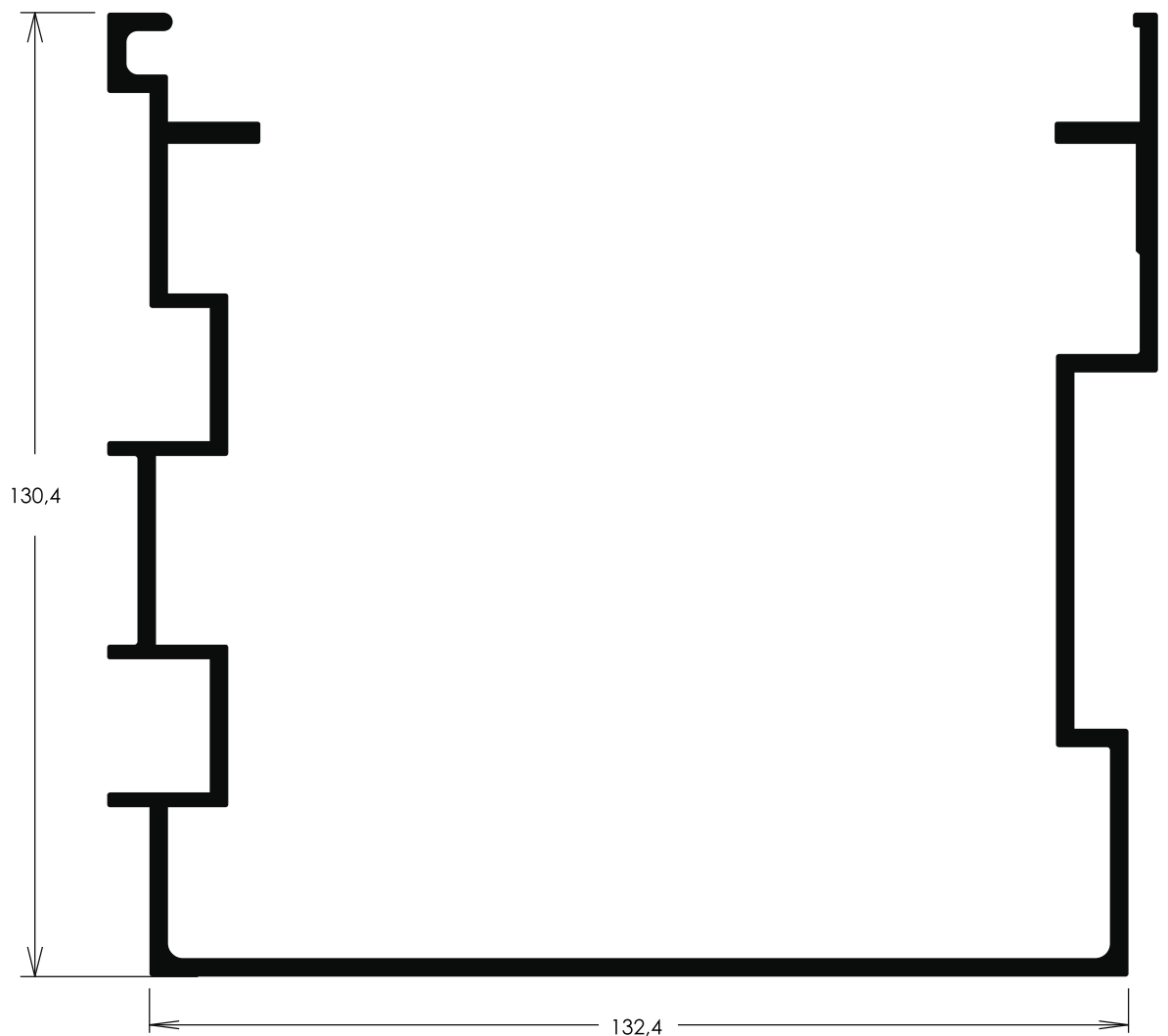
CM175 0,602 Kg/m



LU012 1,293 Kg/m

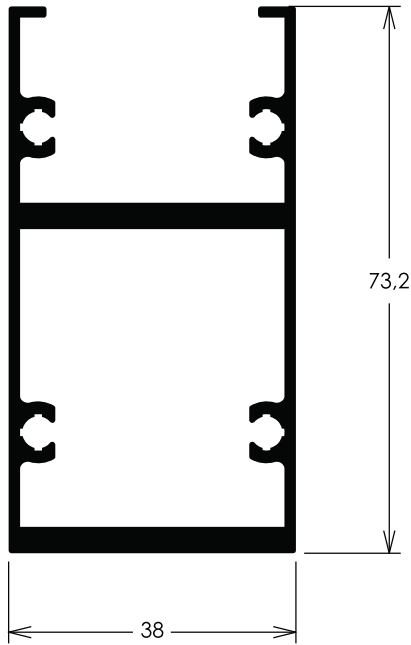


LU011 3,406 Kg/m

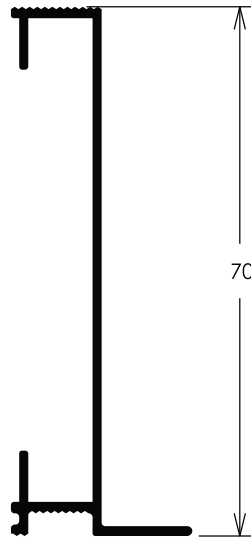


Portões Basculantes

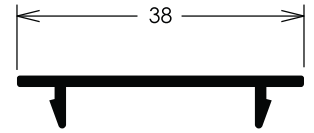
LU002 1,518 Kg/m



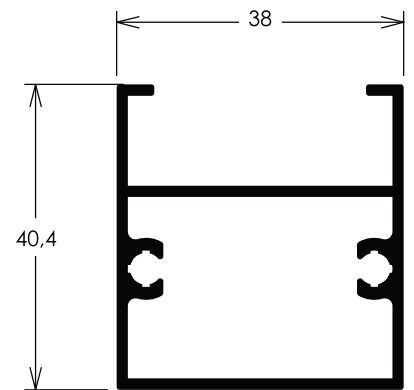
LU027 0,418 Kg/m



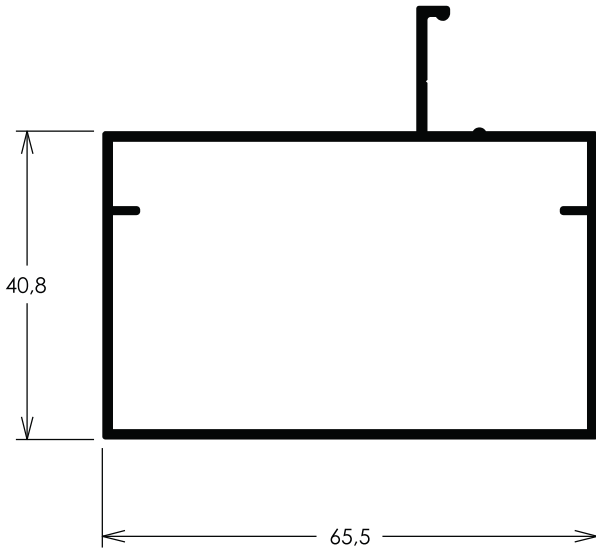
PC035 0,199 Kg/m



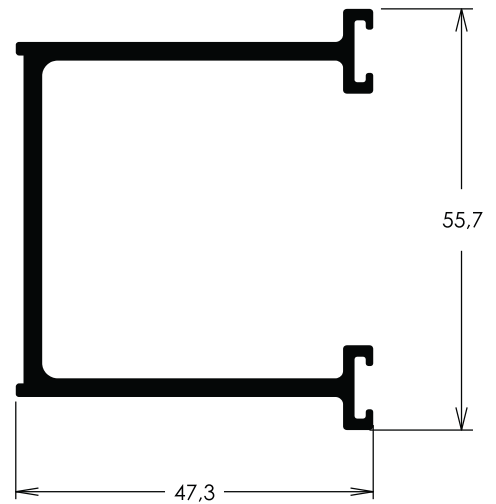
PC034 0,718 Kg/m



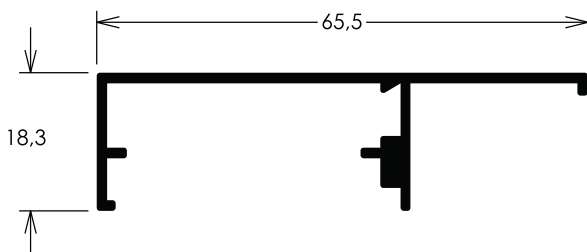
LU021 0,894 Kg/m



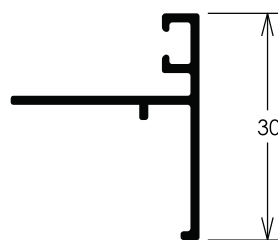
LU018 1,022 Kg/m



LU022 0,547 Kg/m



LU023 0,217 Kg/m

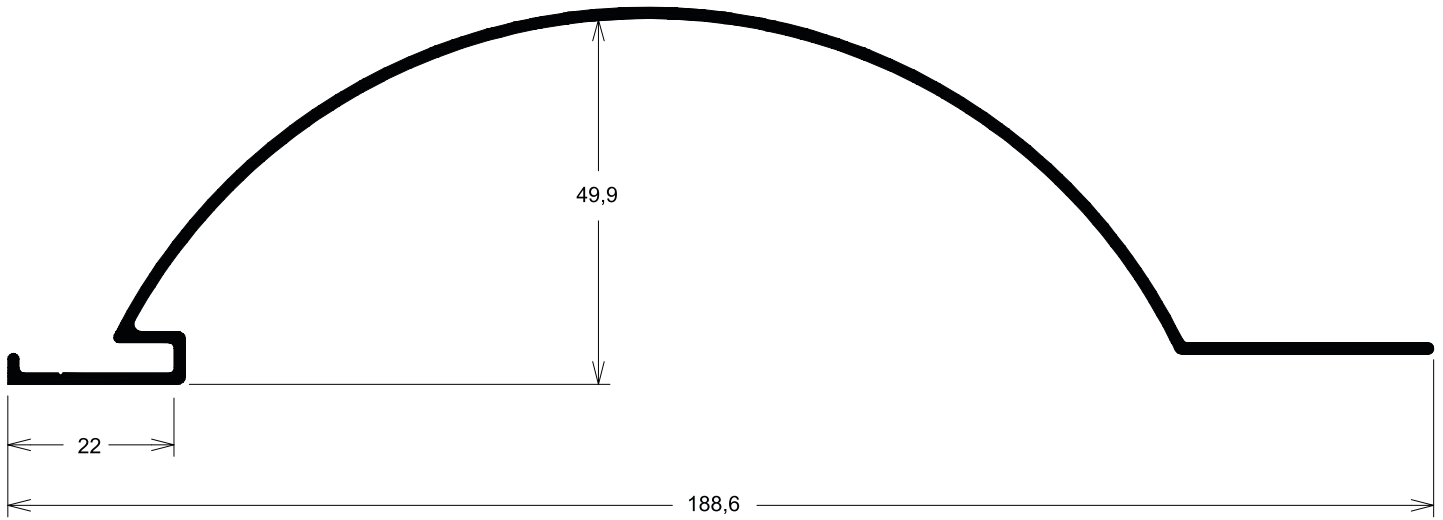


LU035 0,101 Kg/m

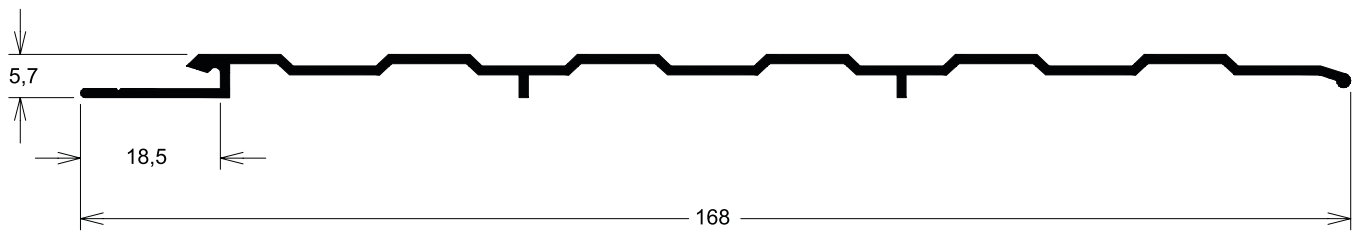


Lambris

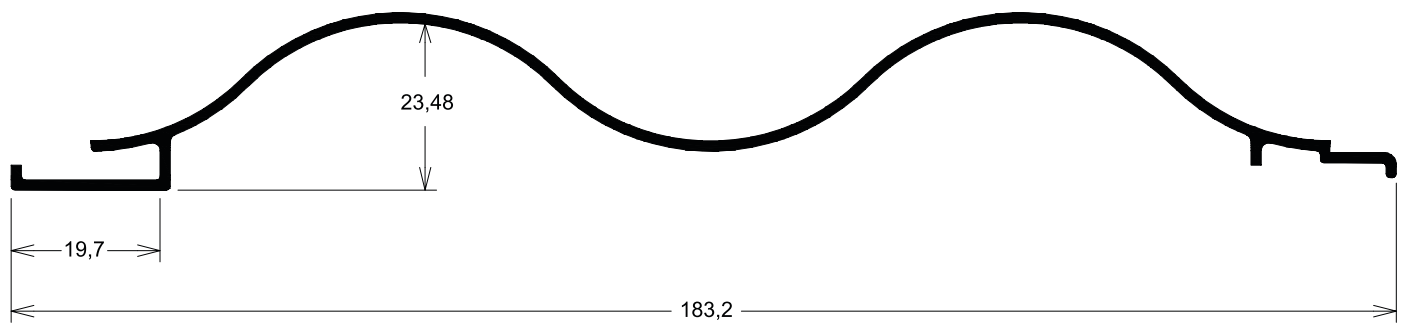
LB038 1,001 Kg/m



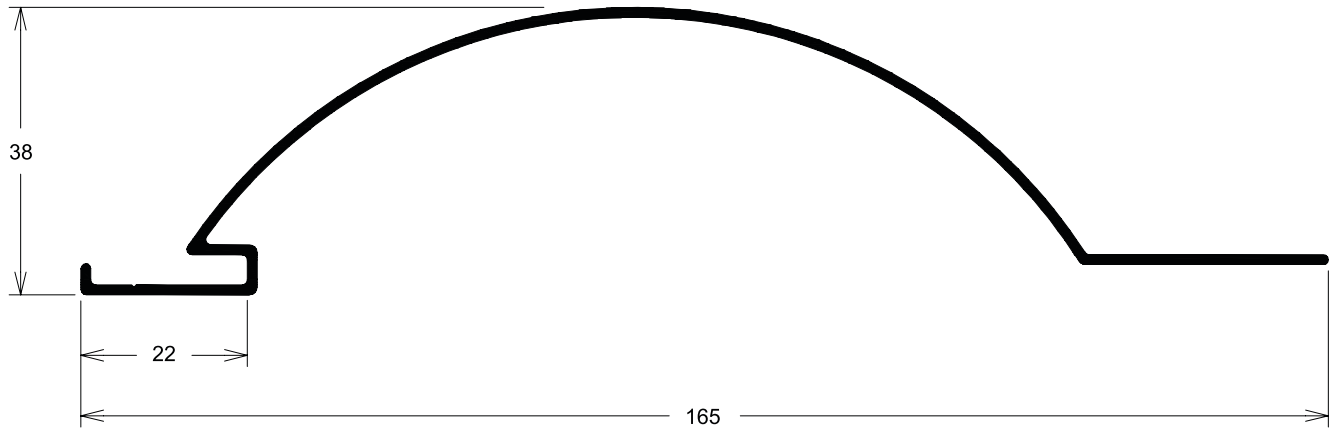
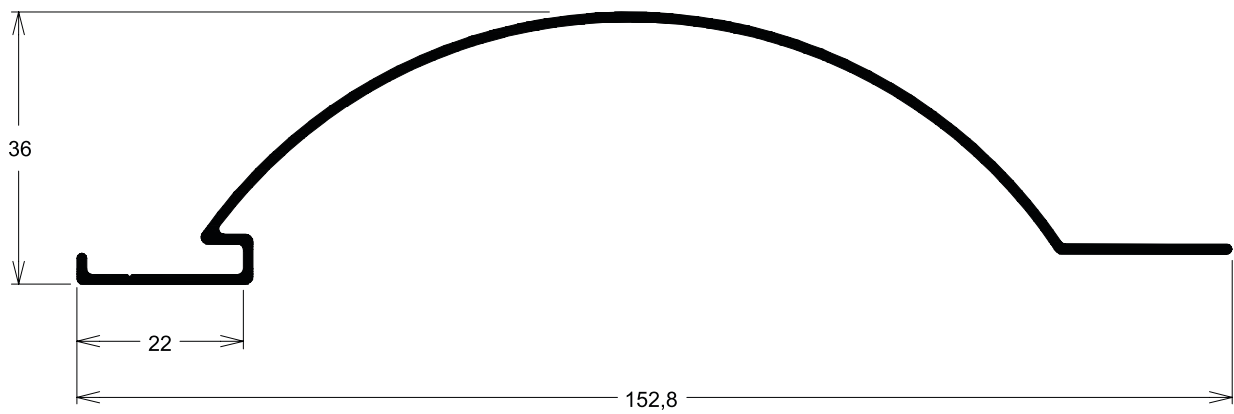
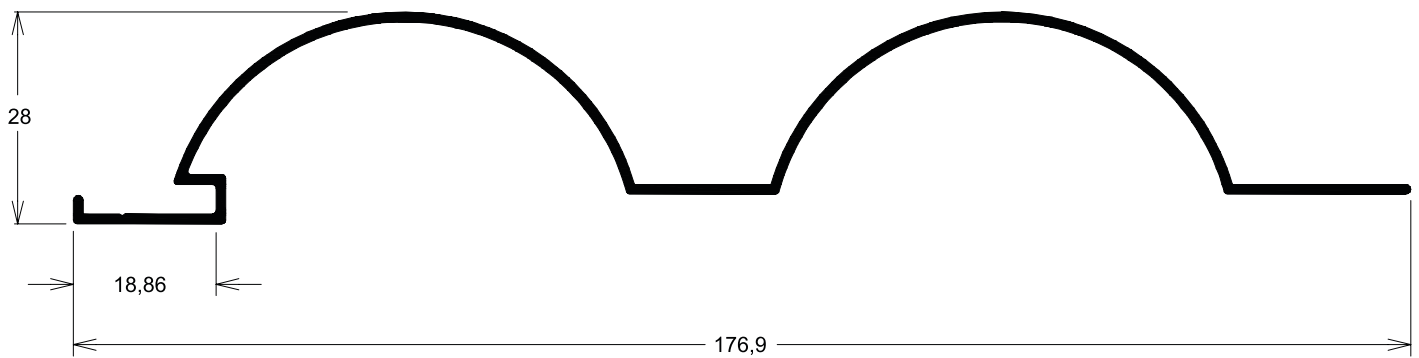
LB050 0,624 Kg/m

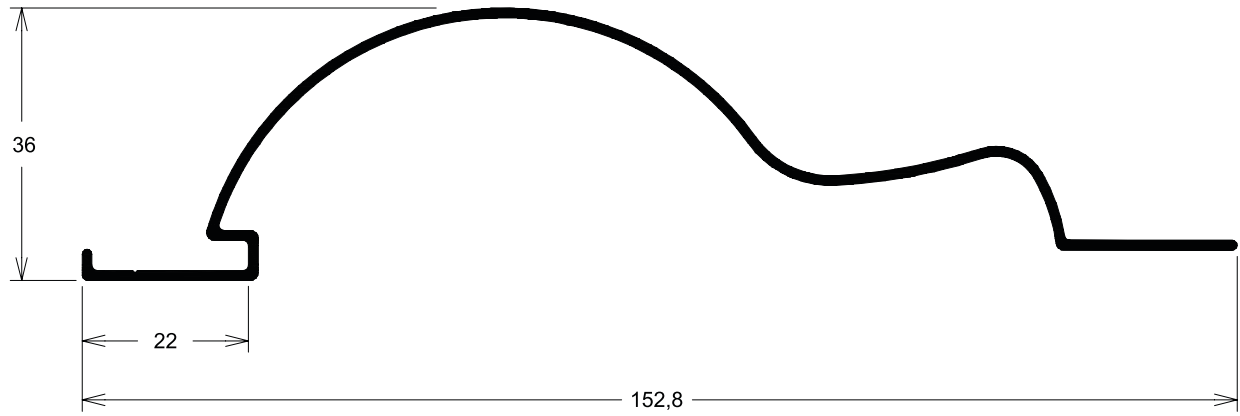
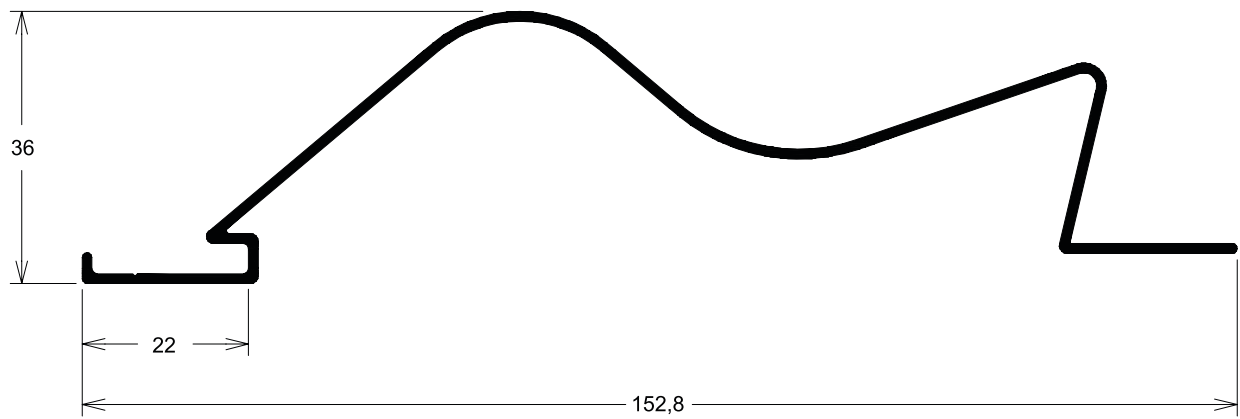
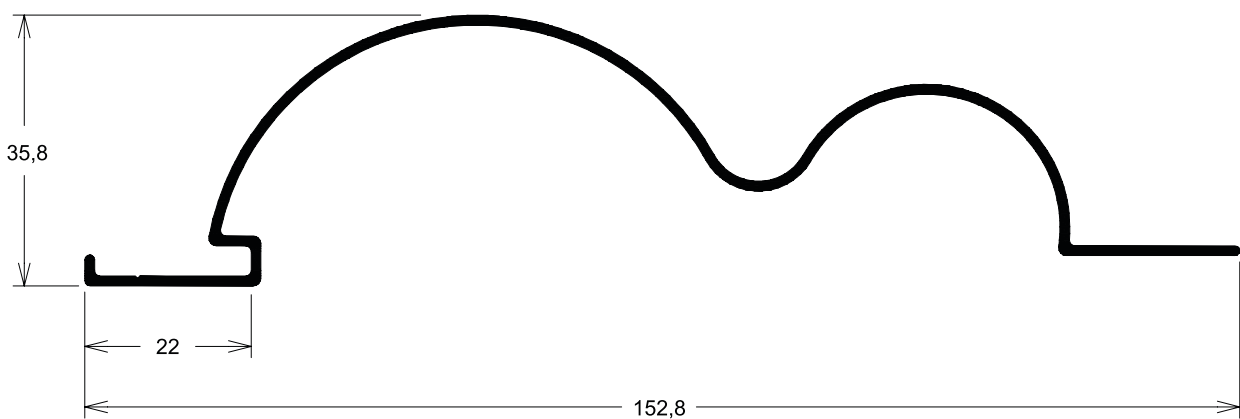


