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aluminorte
alumínio e acessórios



Soluções para
alumínio desde
1986

SP20®
ORIGINAL

Sistema
Aluminorte
Catálogo completo



SISTEMA TESTADO PELO ITEC
REGIÃO III – 30 pav. (90m)



SISTEMA TESTADO PELO IPT-USP

Rw = 34 dB

JANELA COM PERSIANA INTEGRADA
COM VIDRO MONOLÍTICO DE 4 mm



MELHOR CUSTO-BENEFÍCIO
DO BRASIL



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CÓDIGO	PESO	PÁG	CÓDIGO	PESO	PÁG
20SP – 018	0,143 Kg/m	6	20SP – F34	0,161 Kg/m	15
20SP – 202	0,080 Kg/m	6	20SP – F35	0,097 Kg/m	15
20SP – F01	0,422 Kg/m	16	20SP – F42	0,420 Kg/m	15
20SP – F01A	0,444 Kg/m	16	20SP – F43	0,401 Kg/m	15
20SP – F02	0,422 Kg/m	16	20SP – F50	0,378 Kg/m	15
20SP – F03	0,399 Kg/m	16	20SP – F52	0,350 Kg/m	15
20SP – F04	0,464 Kg/m	16	20SP – F59	0,378 Kg/m	15
20SP – F05	0,373 Kg/m	19	20SP – M01	0,674 Kg/m	7
20SP – F05A	0,386 Kg/m	19	20SP – M02	0,596 Kg/m	7
20SP – F06	0,602 Kg/m	17	20SP – M03	0,382 Kg/m	9
20SP – F07	0,580 Kg/m	17	20SP – M04	0,888 Kg/m	10
20SP – F08	0,972 Kg/m	17	20SP – M05	0,786 Kg/m	10
20SP – F09	0,520 Kg/m	19	20SP – M06	0,470 Kg/m	11
20SP – F09 A	0,534 Kg/m	19	20SP – M07	0,555 Kg/m	11
20PL – F100	0,364 Kg/m	03	20PL – M100	0,241 Kg/m	05
20PL – F101	0,387 Kg/m	03	20PL – M101	0,404 Kg/m	05
20PL – F102	1,023 Kg/m	03	20PL – M102	0,521 Kg/m	05
20PL – F103	0,665 Kg/m	03	20PL – M103	0,733 Kg/m	05
20PL – F104	0,489 Kg/m	04	20SP – M19	0,138 Kg/m	9
20PL – F105	0,682 Kg/m	04	20SP – M21	0,417 Kg/m	21
20PL – F106	0,682 Kg/m	04	20SP – M21	0,417 Kg/m	21
20PL – F107	1,030 Kg/m	04	20SP – M22	0,377 Kg/m	21
20SP – F10	0,350 Kg/m	19	20SP – M23	0,173 Kg/m	21
20SP – F11	0,808 Kg/m	18	20SP – M24	0,341 Kg/m	20
20SP – F12	0,826 Kg/m	18	20SP – M25	0,552 Kg/m	20
20SP – F20	0,135 Kg/m	22	20SP – M28	0,162 Kg/m	21