LB071 0,830 Kg/m



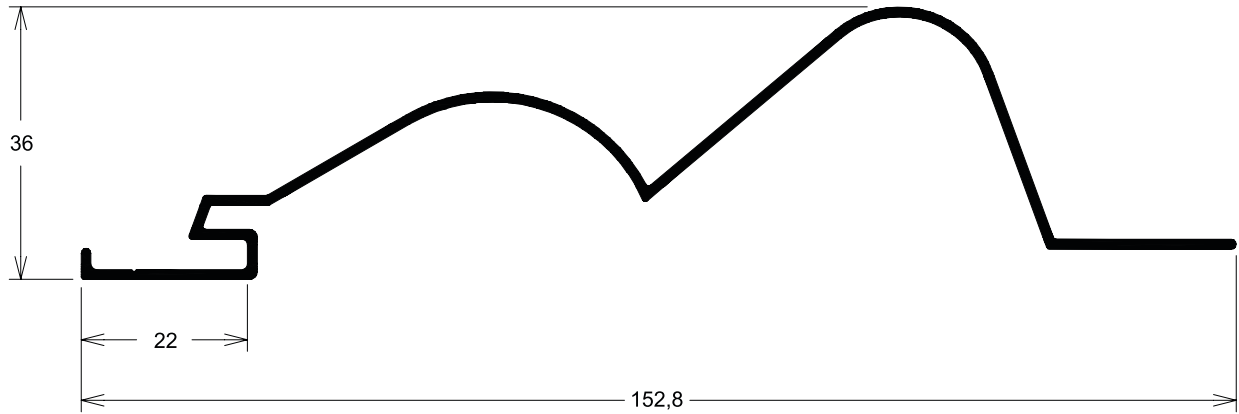
Lambris

LB072 0,742 Kg/m**LB073** 0,676 Kg/m**LB074** 0,831 Kg/m

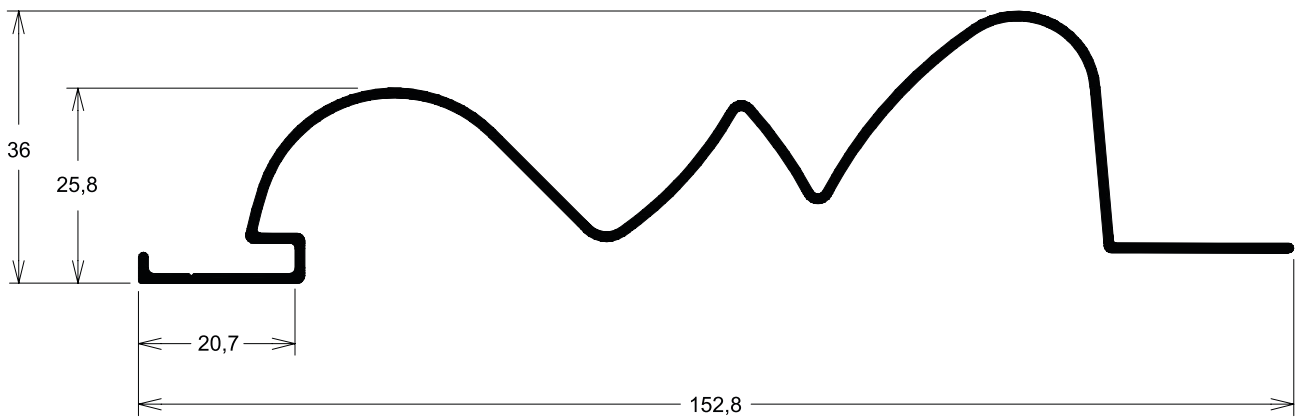
LB075 0,706 Kg/m**LB076 0,766 Kg/m****LB077 0,749 Kg/m**

Lambris

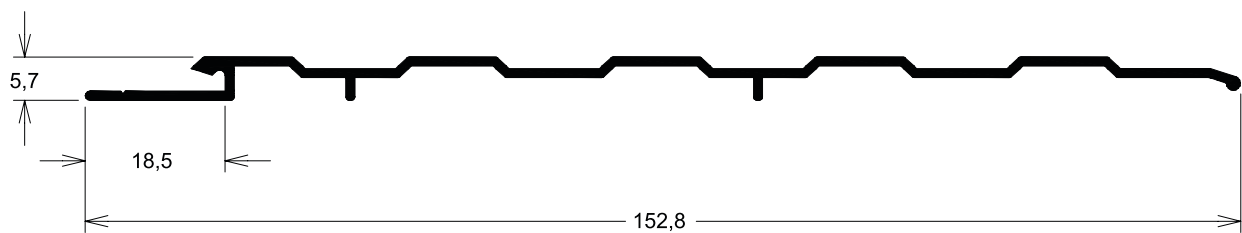
LB079 0,758 Kg/m

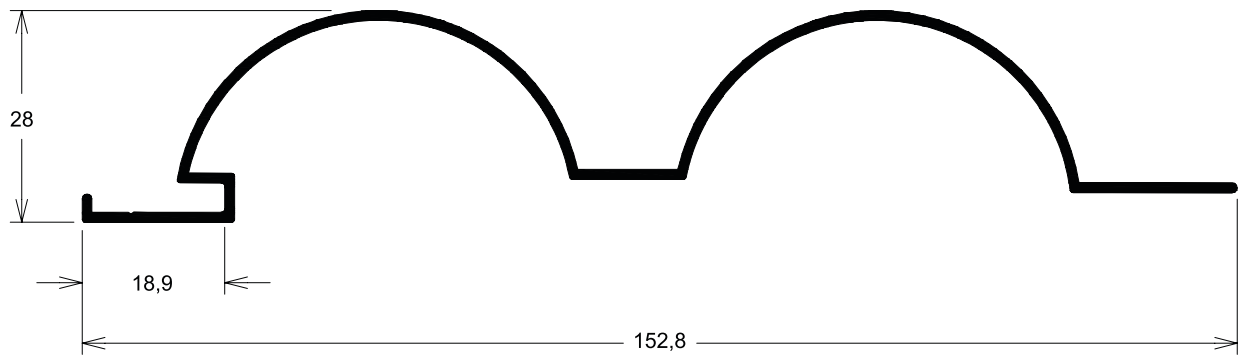


LB080 0,845 Kg/m

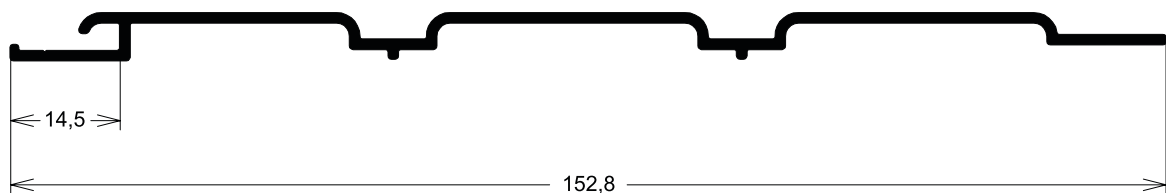


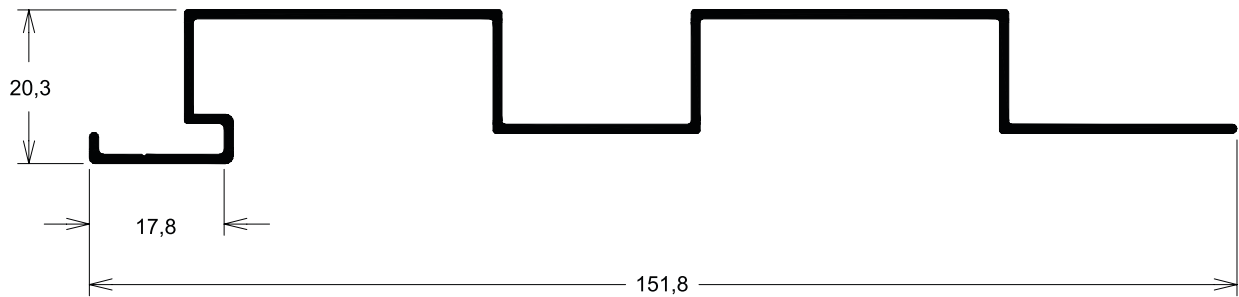
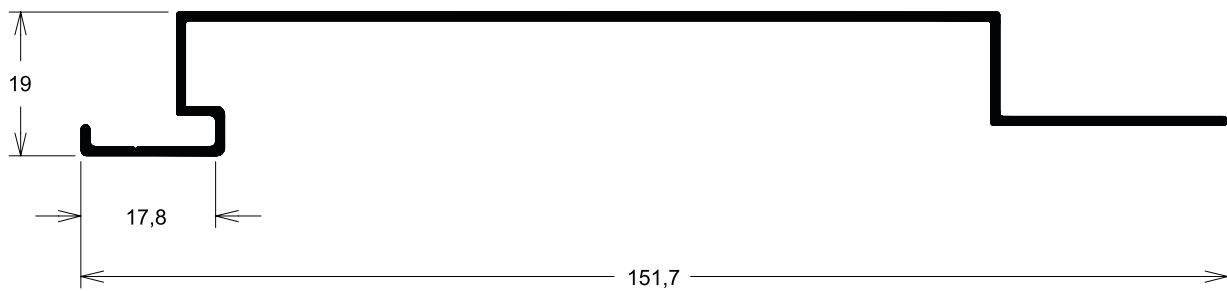
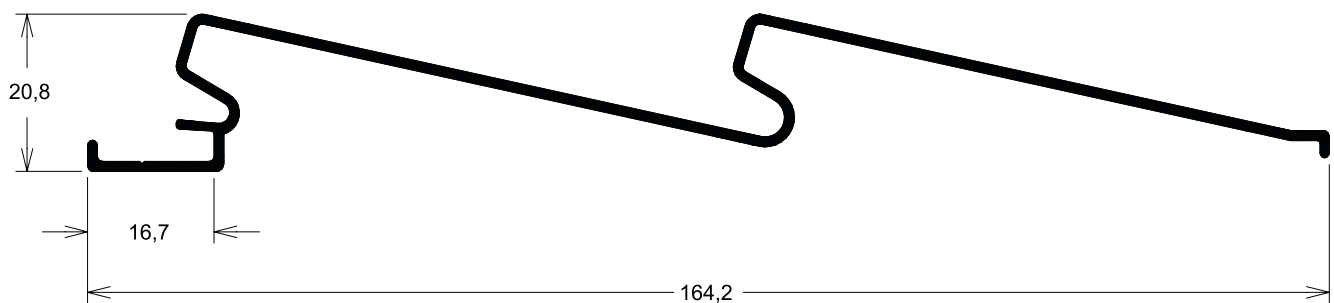
LB081 0,570 Kg/m



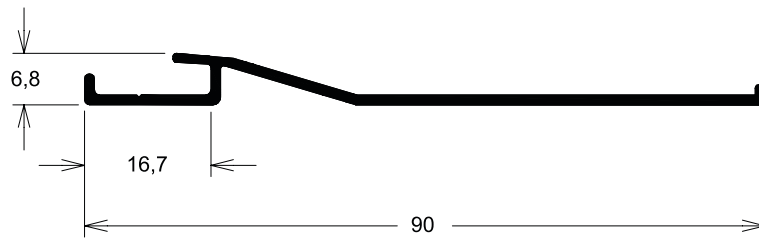
LB082 0,758 Kg/m**LB088 0,745 Kg/m**

Nota: Este perfil substitui o LB036

LB089 0,581 Kg/m

LU030 0,745 Kg/m**LU031 0,637 Kg/m****LU032 0,800 Kg/m**

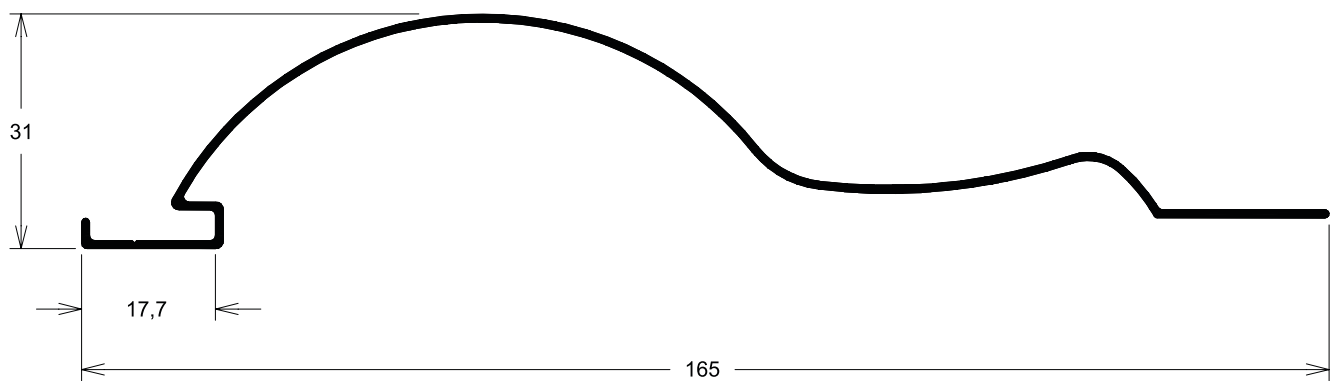
LU033 0,033 Kg/m



LU067 0,582 Kg/m

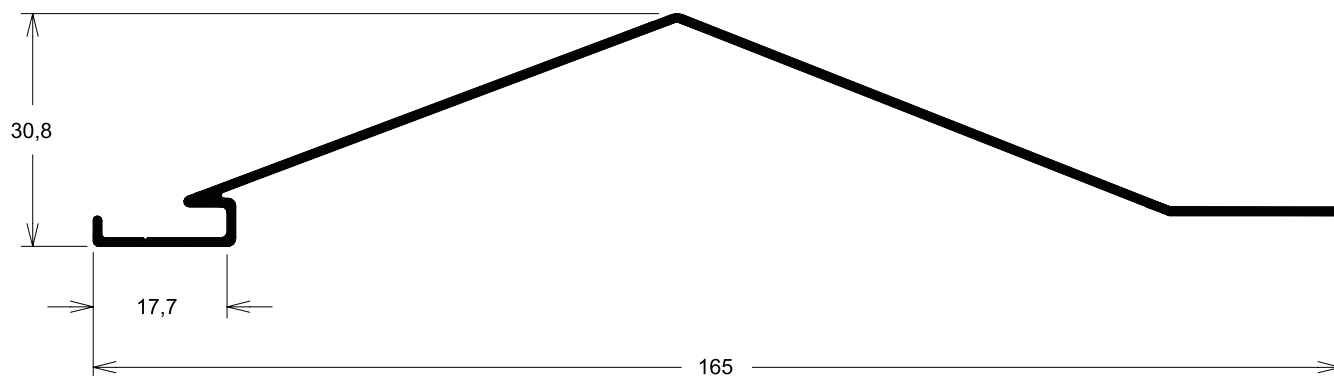


LU072 0,581 Kg/m



Lambris

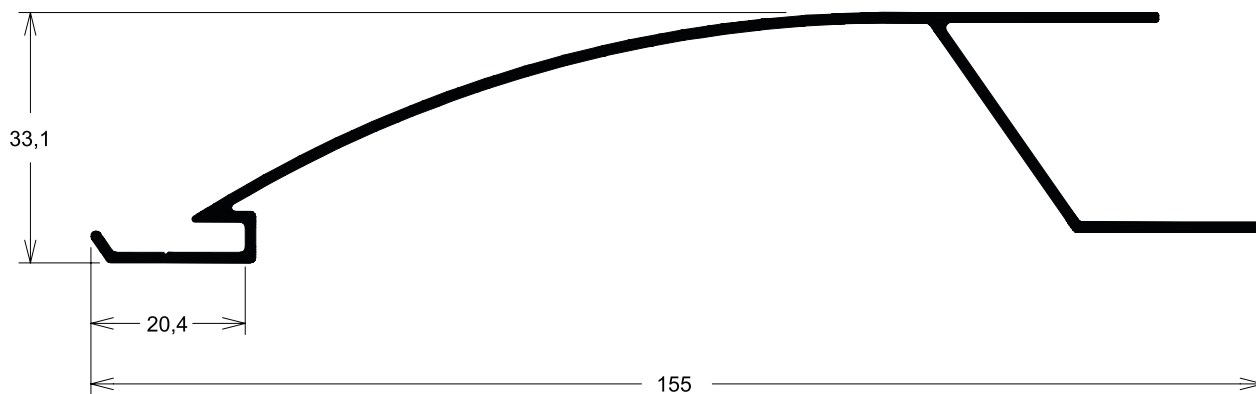
LU073 0,602 Kg/m



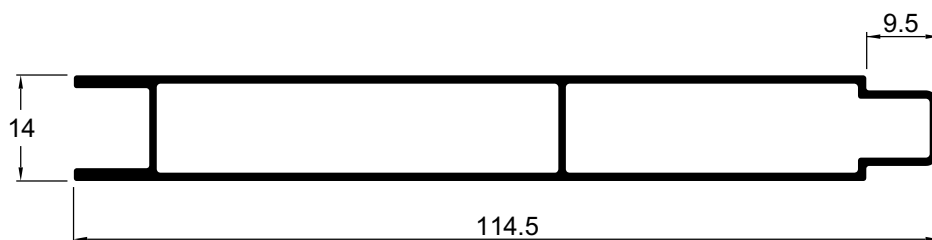
LU074 0,596 Kg/m



LU083 0,839 Kg/m

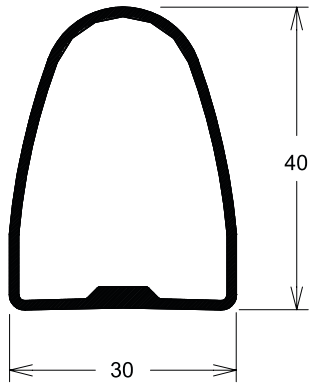


IN205 0,812 Kg/m

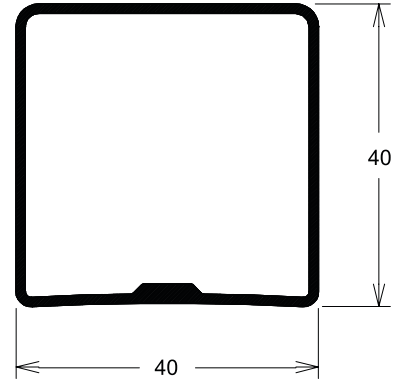


Barrotes e Conexões

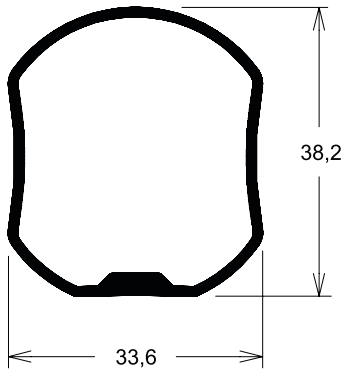
PC033 0,417 Kg/m



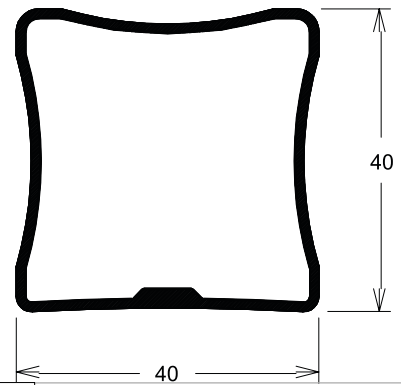
PC041 0,523 Kg/m



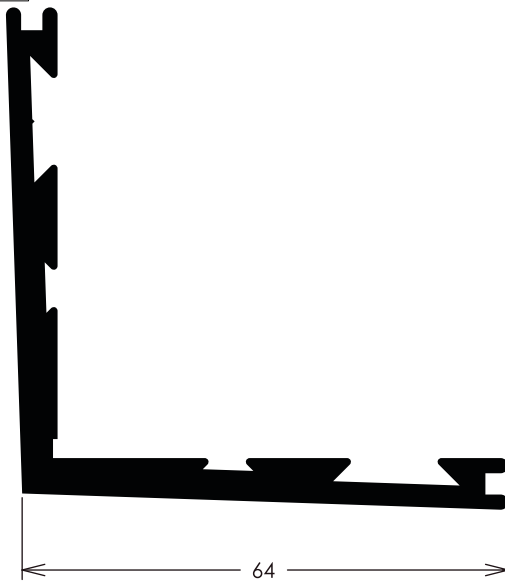
PC042 0,422 Kg/m



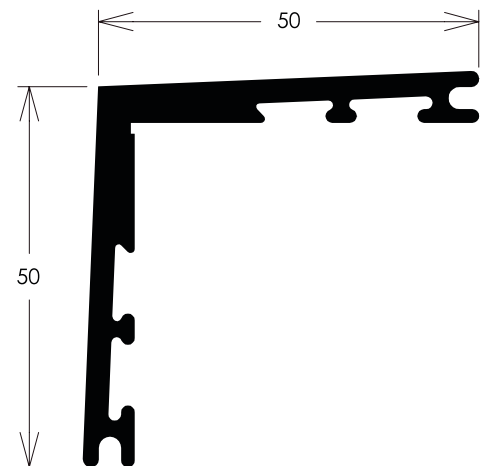
PC044 0,525 Kg/m



CL009 1,616 Kg/m



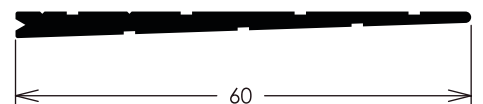
CL006 1,112 Kg/m



CL011 0,317 Kg/m



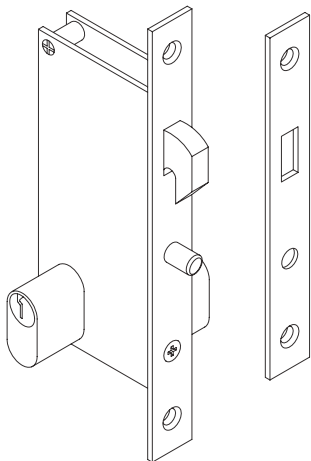
CL010 0,385 Kg/m



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FEC980	E-01
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FRA2080	E-01
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KITBAS002	E-02
KITBAS003	E-02
KITBAS004	E-03
MAC1001	E-01
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PAR1024	E-03
PAR1050	E-03
PAR1056	E-03
PAR1057	E-03
PAR1059	E-03
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PAR436	E-03
PAR437	E-03
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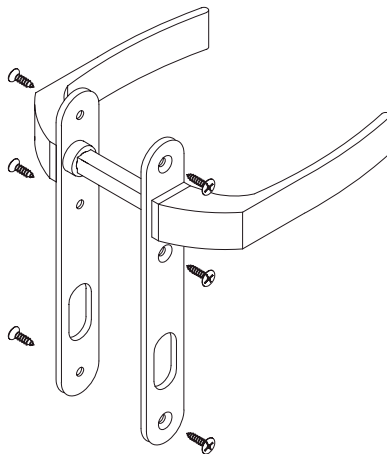
FRA2122