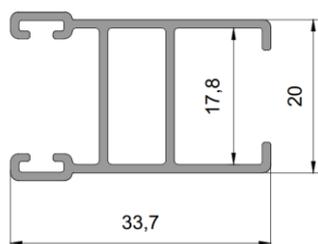
NOVIDADES

CÓDIGO	PESO	PÁG	CÓDIGO	PESO	PÁG
20SP – M29	0,273 Kg/m	21	CM - 200	0,185 Kg/m	6
20SP - M30	0,304 Kg/m	21	DS - 238	0,485 Kg/m	30
20SP – M31	0,135 Kg/m	21	MH - 017	0,193 Kg/m	6
20SP – M35	0,568 Kg/m	14	MN - 015	0,843 Kg/m	30
20SP – M36	0,651 Kg/m	14	MN - 055	0,376 Kg/m	30
20SP – M37	0,954 Kg/m	13	MP - 347	0,184 Kg/m	6
20SP – M38	0,921 Kg/m	13	SPI - 104	0,687 Kg/m	30
20SP – M43	0,352 Kg/m	9	SPI - M11	0,599 Kg/m	24
20SP – M66	0,730 Kg/m	12	SPI - M12	1,267 Kg/m	29
20SP – M67	0,674 Kg/m	12	SPI - M13	1,267 Kg/m	29
20SP - M68	0,442 Kg/m	12	SPI - M14	0,893 Kg/m	23
20SP – M69	0,326 Kg/m	20	SPI - M15	1,102 Kg/m	23
20SP – M70	0,469 Kg/m	20	SPI - M16	0,698 Kg/m	26
20SP – M71	0,336 Kg/m	20	SPI - M17	0,994 Kg/m	24
20SP – M75	0,247 Kg/m	20	SPI - M18	0,788 Kg/m	23
20SP – M76	0,578 Kg/m	10	SPI - M56	0,960 Kg/m	28
20SP – M77	0,576 Kg/m	22	SPI – M5619	1,057 Kg/m	28
20SP – M78	0,362 Kg/m	10	SPI - M57	0,980 Kg/m	25
20SP – M87	0,361 Kg/m	12	SPI - M58	0,889 Kg/m	25
20SP – M89	0,383 Kg/m	8	SPI - M59	0,656 Kg/m	25
20SP – M95	0,611 Kg/m	7	SPI – M59S	0,653 Kg/m	23
20SP – M952	0,443 Kg/m	8	SPI - M60	0,599 Kg/m	28
20SP – M953	0,899 Kg/m	8	SPI – M6162	1,992 Kg/m	27
20SP – M954	0,894 Kg/m	8	SPI – M6364	1,100 Kg/m	27
20SP – P01	0,246 Kg/m	22	SPI - M98	1,149 Kg/m	24
CM - 060	0,274 Kg/m	6	SPI - M99	0,765 Kg/m	26
CM - 174	0,369 Kg/m	6			

NOVIDADES

20PL – F100

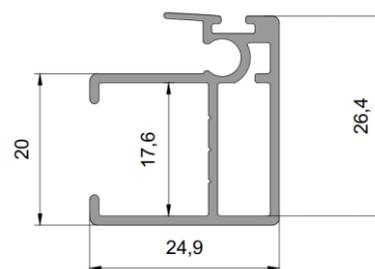
Montante Slim sem Reforço
0,364 Kg/m



$J_x = 0,9391 \text{ cm}^4$	$W_x = 0,853 \text{ cm}^3$
$J_y = 1,1778 \text{ cm}^4$	$W_y = 0,665 \text{ cm}^3$

20PL – F101

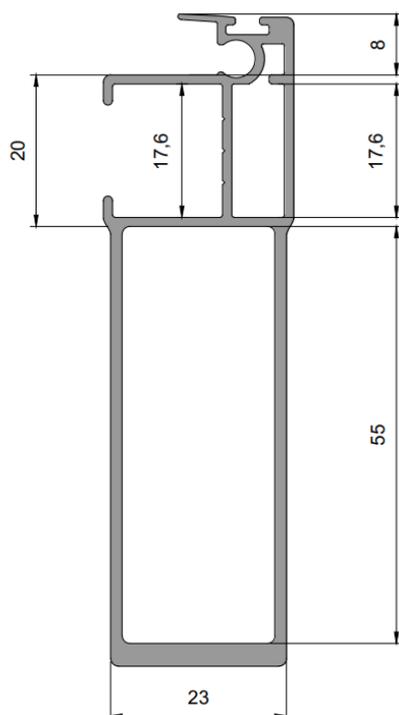
Mão de Amigo Slim sem Reforço
0,387 Kg/m



$J_x = 1,2963 \text{ cm}^4$	$W_x = 0,906 \text{ cm}^3$
$J_y = 0,7850 \text{ cm}^4$	$W_y = 0,487 \text{ cm}^3$