Fechadura - Cilindro 80 mm
Latão Fumê



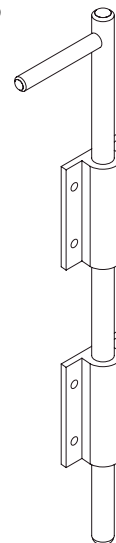
MAC1001

Maçaneta com Espelho
Alumínio Preto



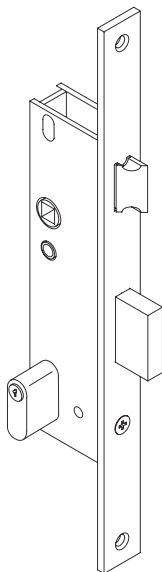
FEC980

Fecho tipo Ferrolho
Alumínio Preto



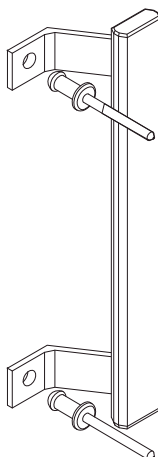
FRA2080

Fechadura - Cilindro 80 mm
Latão Fumê



PUX006

Puxador - Porta de Correr
Alumínio Branco e Preto



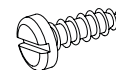
PAR434

Parafuso AA Ø 3,9 x 9,5 mm
Aço Inox



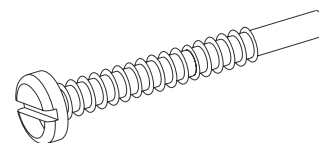
PAR691

Parafuso AA Ø 4,8 x 13 mm
Aço Inox



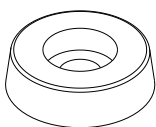
PAR428

Parafuso AA Ø 4,8 x 32 mm
Aço Inox



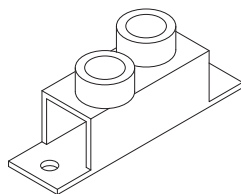
NYL218

Batente da Folha
Nylon Preto



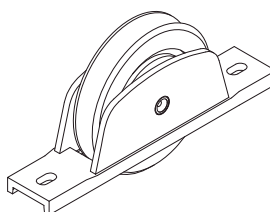
ROL303

Rodízio com suporte
Alumínio Natural



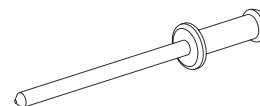
ROL318

Rodízio com rolamento
Alumínio Natural



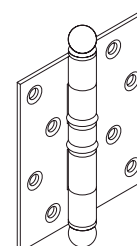
REB115

Rebite Ø 4 x 10,2 mm
Alumínio Natural



DOB863

Dobradiça
Latão Fumê

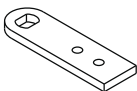
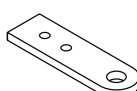
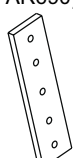
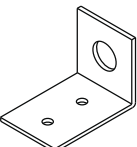
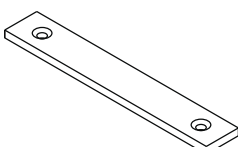
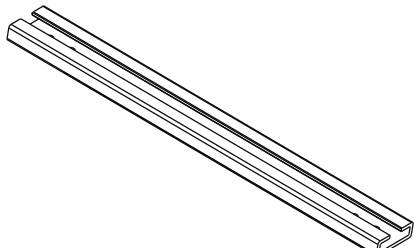
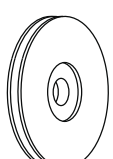
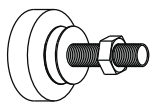
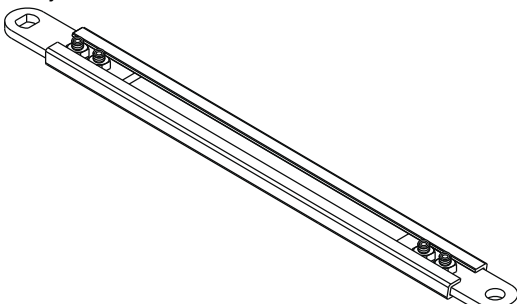
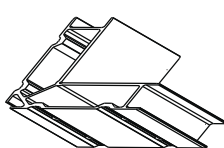
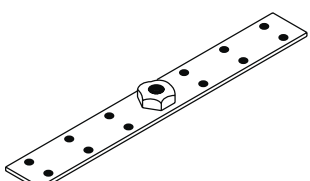
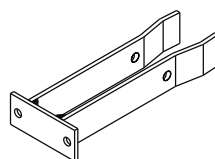
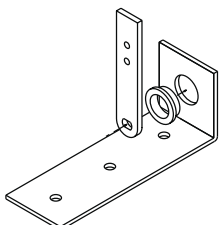
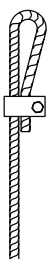
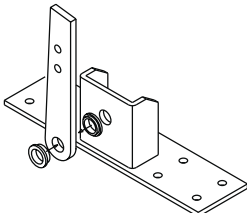
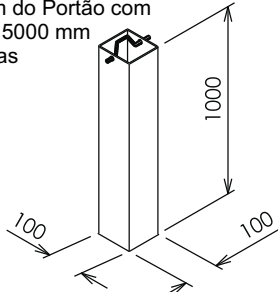


KITBAS001 Kit de acessórios para portão basculante 3 metros

KITBAS002 Kit de acessórios para portão basculante 4 metros

KITBAS003 Kit de acessórios para portão basculante 5 metros

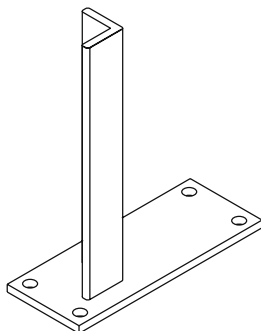
Cores: Preto, Branco e Fosco

<p>Ponteira Superior do Braço</p> <p>02 peças 02 Paraf. c/ Porca (PAR690)</p> 	<p>Ponteira Inferior do Braço</p> <p>02 peças 02 Paraf. c/ Porca (PAR690)</p> 	<p>Barra de Fixação da Travessa</p> <p>Portão até 3 mt = 02 peças Portão até 4 mt = 04 peças Portão até 5 mt = 09 peças 05 Paraf. c / Porca (PAR690)</p> 	
<p>Mancal</p> <p>Portão até 3 mt = 03 peças Portão até 4 mt = 04 peças Portão até 5 mt = 05 peças 02 Paraf. c/ Porca (PAR690)</p> 	<p>Trava da Caixa</p> <p>06 peças 02 Parafusos (PAR1058)</p> 	<p>Complemento do Braço</p> <p>02 peças</p> 	
<p>Roldana com Rolamento</p> <p>02 peças</p> 	<p>Roldana Guia Lat. c/ Rolamento</p> <p>02 peças</p> 	<p>Detalhe de Aplicação</p> <p>02 conjuntos</p> 	
<p>Conexão</p> <p>04 peças 08 Parafusos (PAR1059)</p> 	<p>Suporte para Guia Lateral</p> <p>02 peças 12 Parafusos (PAR691)</p> 	<p>Suporte para Roldana</p> <p>02 peças 02 Paraf. c/ Porca (PAR690)</p> 	
<p>Suporte do Estabilizador</p> <p>02 peças 03 Paraf. c/ Porca (PAR690)</p> 	<p>Cabo de Aço</p> <p>02 conjuntos</p> 	<p>Suporte do Braço Estabilizador</p> <p>02 peças 08 Paraf. c/ Porca (PAR936)</p> 	<p>Contrapeso</p> <p>Caixa c/ Capacidade de até 70 Kg p/ Medida Máxiam do Portão com 2500 x 5000 mm 02 peças</p> 

Suporte do Motor

02 peças
04 Paraf. c/ Porca (PAR690)

KITBAS004 - Kit Motorização
Cores: Preto, Branco e Fosco



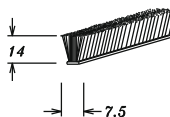
PAR1060

Paraf. Cab. Abaulada
c/ Sext. Interno
M6 x 15 Inox 304



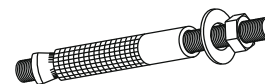
FIT316

Fita Vedadora
Base 7,5 x 14 mm
Preta



CHU795

Chumbador c/ Porca
Arruela e Prisioneiro
9,5 x 80 mm



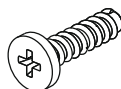
PAR437

Paraf. AA CP 3,5 x 9,5 mm
Aço Inox Natural



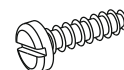
PAR1024

Paraf. AA CP Philips
4,2 x 13 mm
Aço Inox Natural



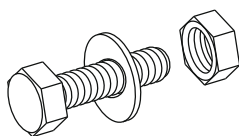
PAR936

Paraf. AA CP 4,5 x 16 mm
Aço Inox Natural



PAR1057

Paraf. Sext. 1/2" x 1,1/2"
Porca e Arruela
Aço Inox Natural



PAR1058

Paraf. AA CX Philips
4,2 x 13 mm
Aço Inox Natural



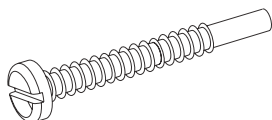
PAR1056

Paraf. AA CX Philips
4,8 x 19 mm
Aço Inox Natural



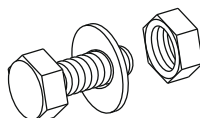
PAR436

Paraf. AA 3,9 x 28 mm
Aço Inox



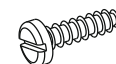
PAR1059

Paraf. Sext. 1/4" x 5/8"
Porca e Arruela
Aço Inox Natural



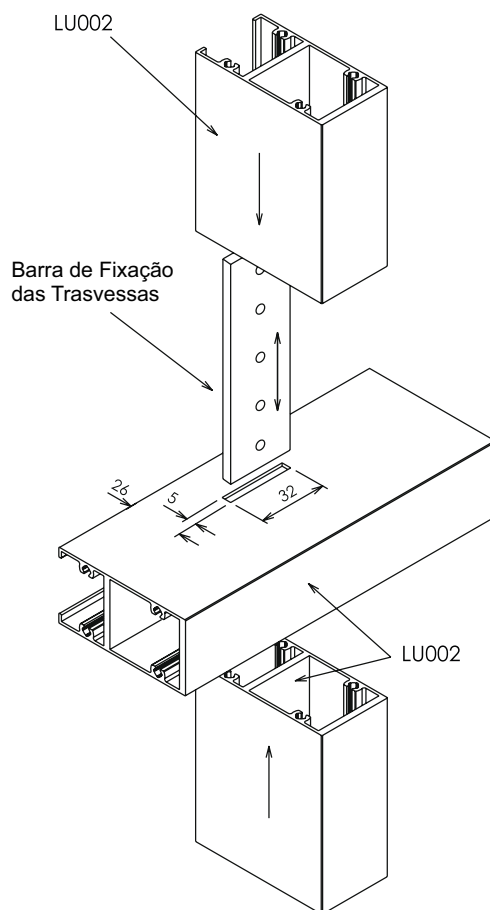
PAR1050

Paraf. AA 3,5 x 16 mm
Aço Inox Natural

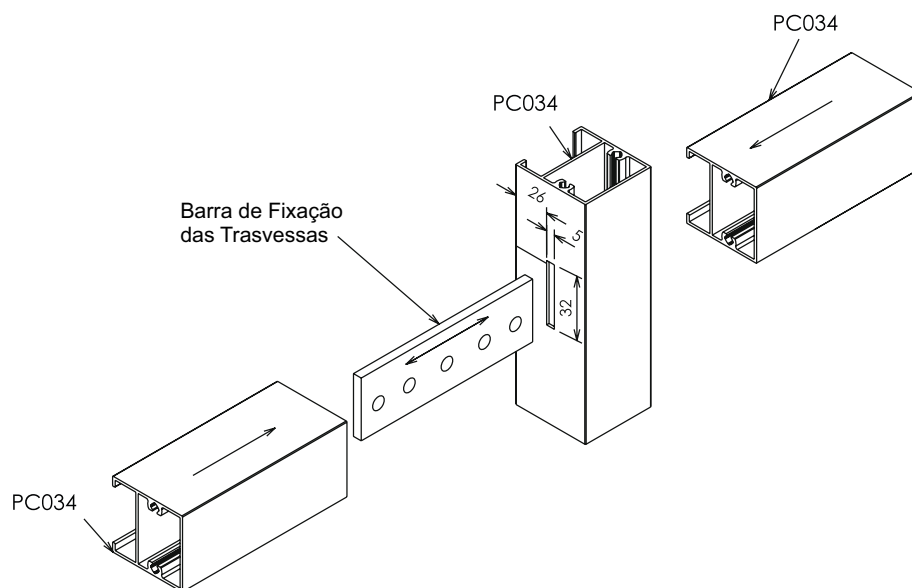


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INSTRUÇÕES DE USINAGEM E MONTAGEM PARA PORTÕES DE 3 METROS	F-01
BARRA ESTABILIZADORA	F-02
ENCAIXE SUPERIOR NA GUIA PARA APOIO DA ROLDANA	F-03
ENCAIXE PARA APOIO DA ROLDANA	F-04
USINAGEM DA TRAVESSA	F-05
DETALHE CONSTRUTIVO PORTÃO BASCULANTE	G-01
ESQUEMA PORTÃO MOTORIZADO	G-02
ESQUEMA PORTÃO MANUAL	G-03
DEFINIÇÃO DA MEDIDA DO BRAÇO	G-04
DETERMINAR O PONTO DE GIRO	G-05

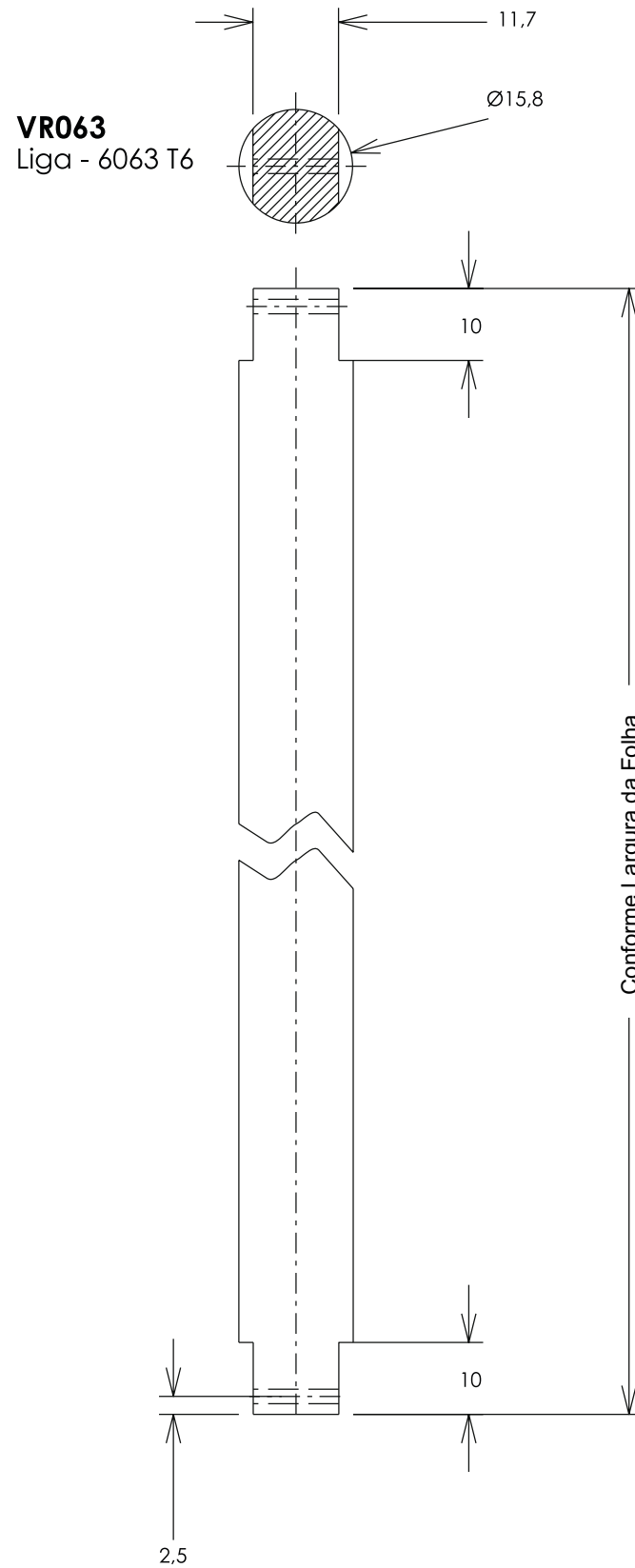
Instruções de Usinagem e Montagem para Portões de 5 metros



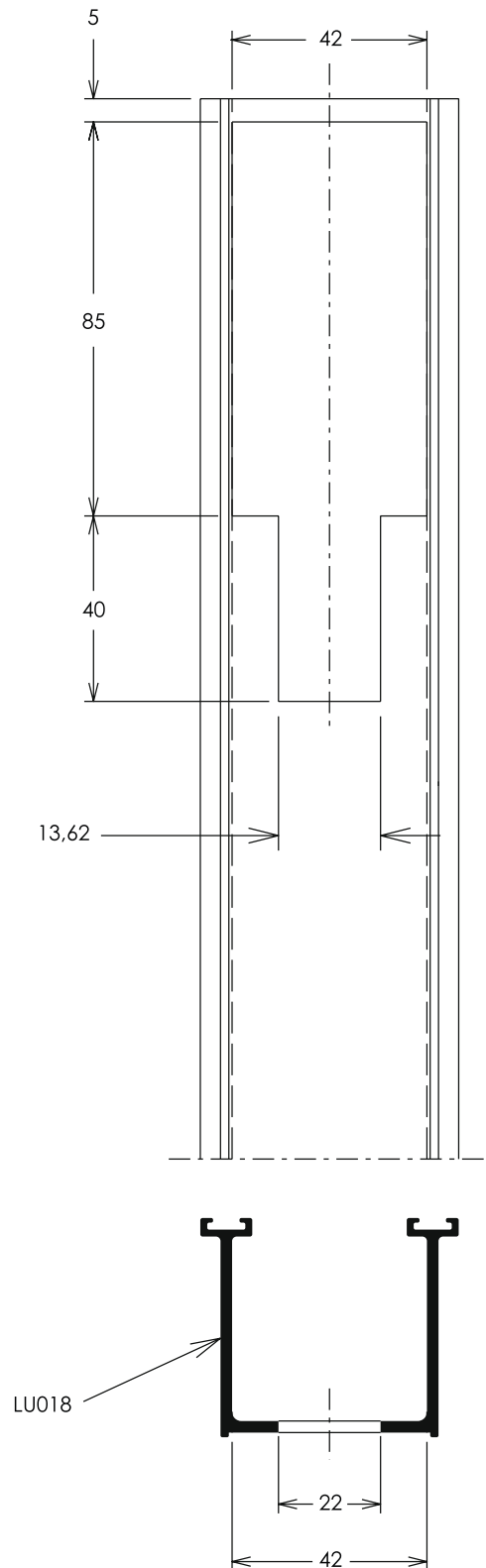
Instruções de Usinagem e Montagem para Portões de 3 metros



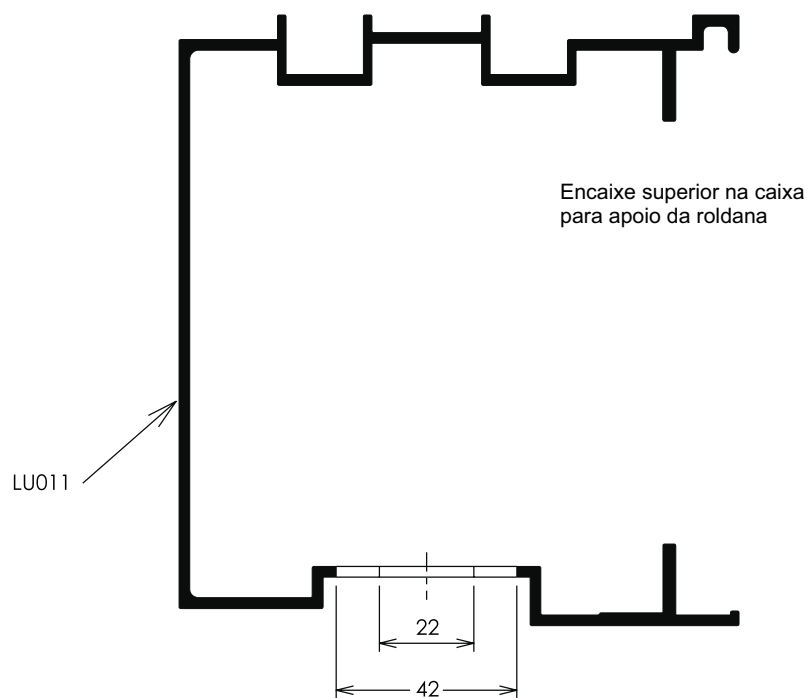
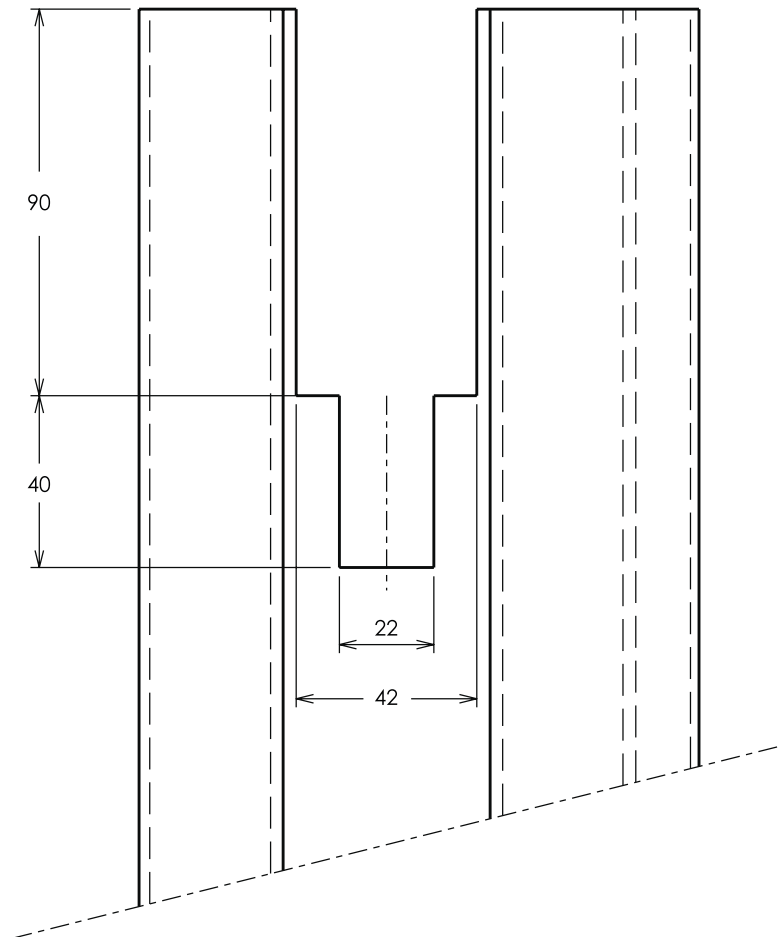
Barra Estabilizadora