20PL – F102

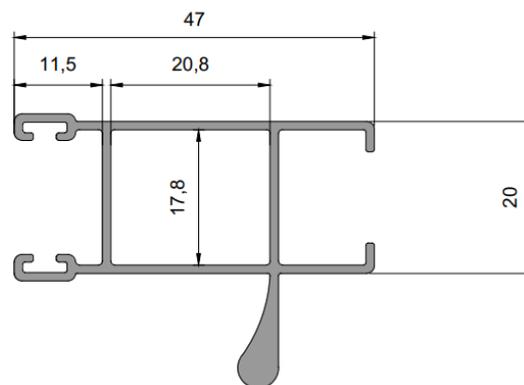
Mão de Amigo Slim com Reforço
1,023 Kg/m



$J_x = 31,5885 \text{ cm}^4$	$W_x = 6,988 \text{ cm}^3$
$J_y = 3,1258 \text{ cm}^4$	$W_y = 2,265 \text{ cm}^3$

20PL – F103

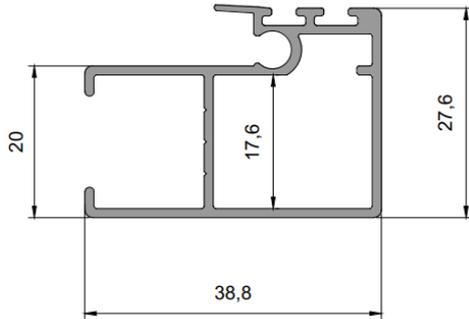
Montante com Reforço
0,665 Kg/m



$J_x = 2,5873 \text{ cm}^4$	$W_x = 1,237 \text{ cm}^3$
$J_y = 3,6051 \text{ cm}^4$	$W_y = 1,459 \text{ cm}^3$

20PL – F104

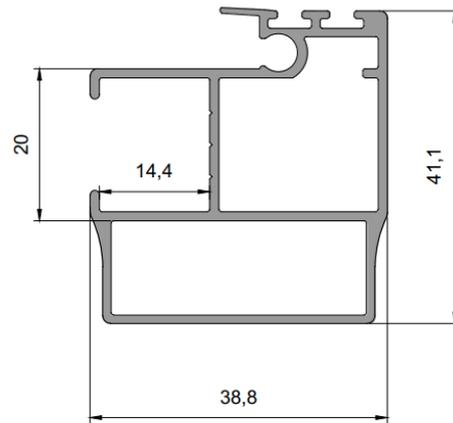
Mão de Amigo sem Reforço
0,489 Kg/m



$J_x = 1,7799 \text{ cm}^4$	$W_x = 1,236 \text{ cm}^3$
$J_y = 2,5499 \text{ cm}^4$	$W_y = 1,108 \text{ cm}^3$

20PL – F105

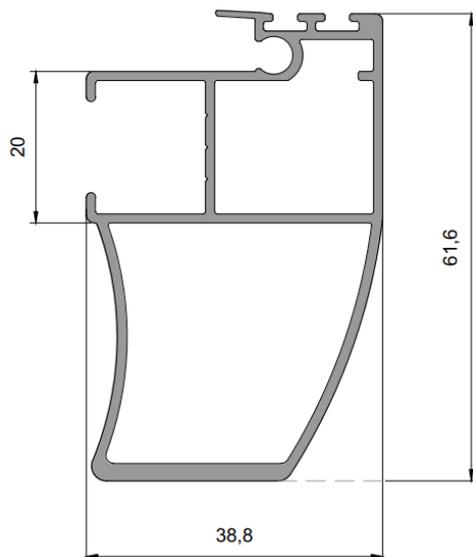
Mão de Amigo com Reforço
0,682 Kg/m



$J_x = 4,6658 \text{ cm}^4$	$W_x = 2,232 \text{ cm}^3$
$J_y = 3,9966 \text{ cm}^4$	$W_y = 1,824 \text{ cm}^3$