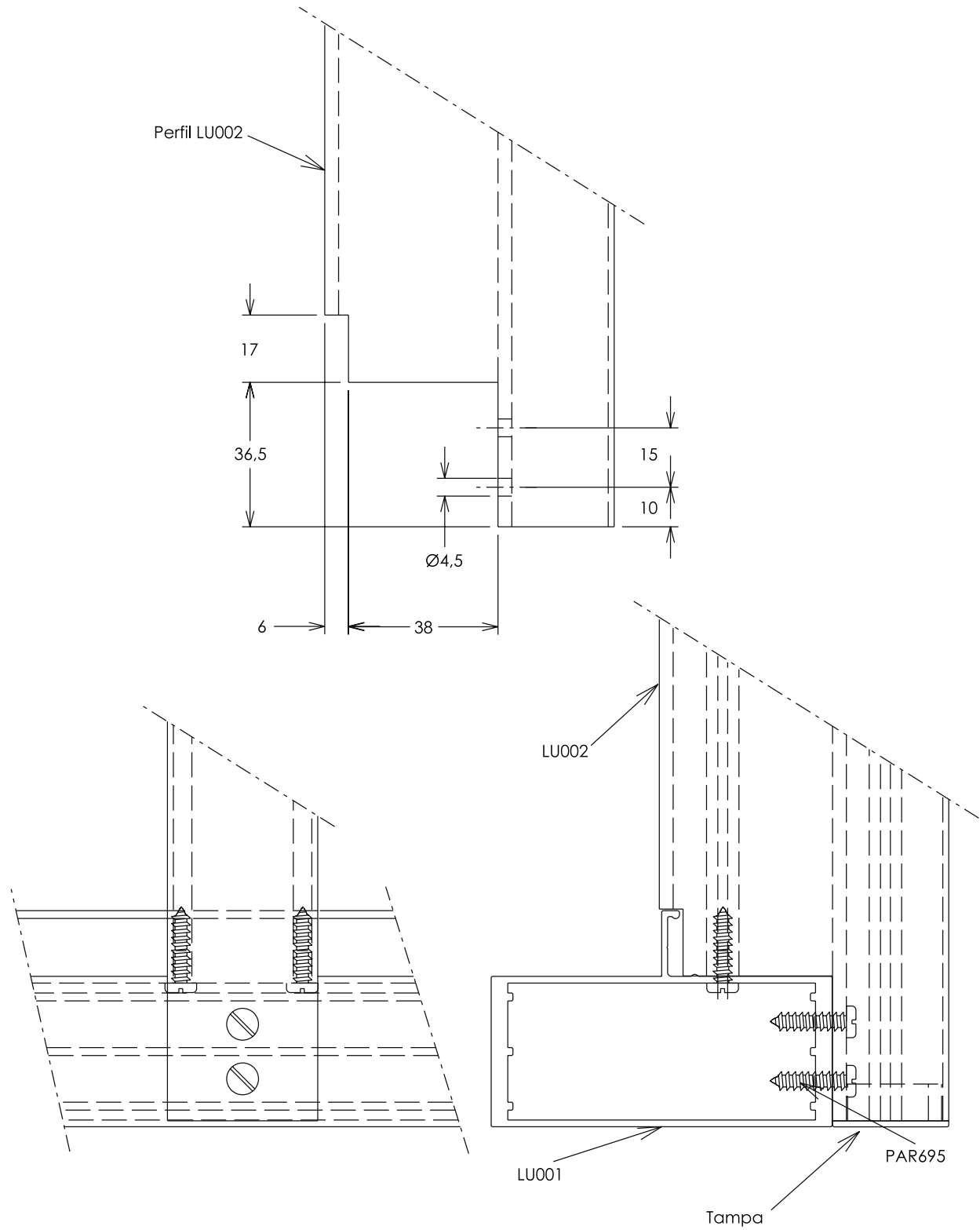
Encaixe Superior na Guia para Apoio da Roldana



Encaixe para Apoio da Roldana

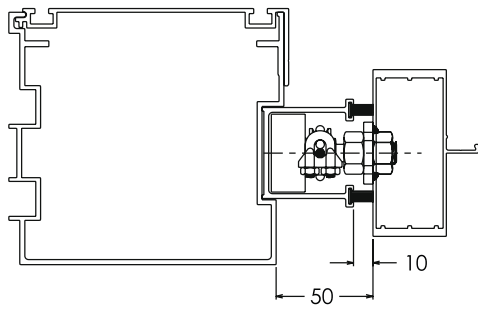


Usinagem da Travessa

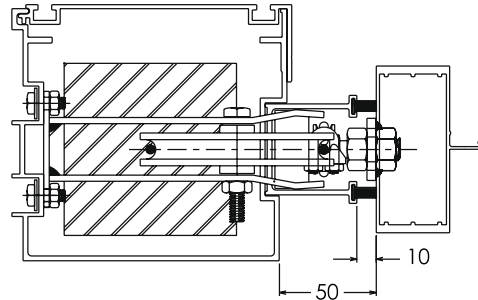


Detalhes Construtivos

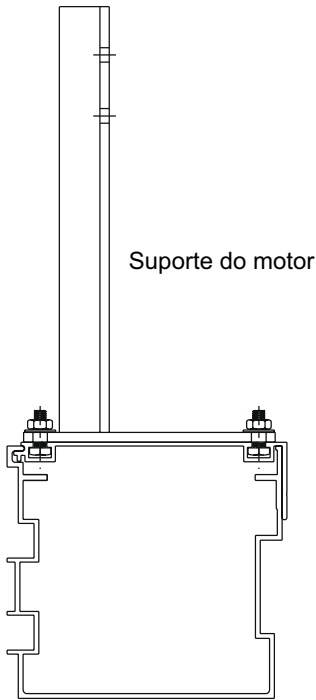
Detalhe Construtivo Portão Basculante



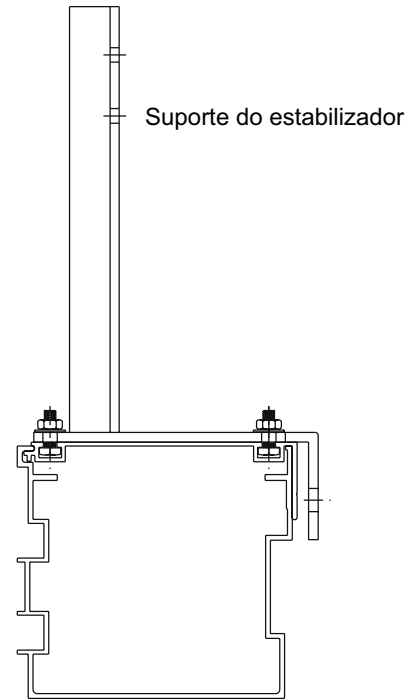
Guia lateral



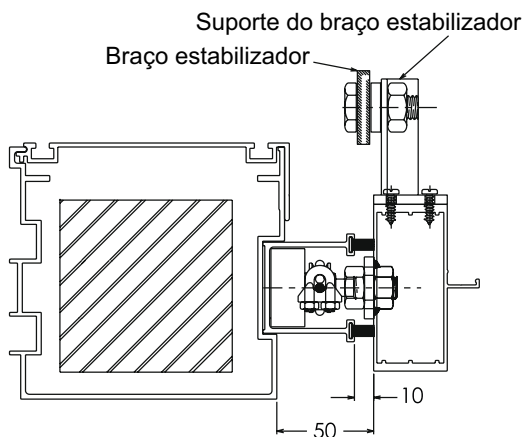
Conjunto da roldana



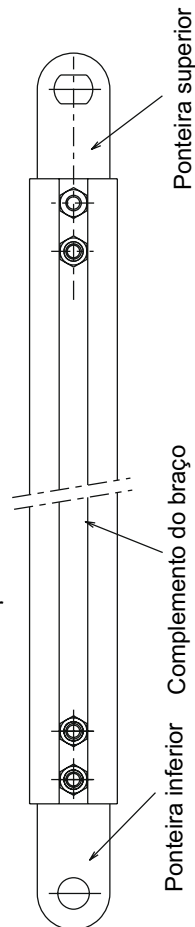
Suporte do motor



Suporte do estabilizador



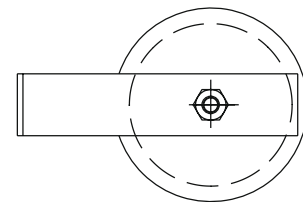
Conjunto do braço estabilizador



Ponteira superior

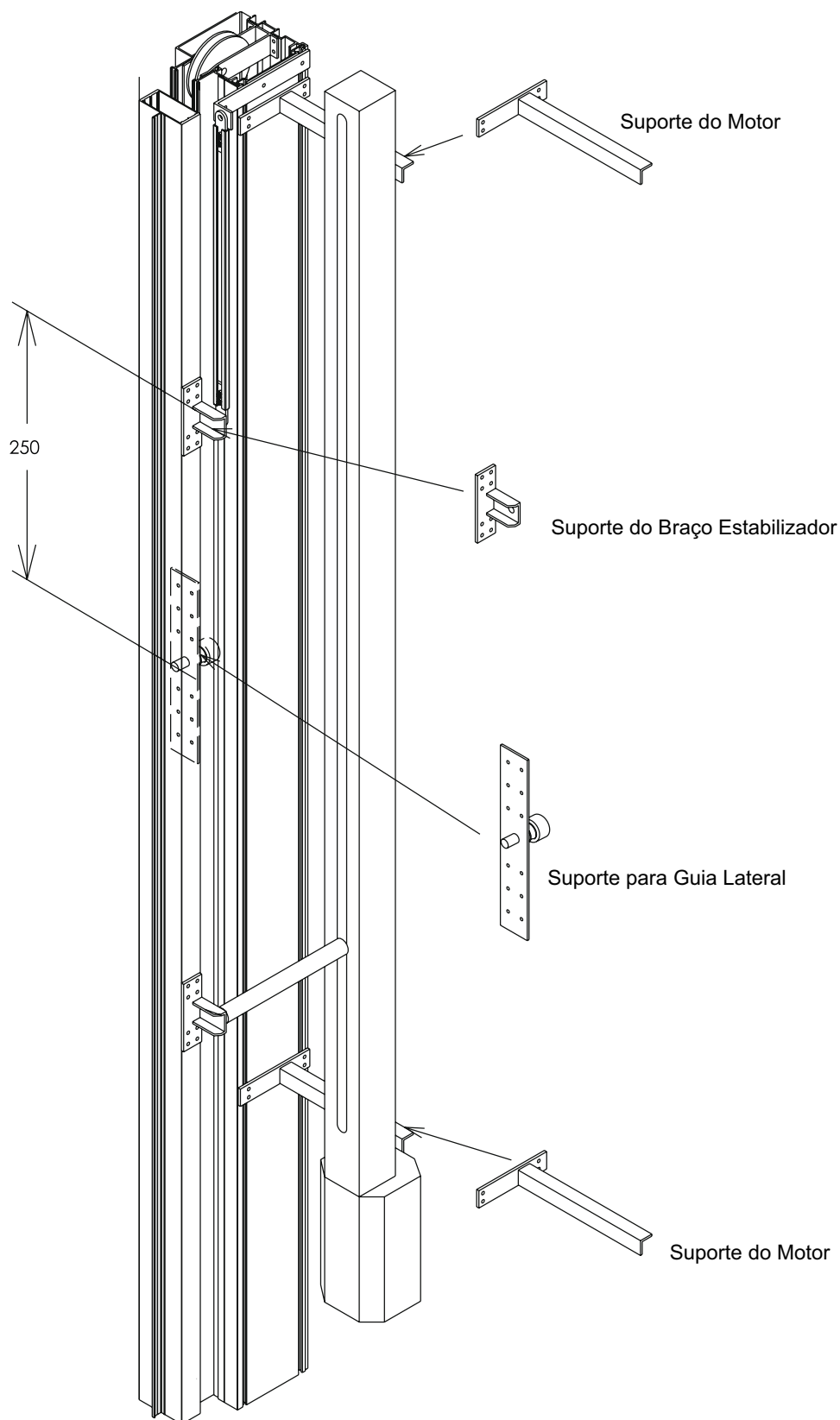
Complemento do braço

Ponteira inferior

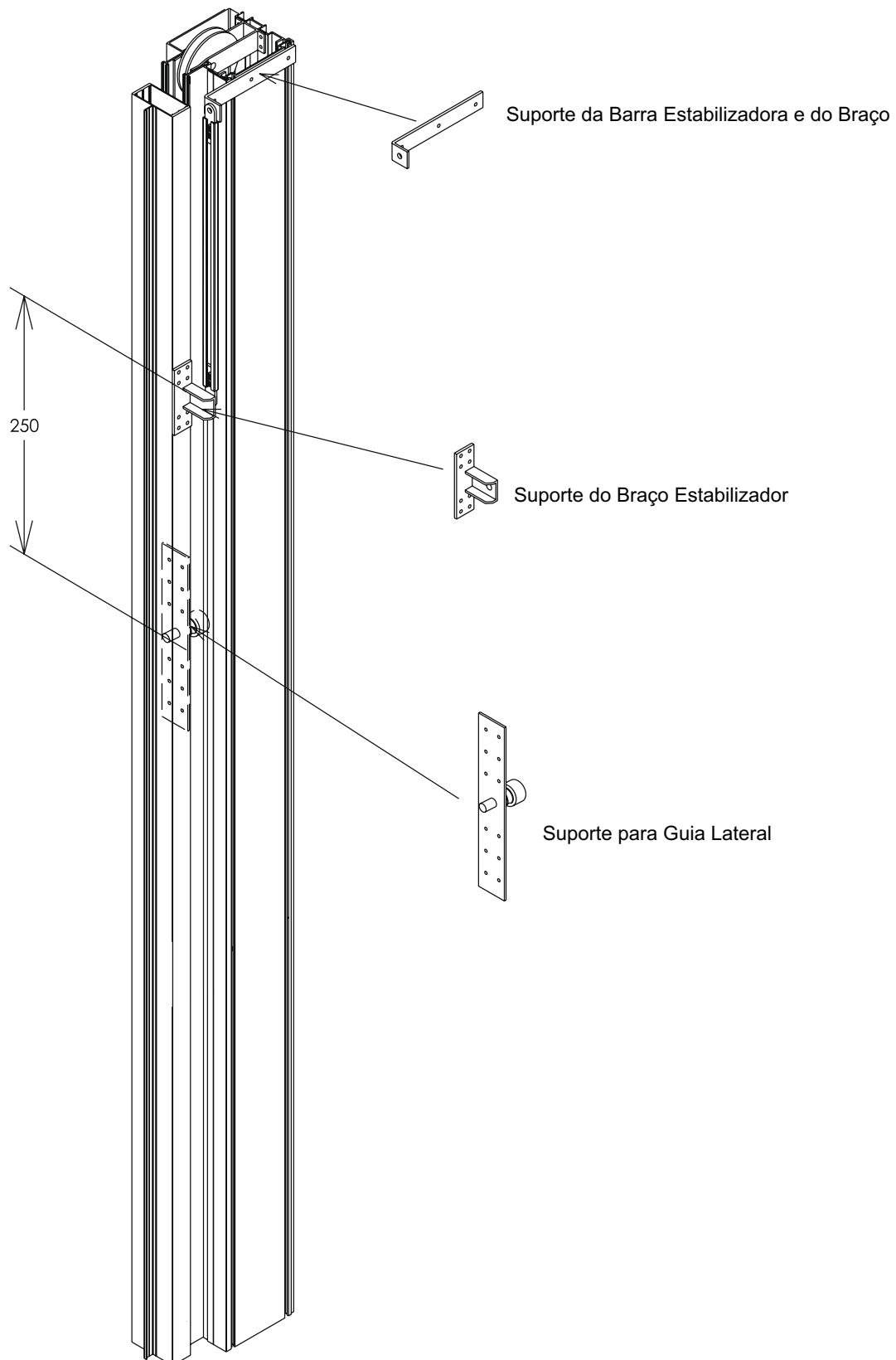


Suporte com roldana

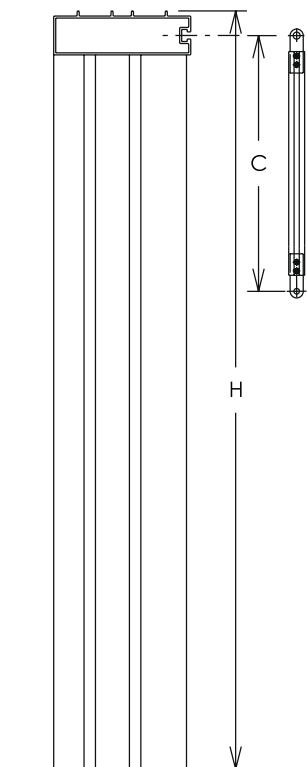
Esquema Portão Motorizado



Esquema Portão Manual



Definição da Medida do Braço



Fórmula

$$C = (H - 20) \times 0,27$$

Atenção:

A Medida "C" é Entre Eixo dos Furos

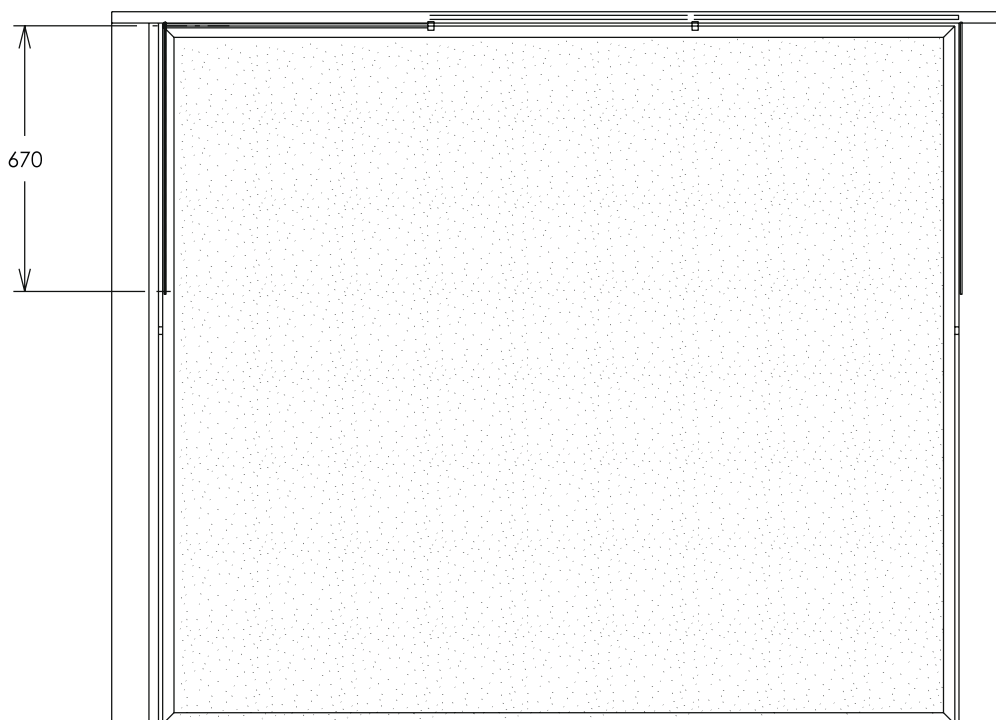
Exemplo

$$C = 2500 - 20 = 2480$$

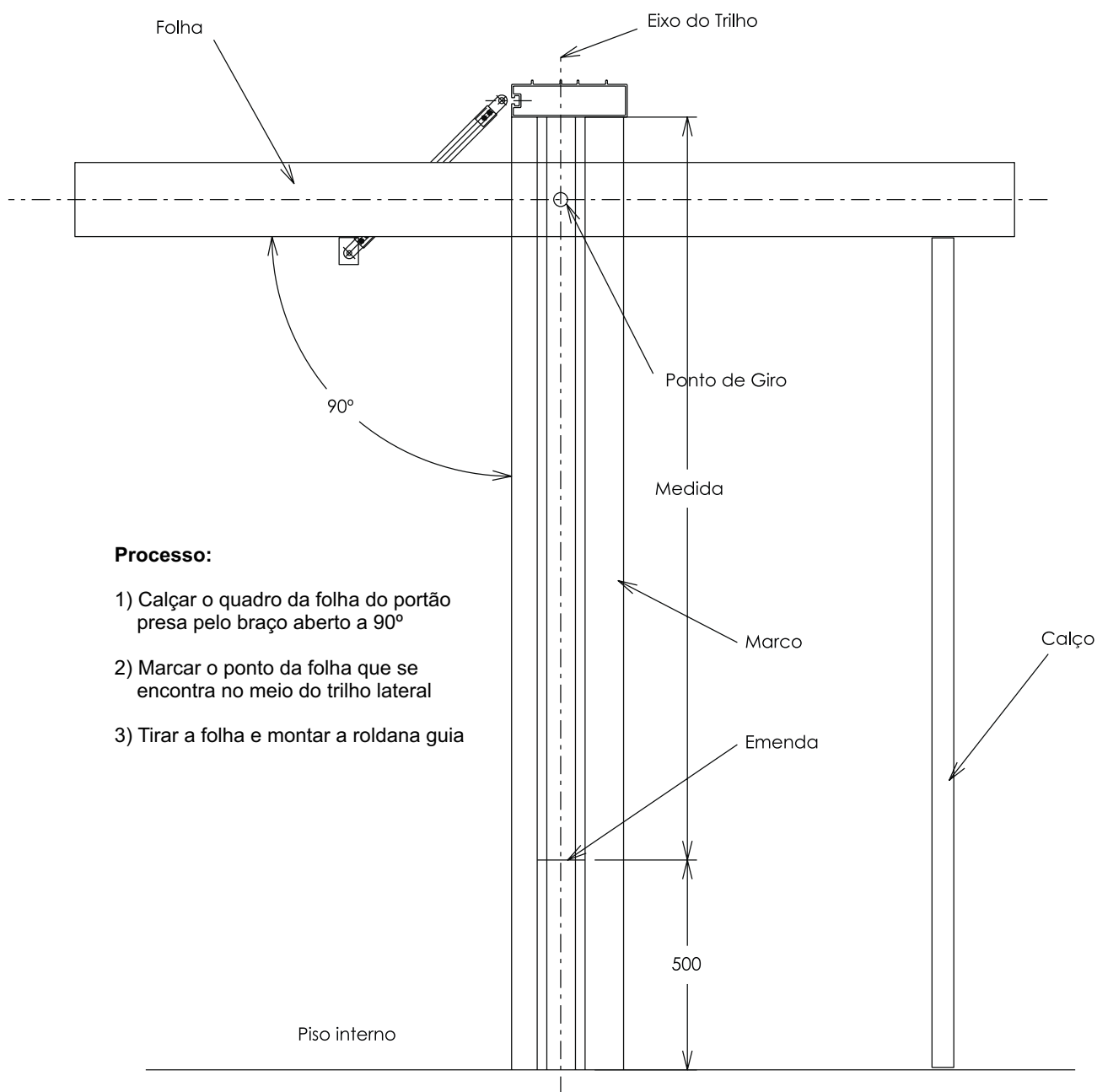
$$C = 2480 \times 0,27 = 670 \text{ (Arredondada)}$$

Medida de Corte do Complemento do Braço

$$670 - 74 = 596$$



Determinar o Ponto de Giro

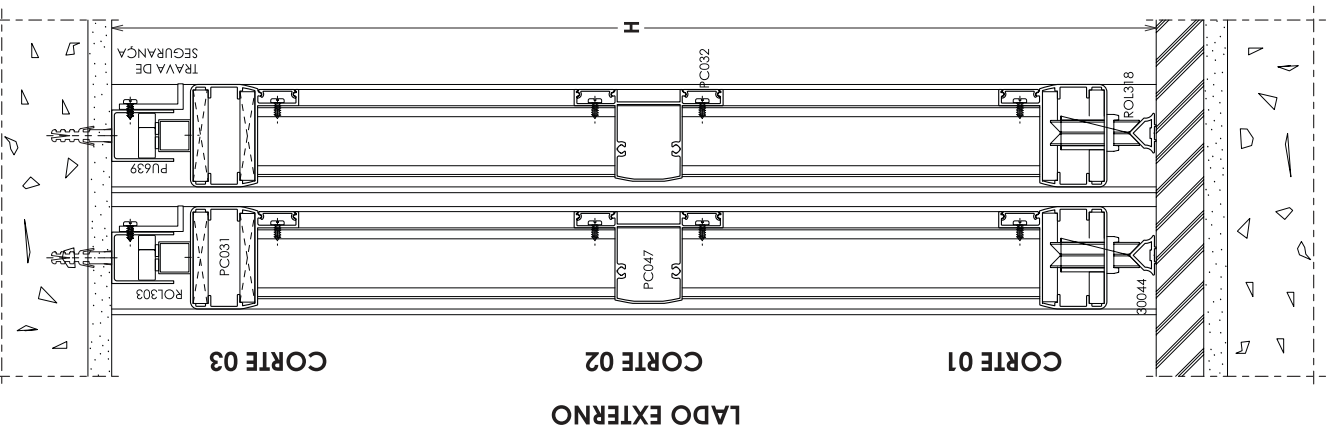
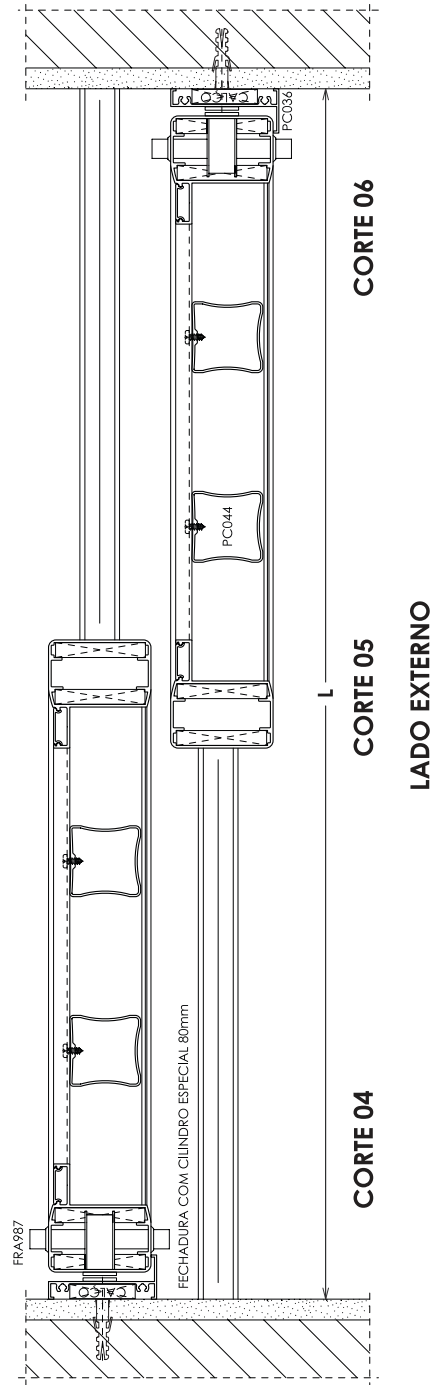
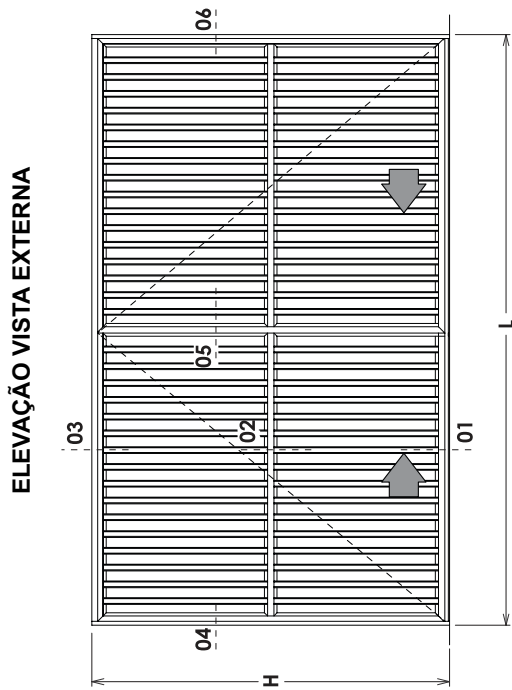


Atenção:

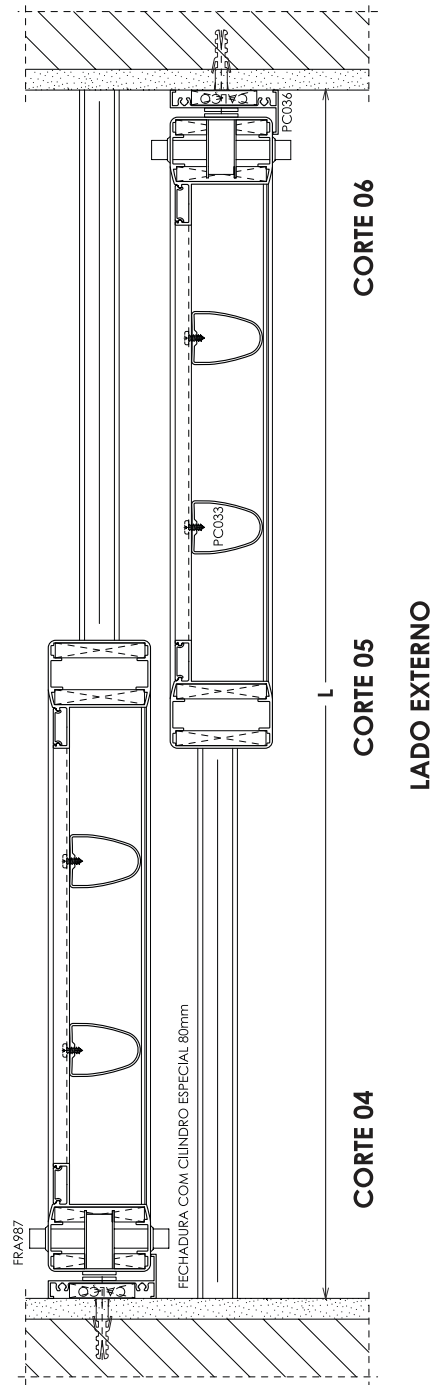
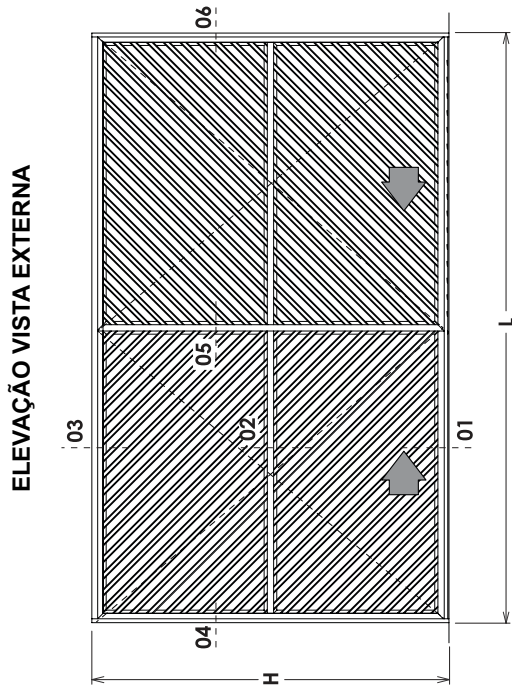
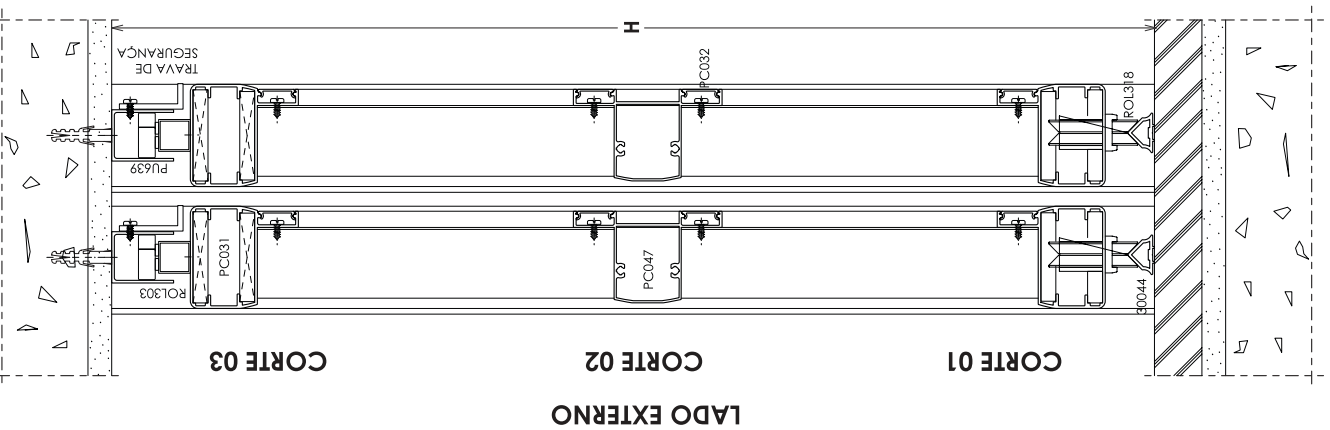
Para a colocação da folha já com as roldanas guia, o trilho (Lu018) deverá ser cortado de acordo com as medidas acima.

O trilho com 500 mm deverá se fixada após a colocação da folha com as roldanas no trilho de espera no marco.

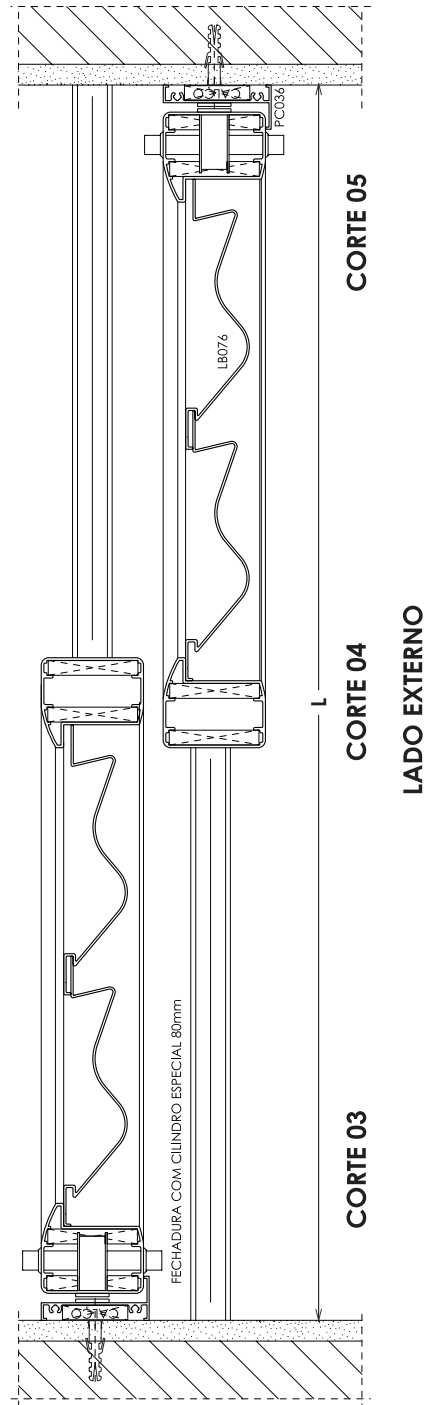
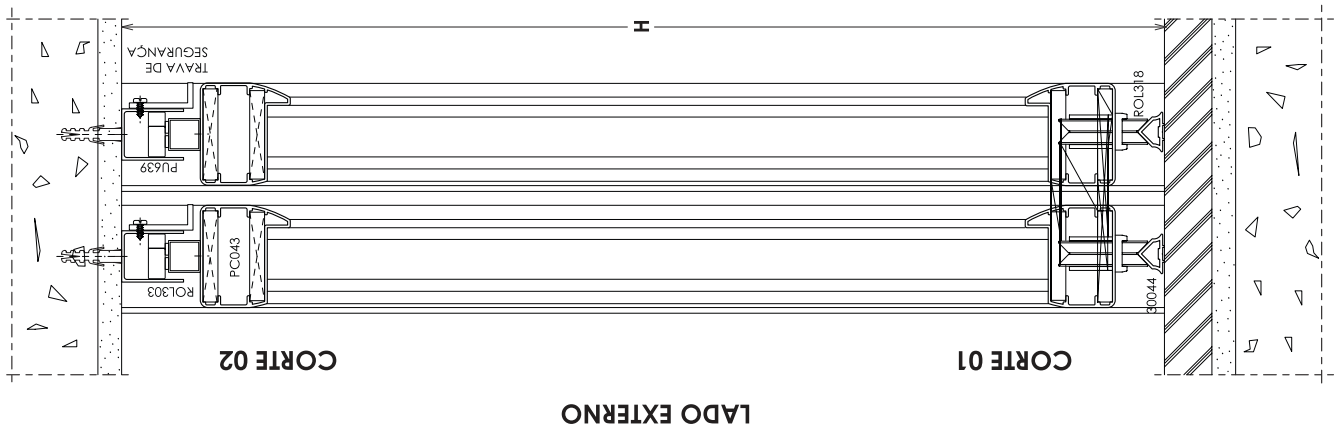
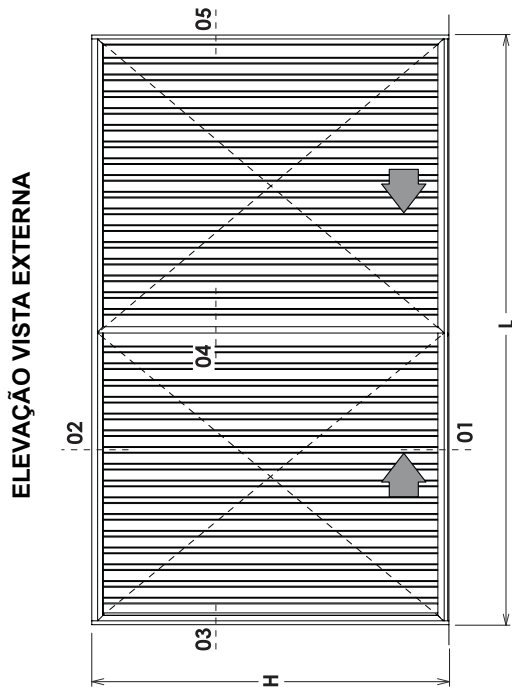
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PORTÃO UNIVERSAL COM LAMBRIS VERTICAIS 2 FOLHAS DE CORRER	H-03
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Portão Universal com barrotes verticais 2 folhas de correr

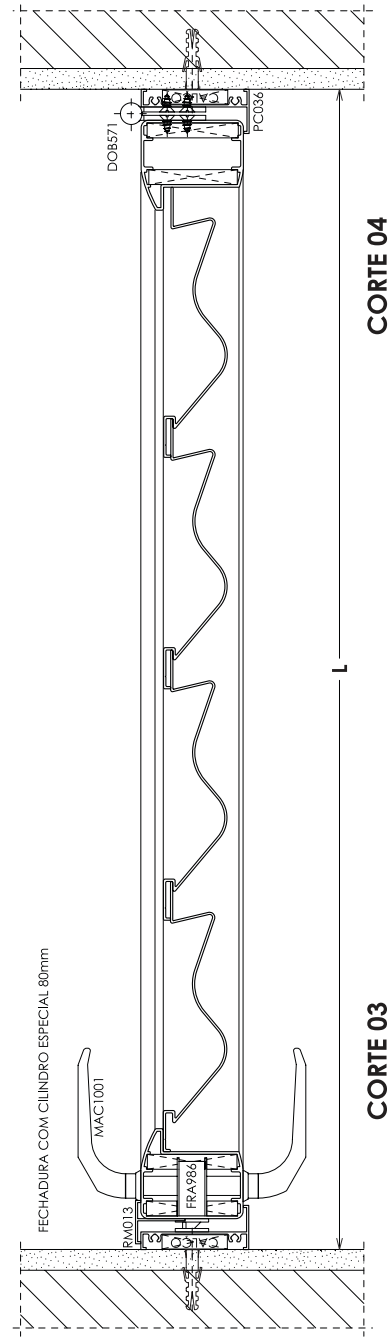
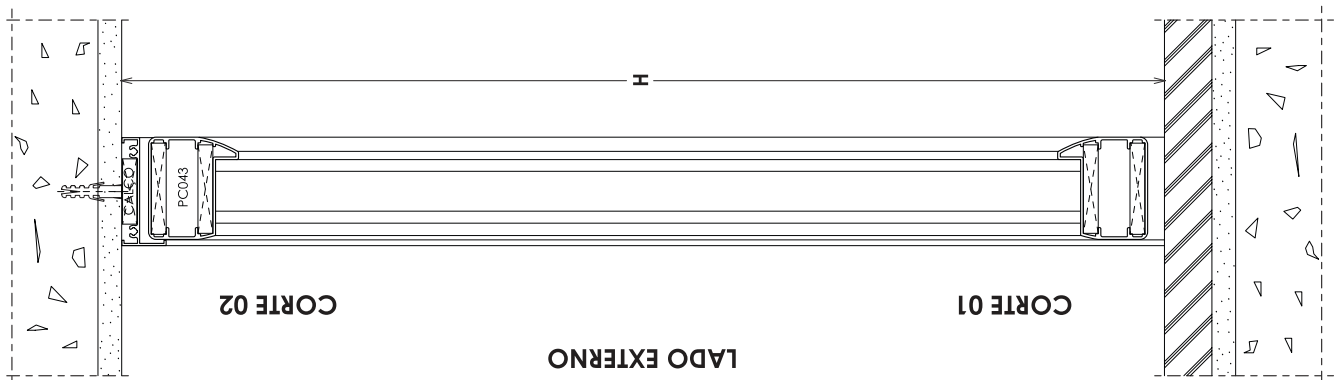
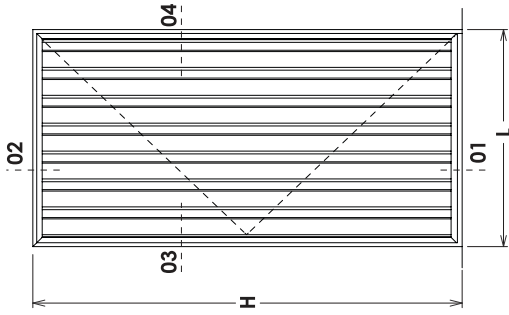