20PL – F106

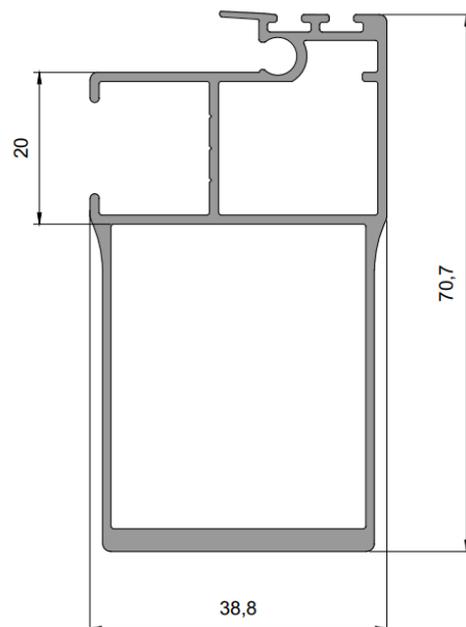
Mão de Amigo com Reforço
0,885 Kg/m



$J_x = 14,2928 \text{ cm}^4$	$W_x = 4,566 \text{ cm}^3$
$J_y = 5,2612 \text{ cm}^4$	$W_y = 2,604 \text{ cm}^3$

20PL – F107

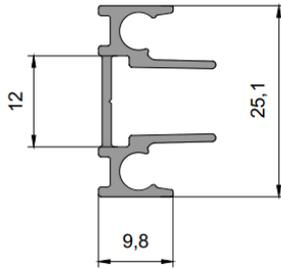
Mão de Amigo com Reforço
1,030 Kg/m



$J_x = 24,5775 \text{ cm}^4$	$W_x = 6,501 \text{ cm}^3$
$J_y = 6,5629 \text{ cm}^4$	$W_y = 3,110 \text{ cm}^3$

20PL – M100

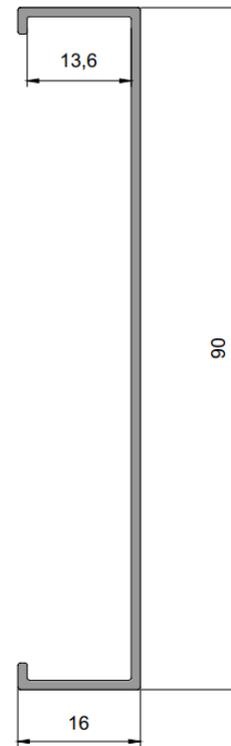
Mata Junta
0,241 Kg/m



$Jx = 0,5754 \text{ cm}^4$	$Wx = 0,456 \text{ cm}^3$
$Jy = 0,1309 \text{ cm}^4$	$Wy = 0,124 \text{ cm}^3$