Portão Universal com barrotes inclinados 2 folhas de correr



Portão Universal com lambris verticais 2 folhas de correr

ELEVAÇÃO VISTA EXTERNA



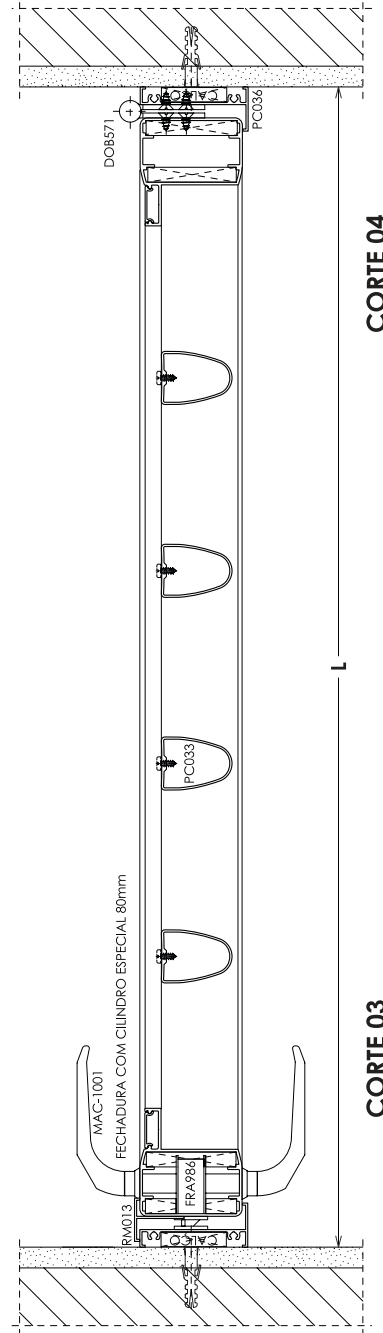
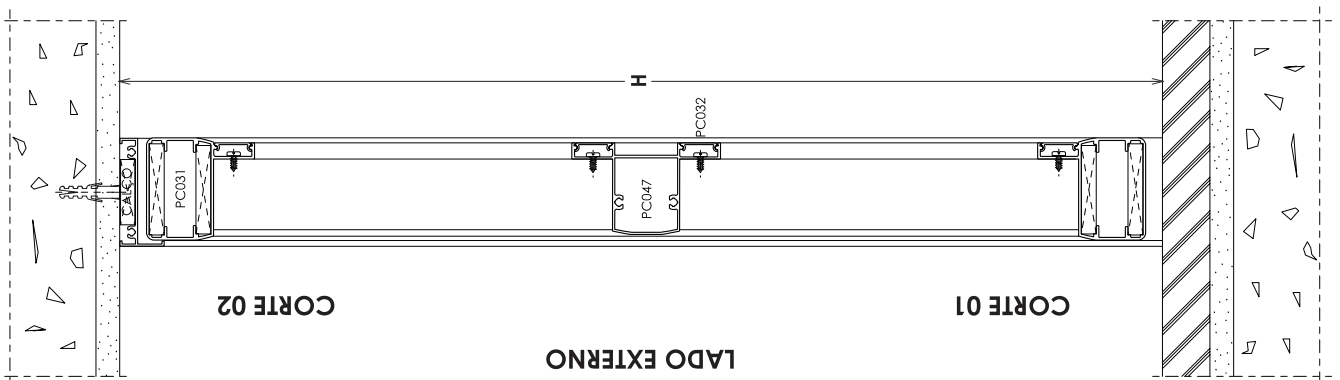
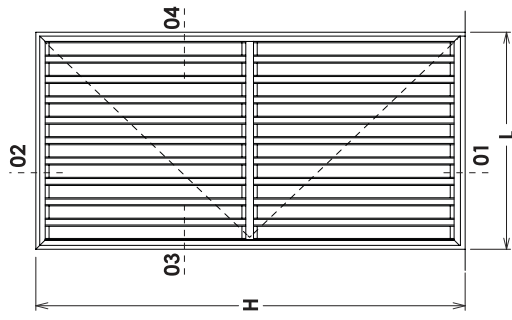
CORTE 04

LADO EXTERNO

CORTE 03

Portão Universal com lambris verticais 1 folha de giro

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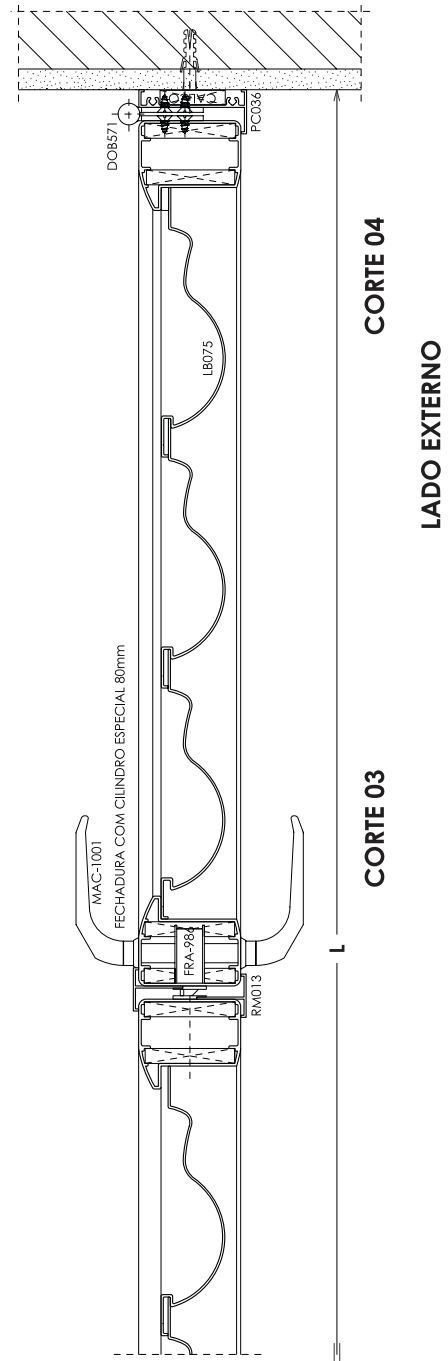
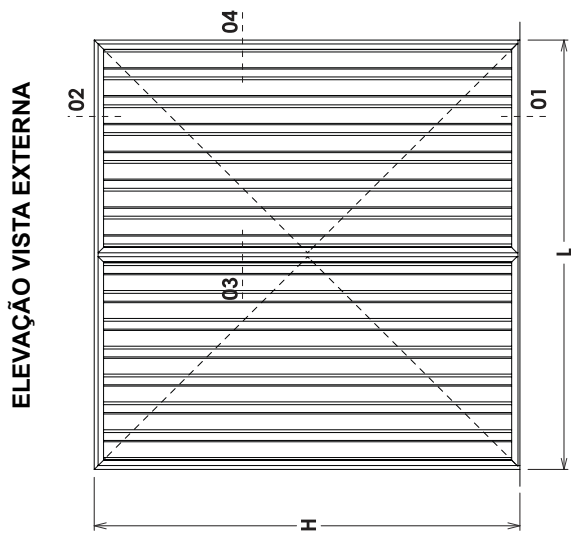
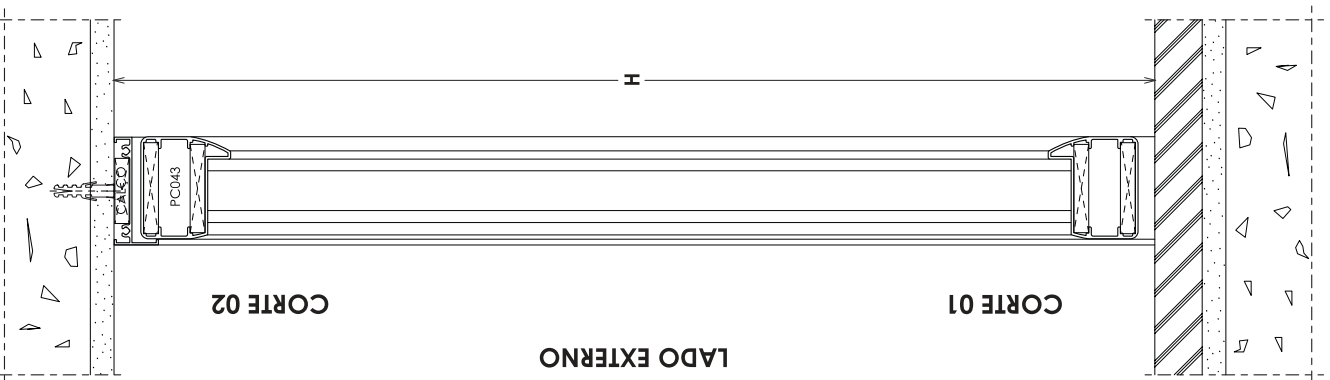


CORTE 04

LADO EXTERNO

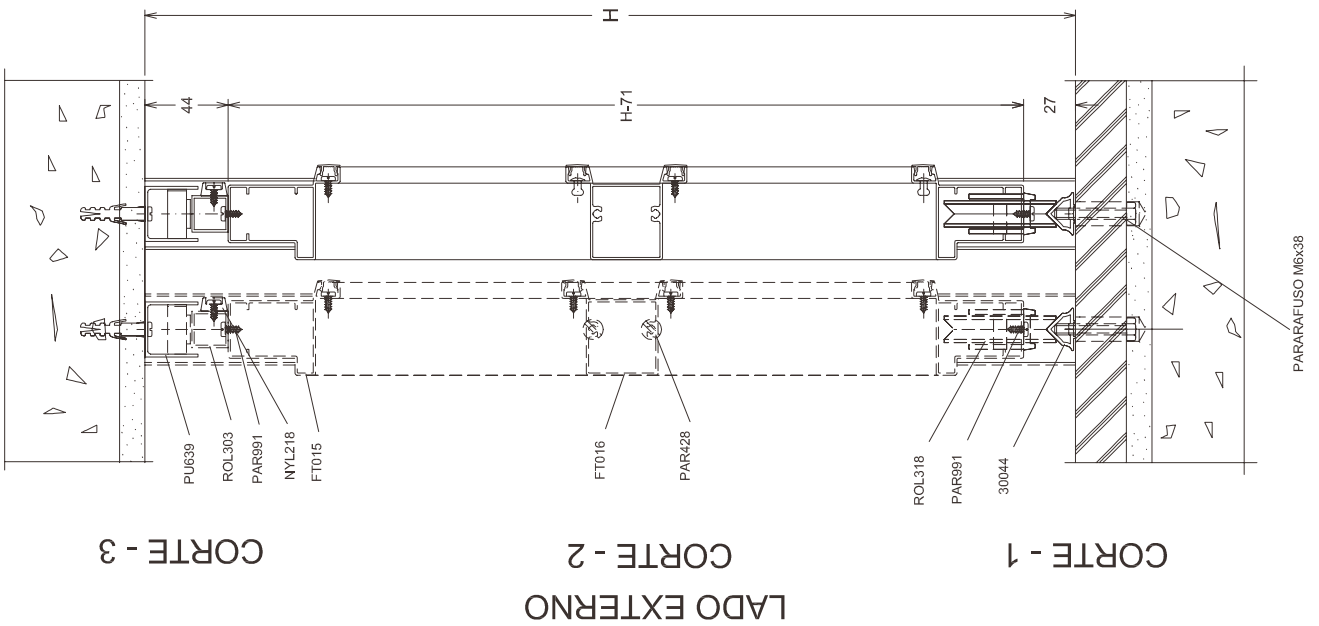
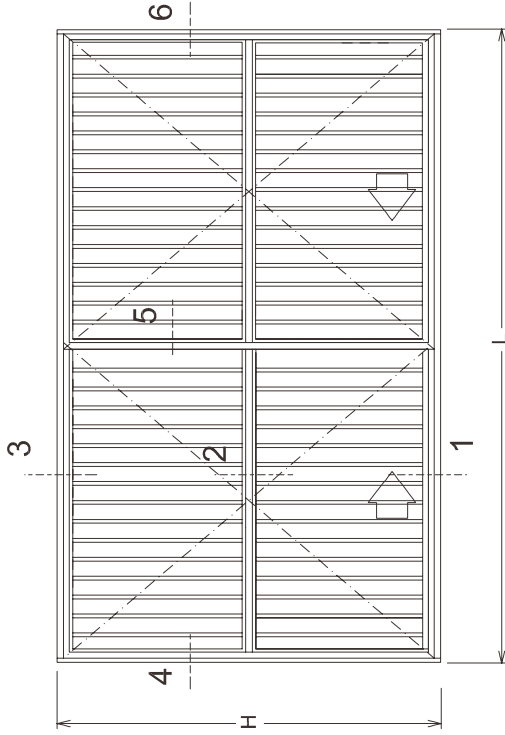
CORTE 03

Portão Universal com barrotes verticais 1 folha de giro



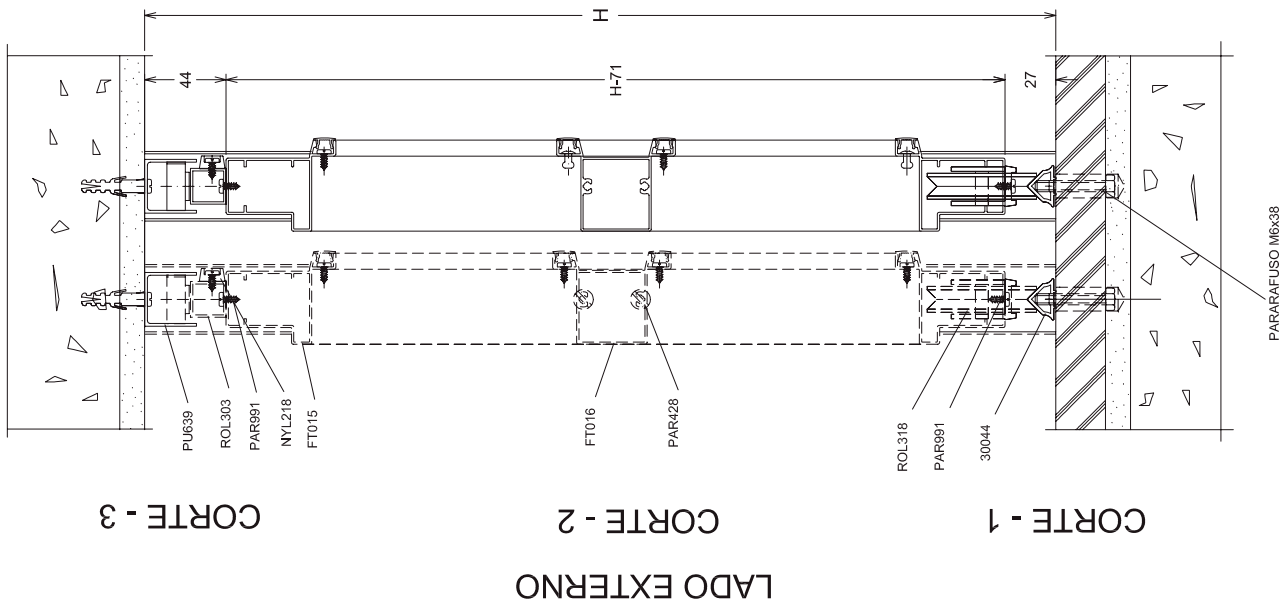
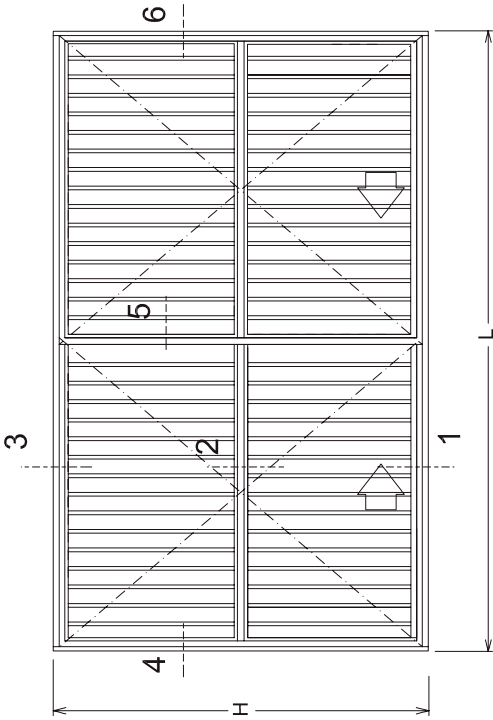
Portão Universal com lambris verticais 2 folhas de giro

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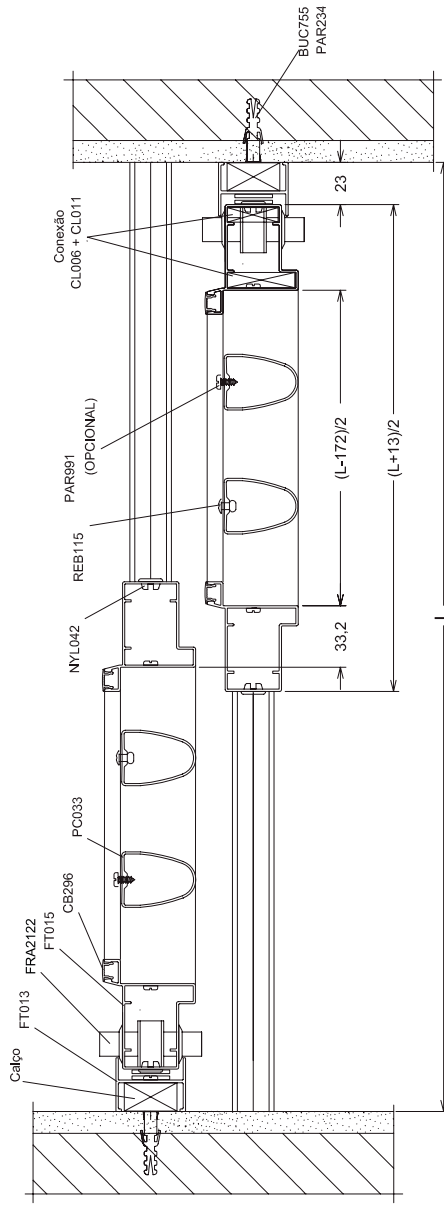


Portão Fit de correr 2 folhas com barrotes e marco baixo

ELEVAÇÃO VISTA EXTERNA



LADO EXTERNO



CORTE - 4

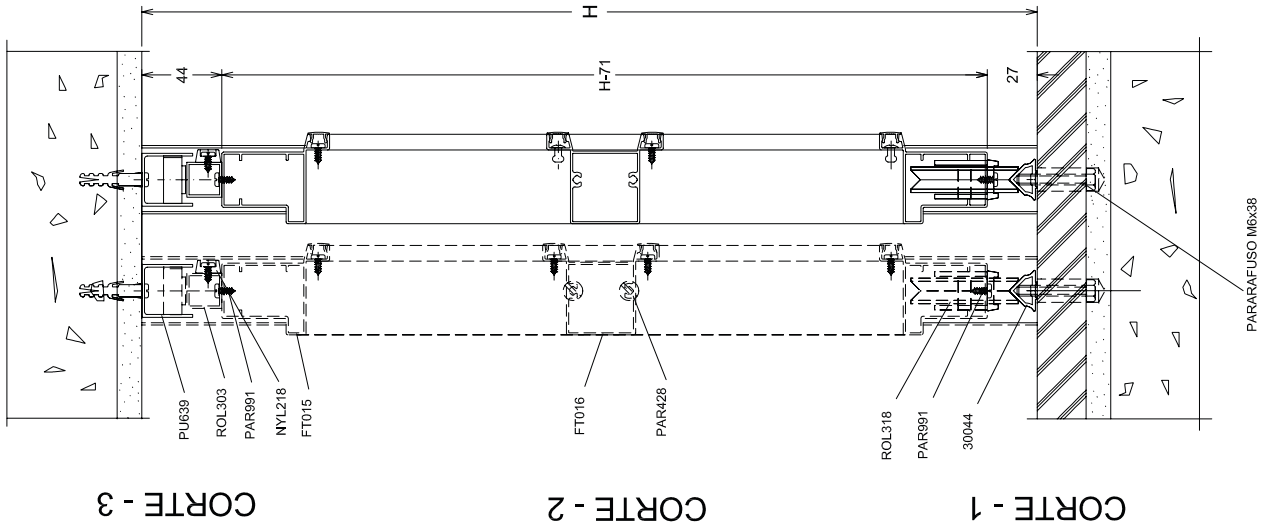
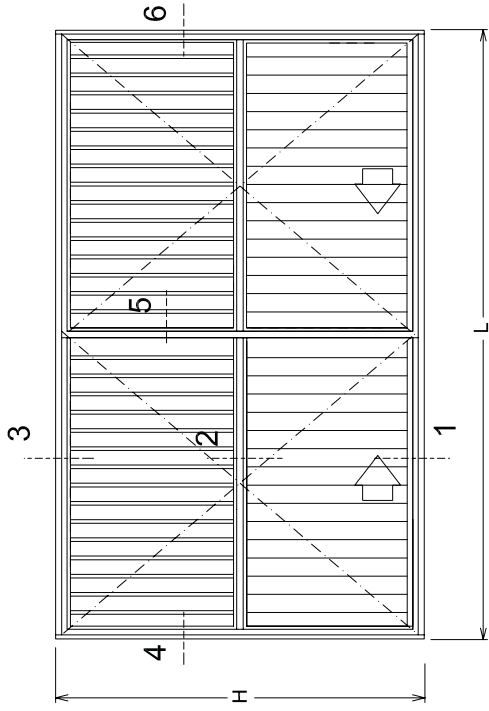
CORTE - 5

LADO EXTERNO

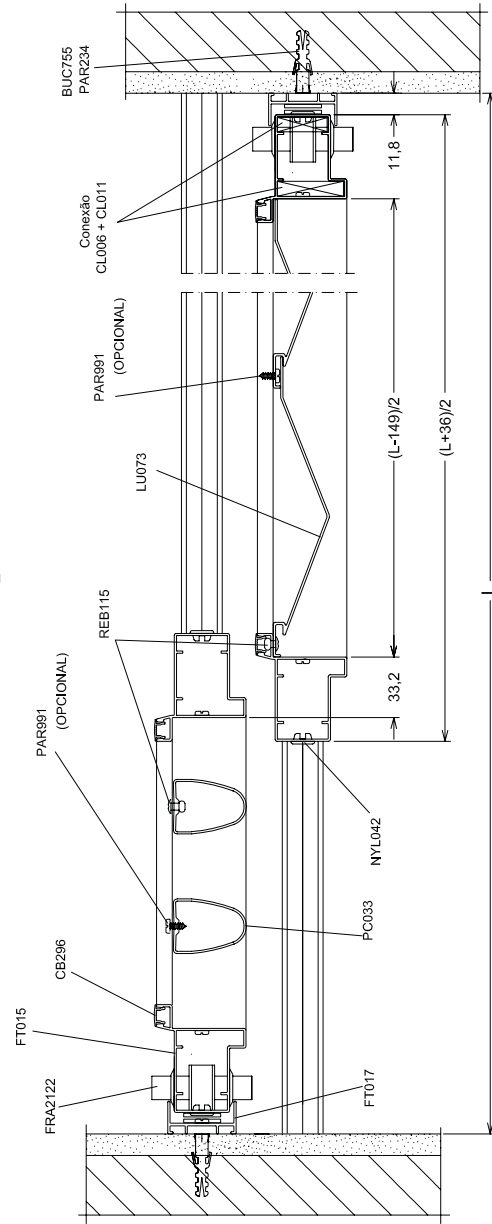
CORTE - 6

Portão Fit de correr 2 folhas com barrotes/lambris e marco alto

ELEVAÇÃO VISTA EXTERNA



LADO EXTERNO



CORTE - 4

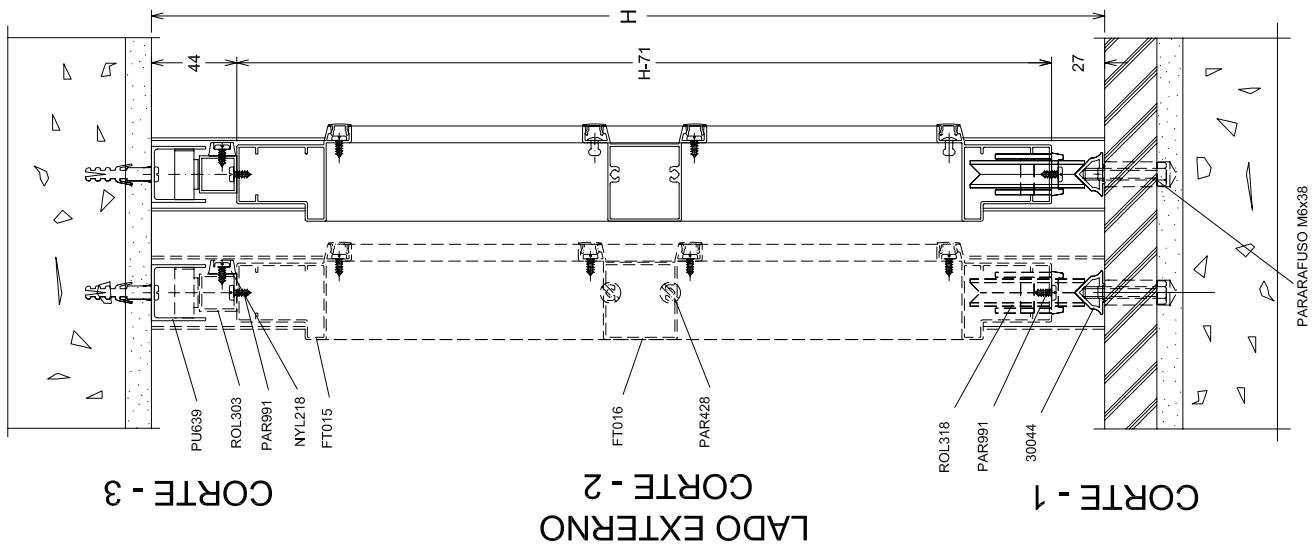
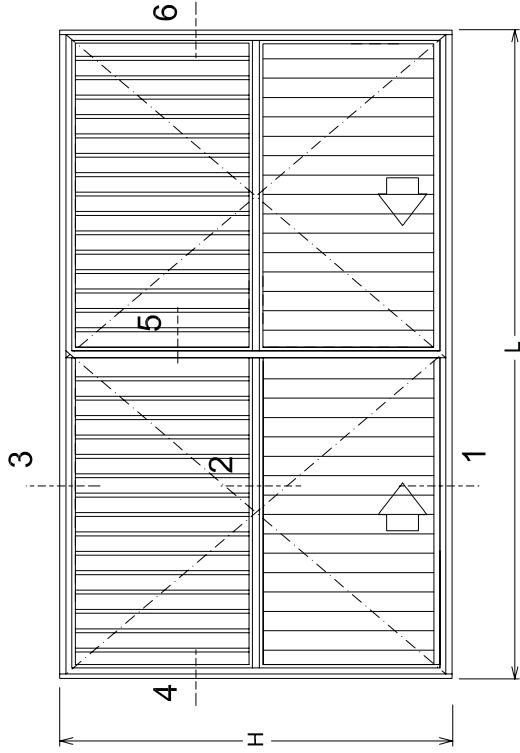
CORTE - 5

LADO EXTERNO

CORTE - 6

Portão Fit de correr 2 folhas com barrotes/lambris e marco baixo

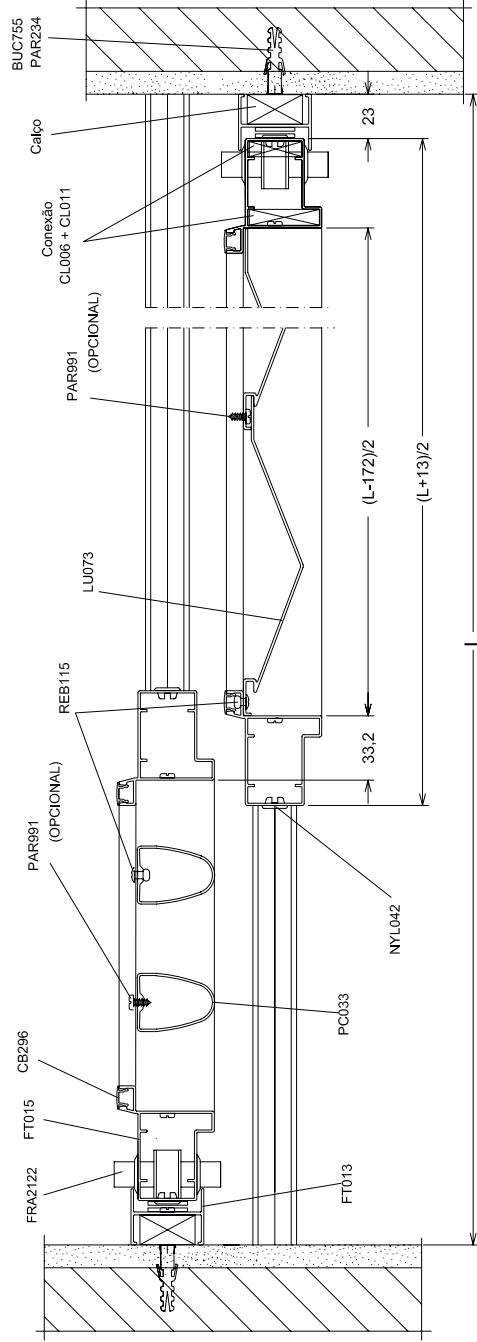
ELEVAÇÃO VISTA EXTERNA



CORTE - 3

**LADO EXTERNO
CORTE - 2**

CORTE - 1



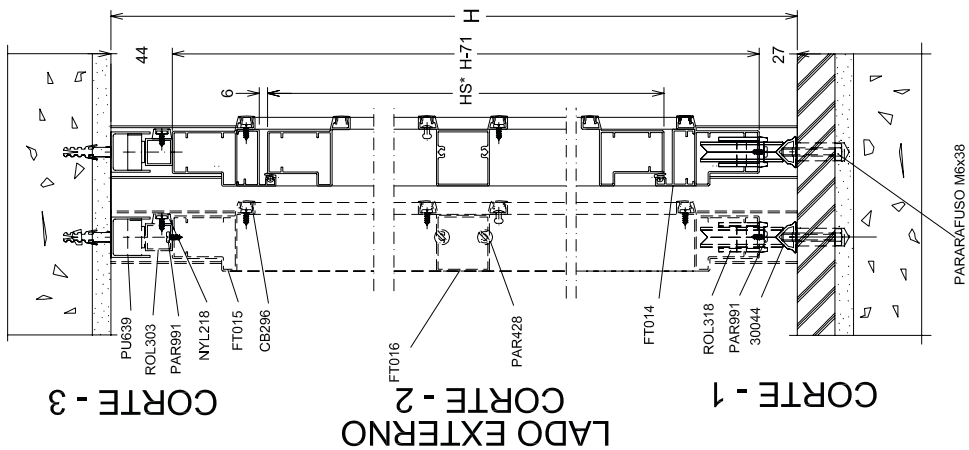
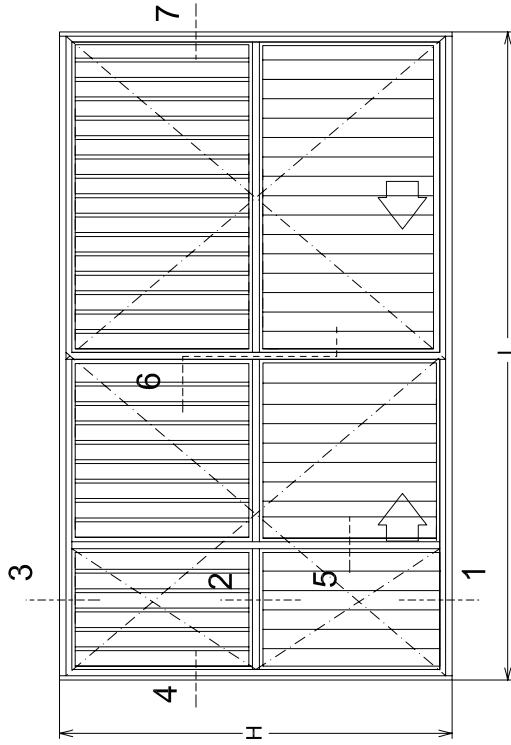
CORTE - 4

**CORTE - 5
LADO EXTERNO**

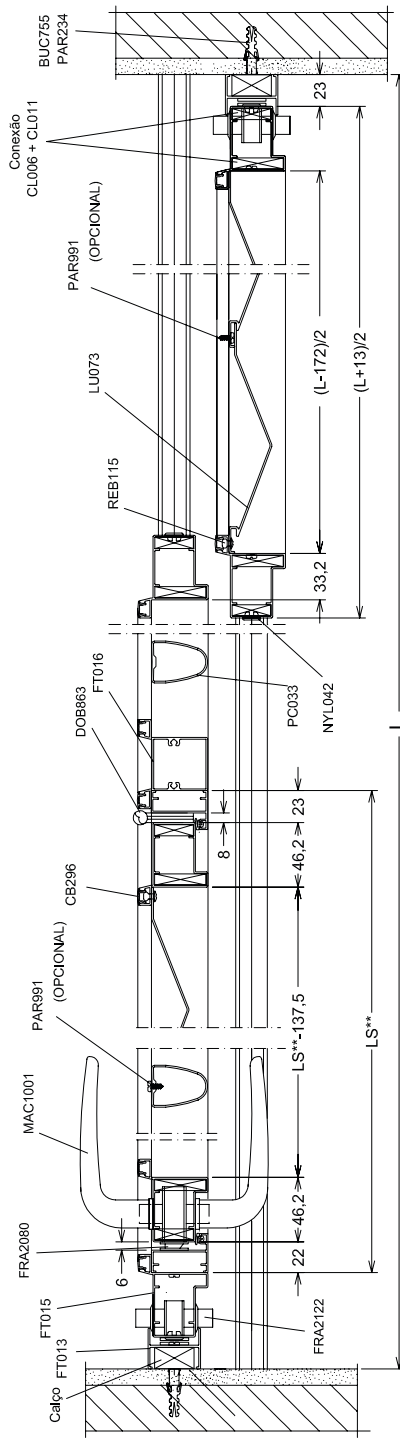
CORTE - 6

Portão Fit de correr 2 folhas com barrotes/lambris e marco alto

ELEVAÇÃO VISTA EXTERNA



LADO EXTERNO

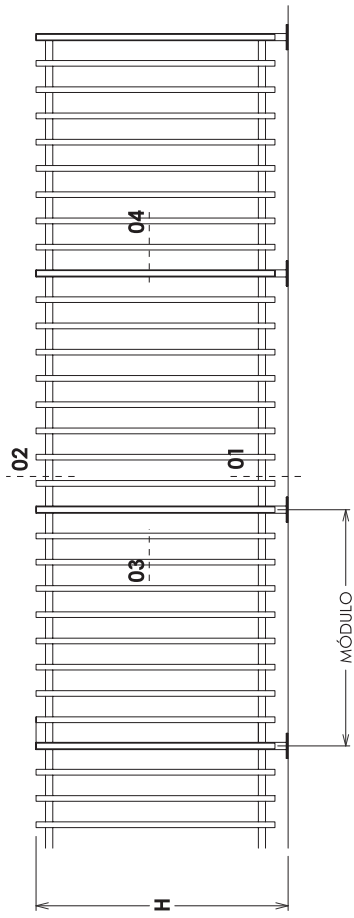


CORTE - 4 CORTE - 5 CORTE - 6
LADO EXTERNO

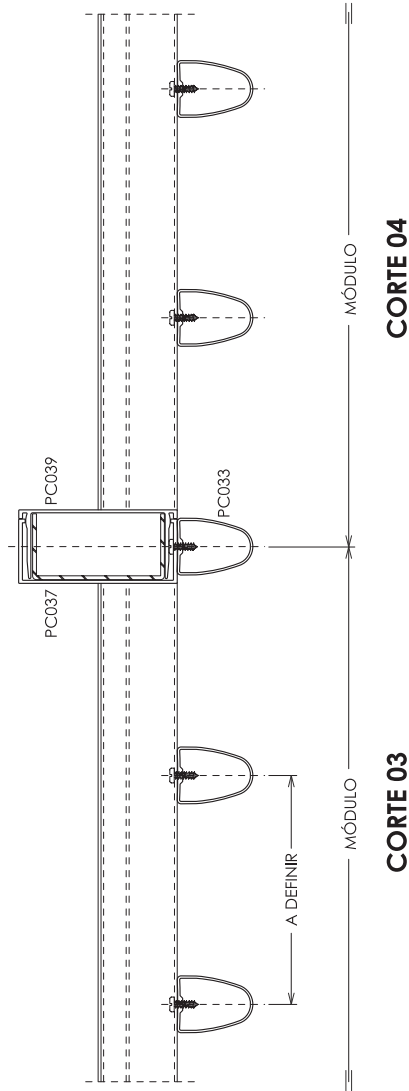
*HS: Altura do Portão Social
**LS: Largura do Portão Social

Portão Fit de correr 2 folhas com barrotes/lambris, portão social e marco alto

ELEVAÇÃO VISTA EXTERNA

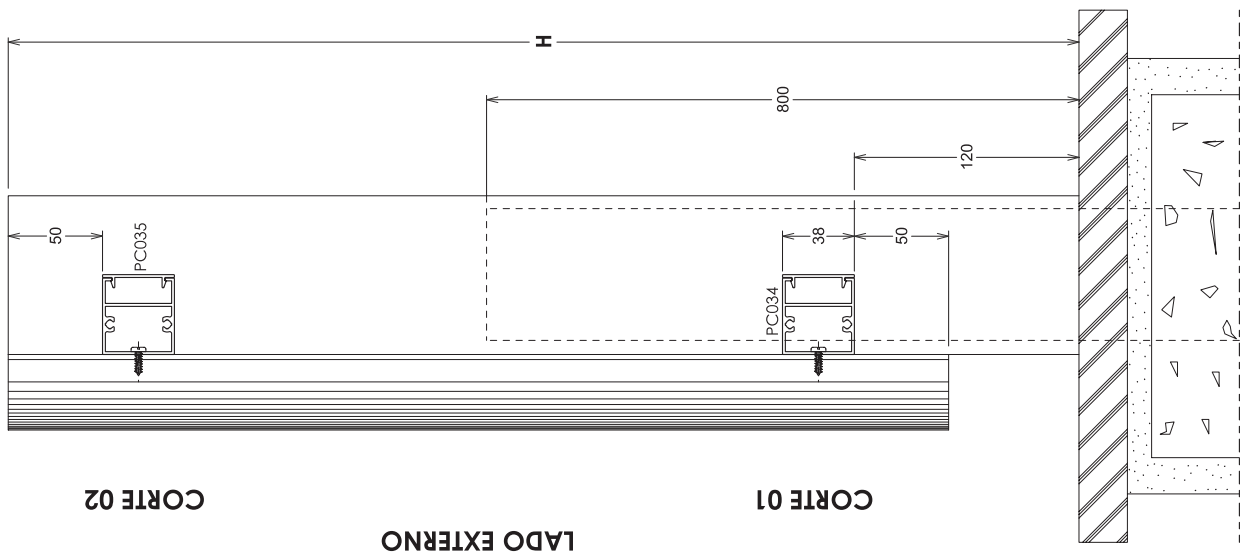


ATENÇÃO
Pontaletes em chapa de aço galvanizada a fogo.
Para utilizar pontaletes em alumínio, consultar a área técnica.



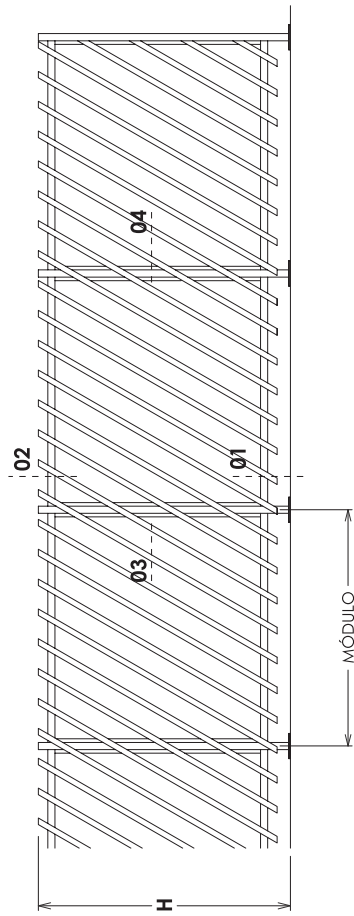
LADO EXTERNO

Grade com barrotes verticais

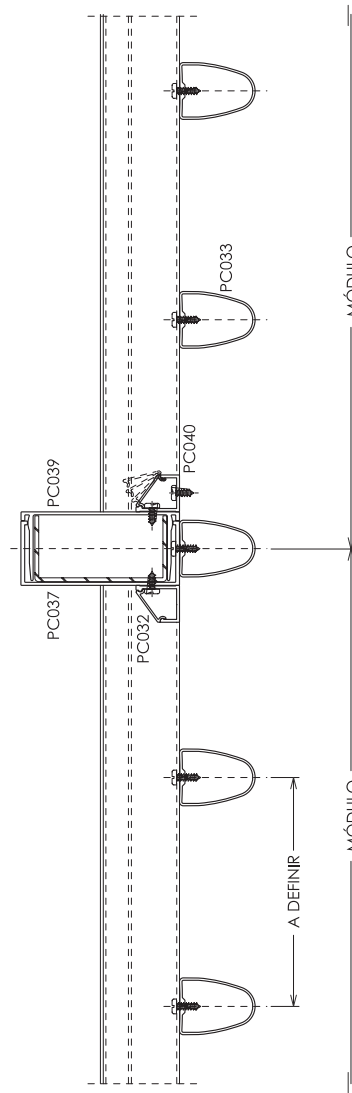


LADO EXTERNO

ELEVAÇÃO VISTA EXTERNA



ATENÇÃO
Pontaletes em chapa de aço galvanizada a fogo.
Para utilizar pontaletes em alumínio, consultar a área técnica.

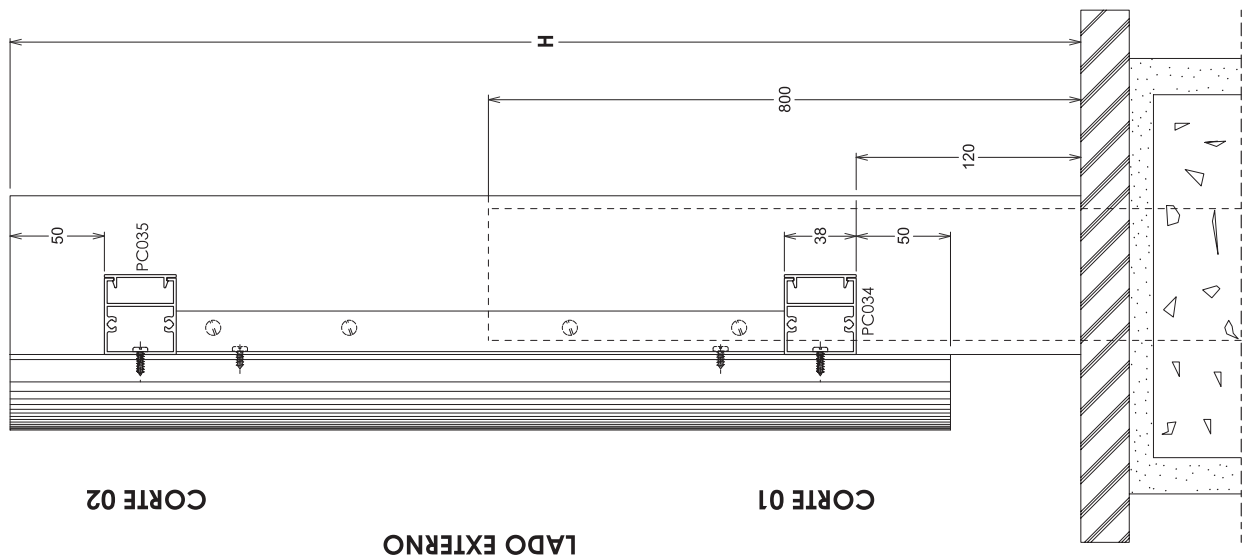


CORTE 03

LADO EXTERNO

CORTE 03

Grade com barrotes inclinados

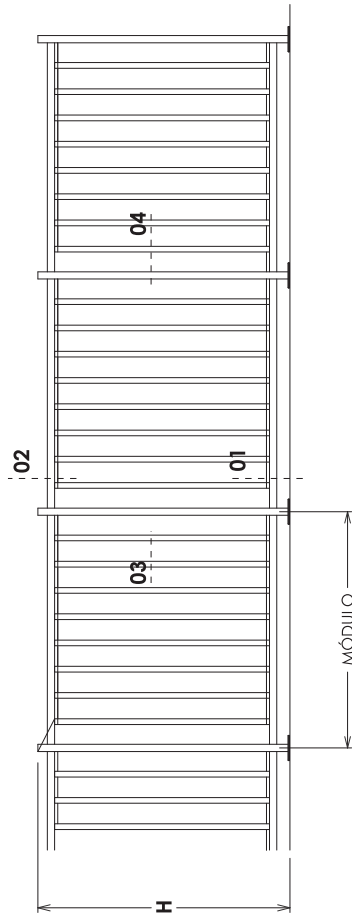


CORTE 02

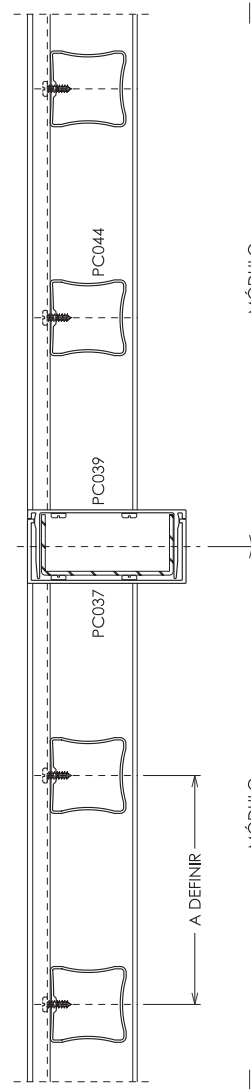
LADO EXTERNO

CORTE 01

ELEVAÇÃO VISTA EXTERNA



ATENÇÃO
Pontaletes em chapa de aço galvanizada a fogo.
Para utilizar pontaletes em alumínio, consultar a área técnica.

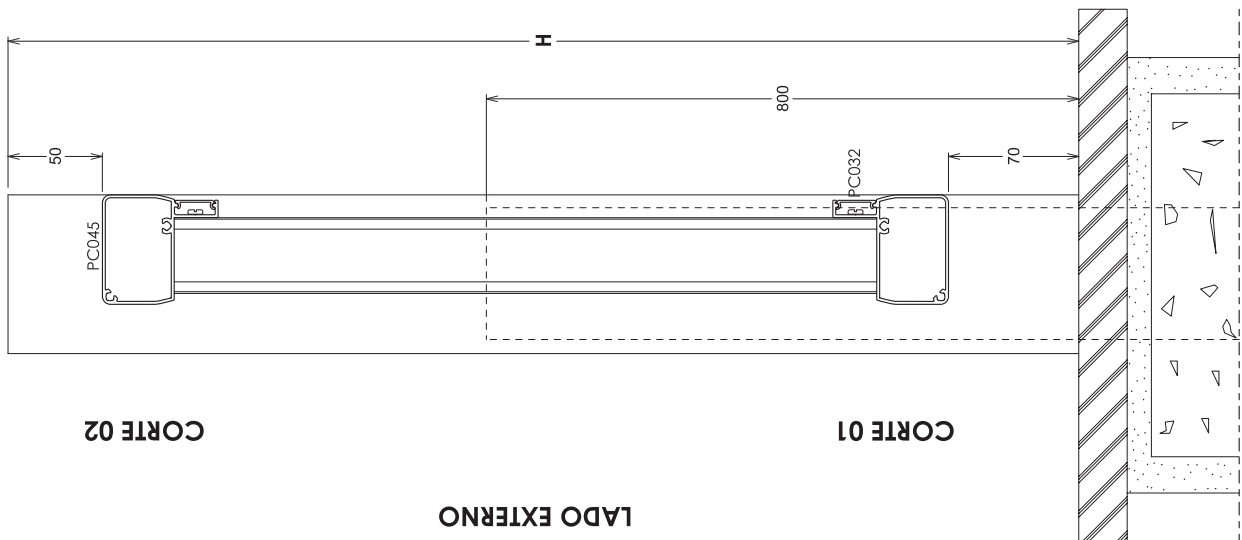


CORTE 03

LADO EXTERNO

CORTE 03

Grade com barrotes verticais entre travessas

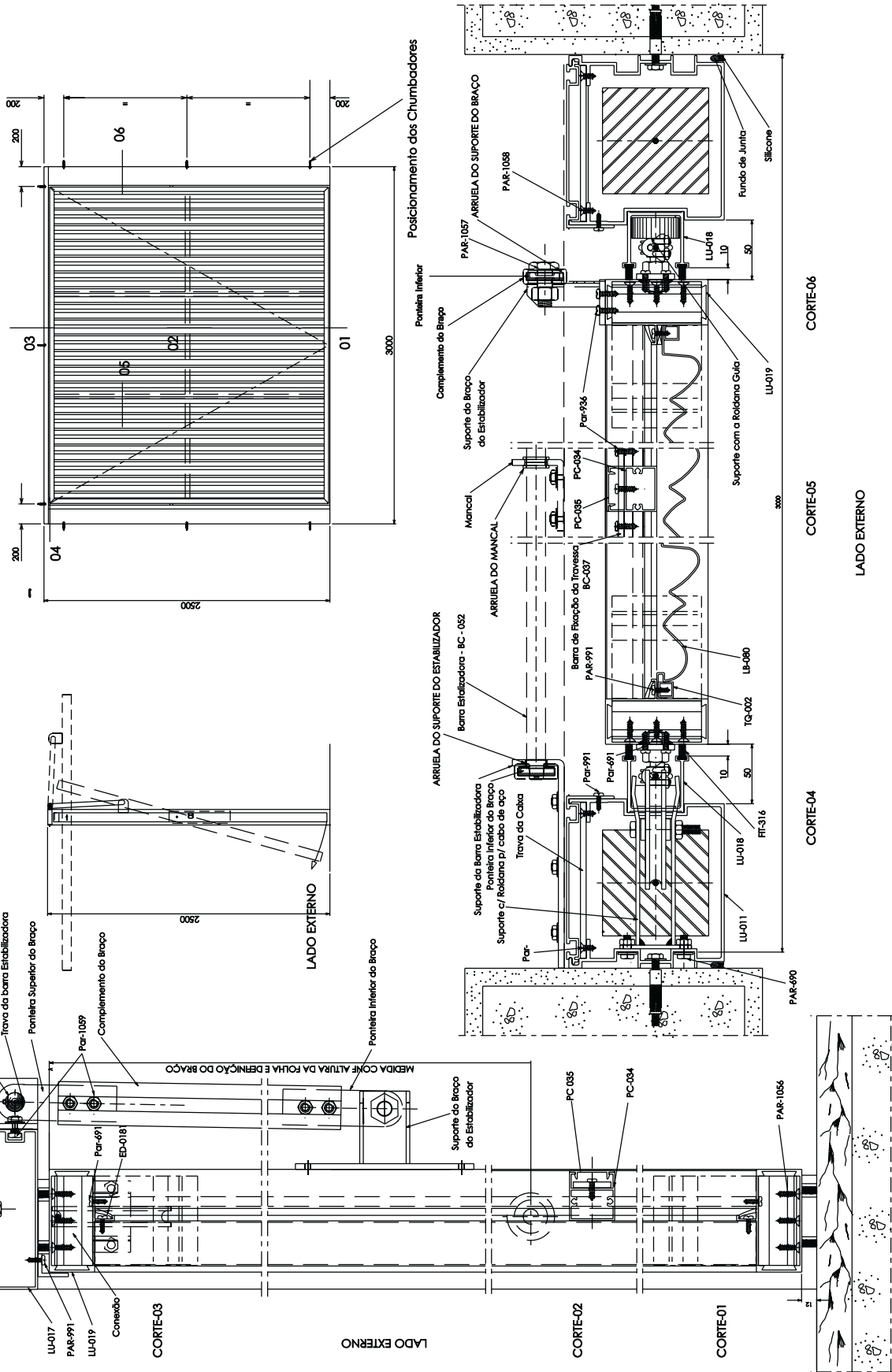


CORTE 02

CORTE 01

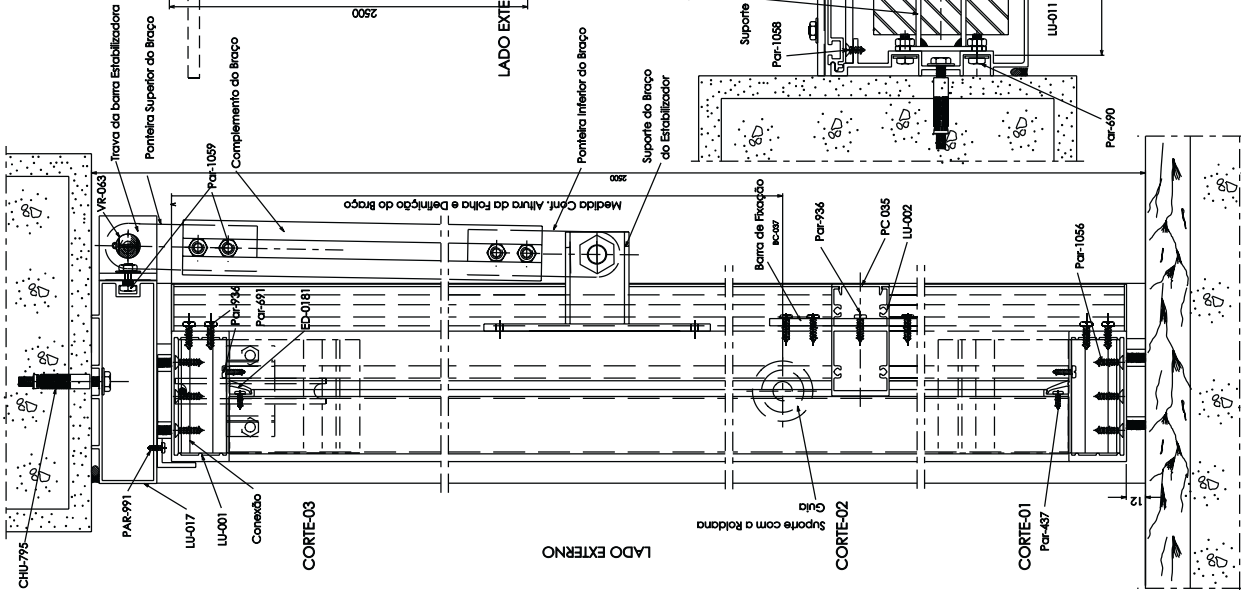
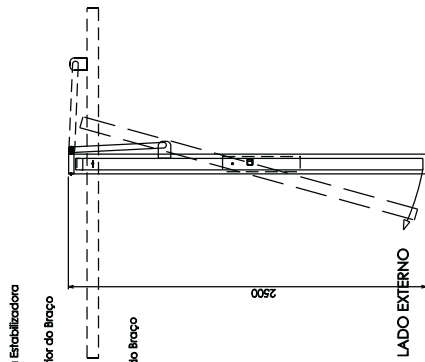
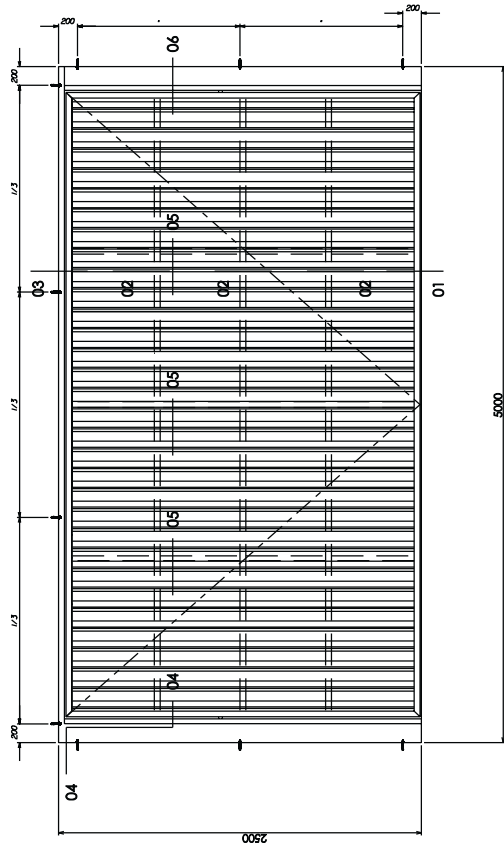
LADO EXTERNO

ELEVAÇÃO VISTA PELO LADO EXTERNO



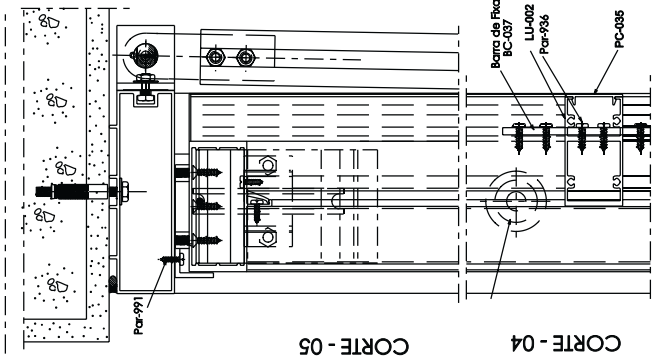
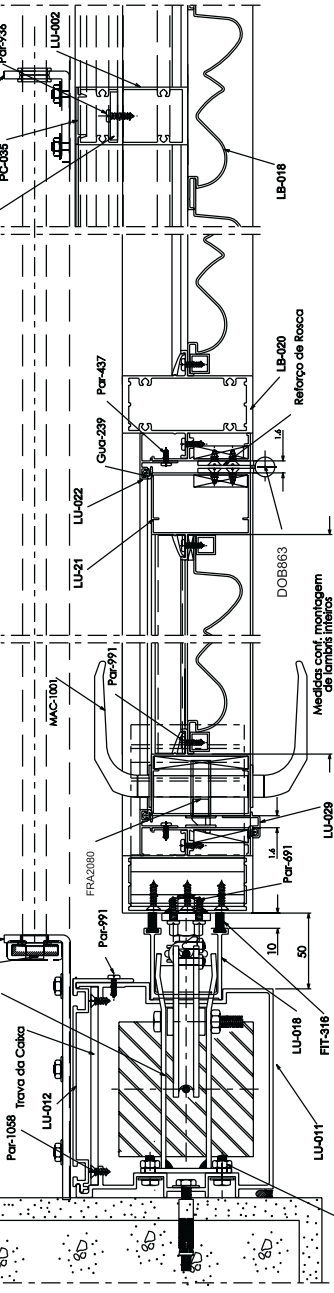
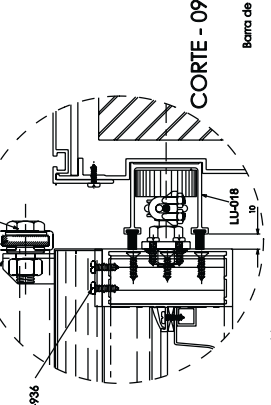
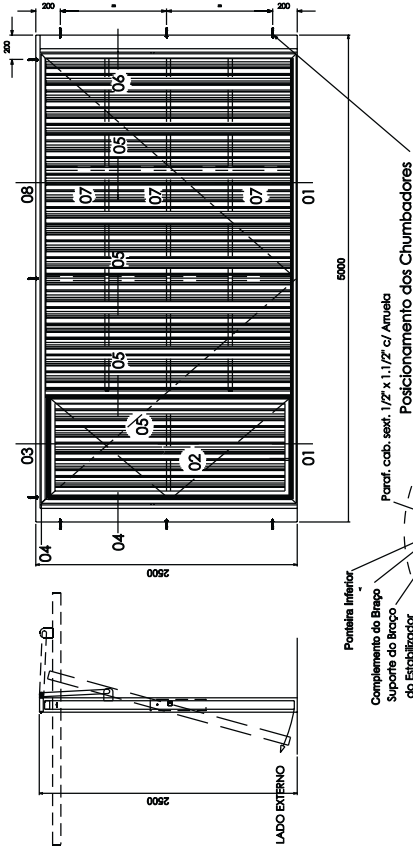
Portão Basculante de 3 MT

ELEVAÇÃO VISTA PELO LADO EXTERNO



Portão Basculante de 5 MT

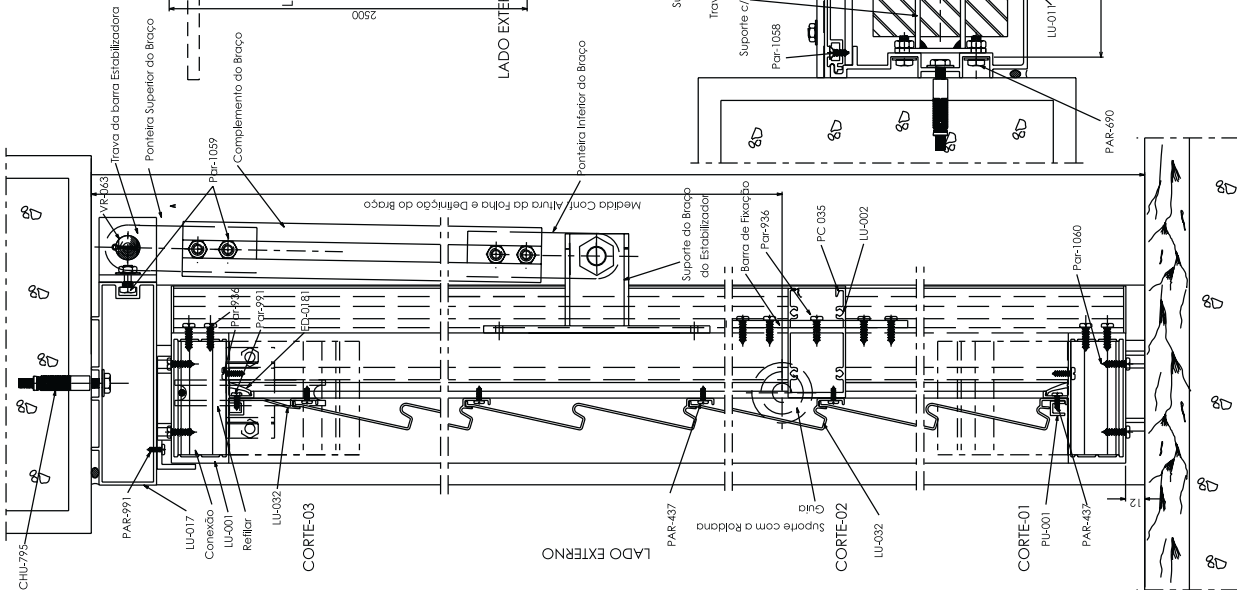
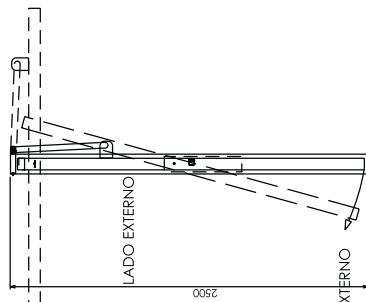
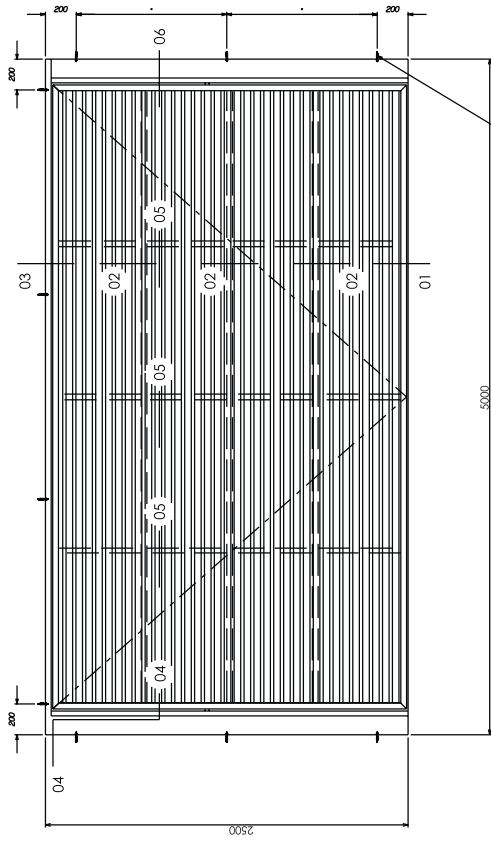
ELEVAÇÃO VISTA PELO LADO EXTERNO



LADO EXTERNO

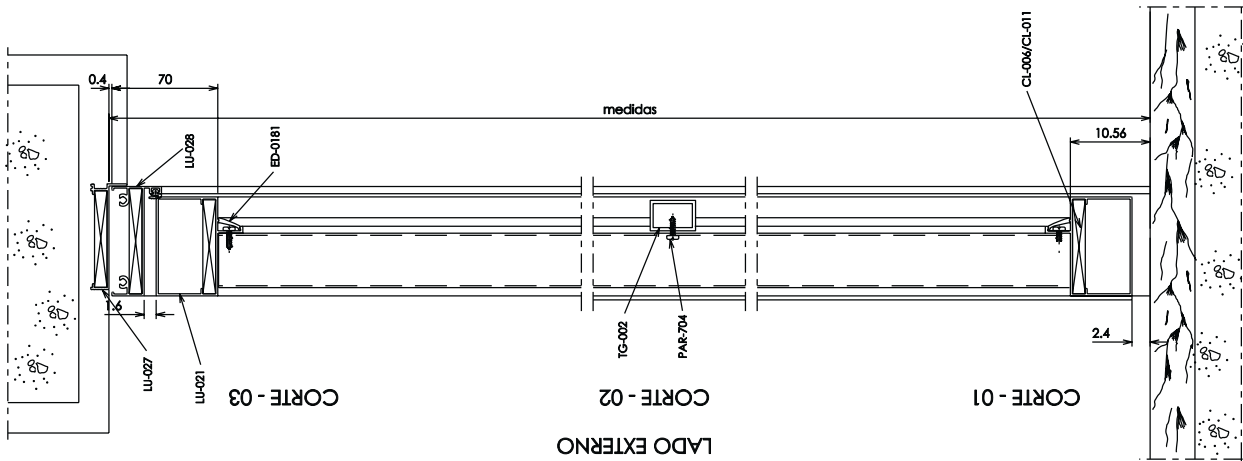
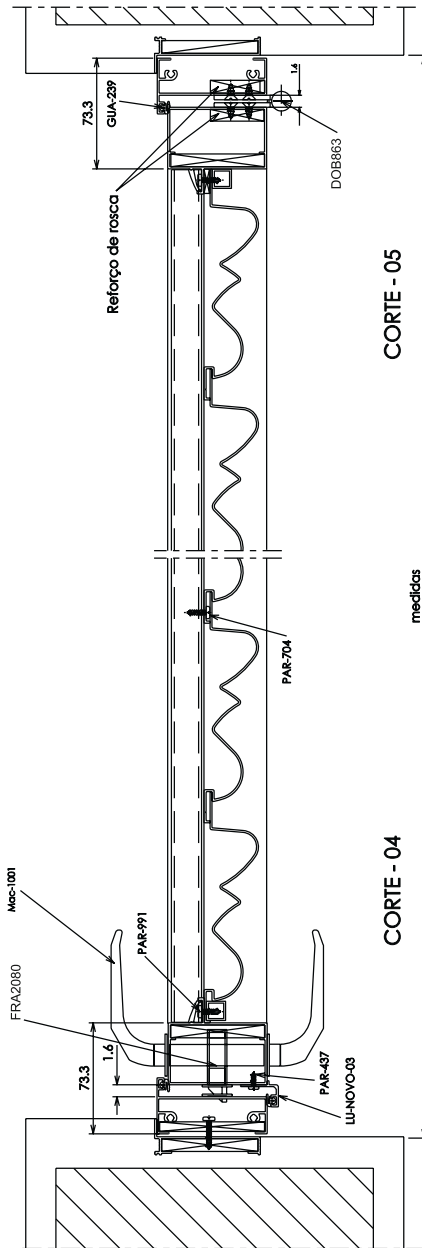
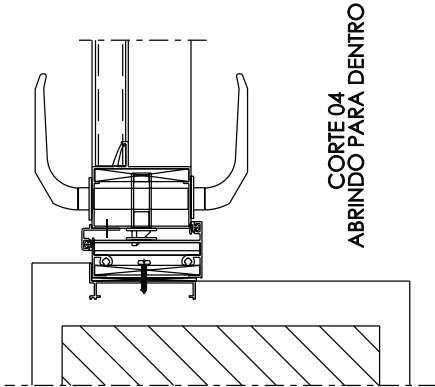
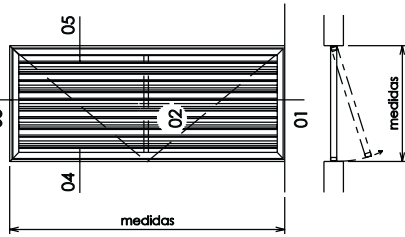
Portão Basculante de 5 MT - Porta Social

ELEVAÇÃO VISTA PELO LADO EXTERNO



Portão Basculante 5 MT - V enezianas na Horizontal

ELEVAÇÃO VISTA PELO LADO EXTERNO



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