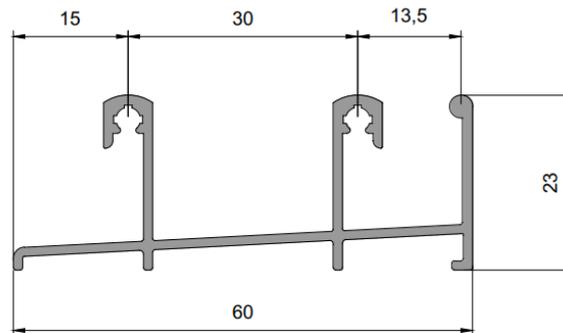
20PL – M101

Marco Lateral 03 Planos
0,404 Kg/m



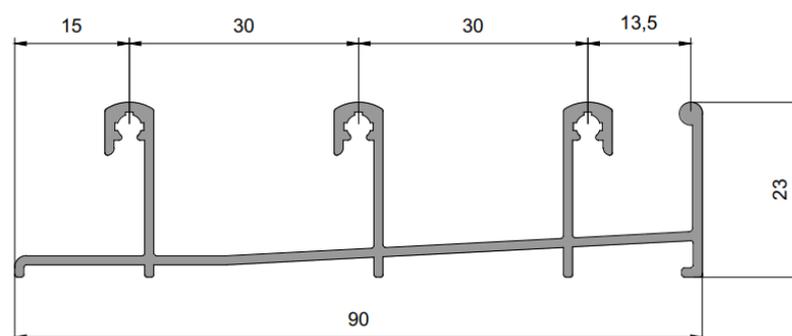
20PL – M102

Marco Inferior 02 Planos
0,521 Kg/m



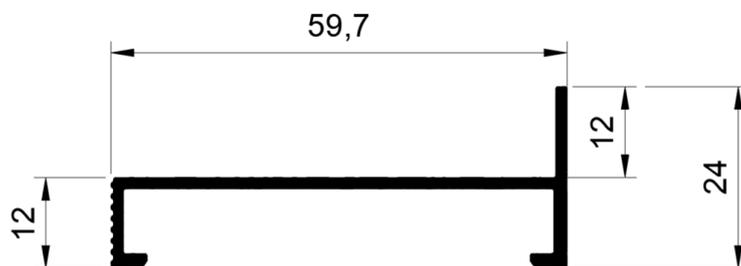
20PL – M103

Marco Inferior 03 Planos
0,733 Kg/m



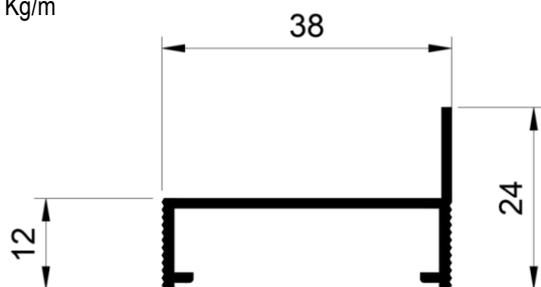
CM - 174

Contramarco
0,369 Kg/m



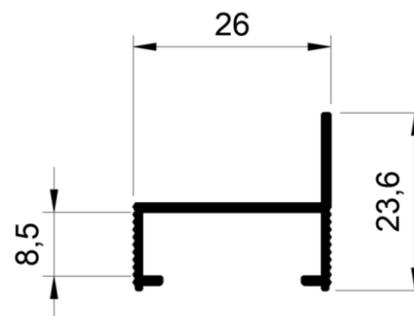
CM - 060

Contramarco
0,274 Kg/m



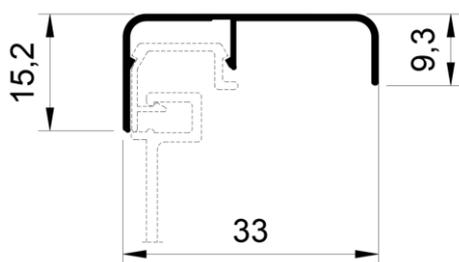
CM - 200

Contramarco
0,173 Kg/m



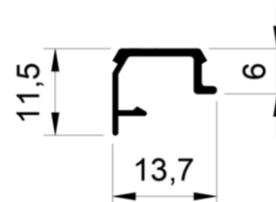
20SP - 018

Arremate (Pacote)
0,143 Kg/m



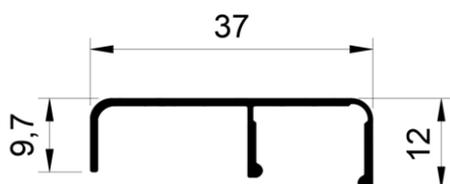
20SP - 202

Presilha para Arremate (Pacote)
0,080 Kg/m



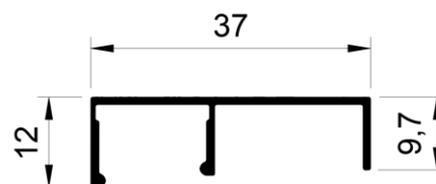
MH - 017

Arremate
0,193 Kg/m



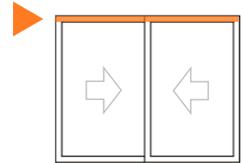
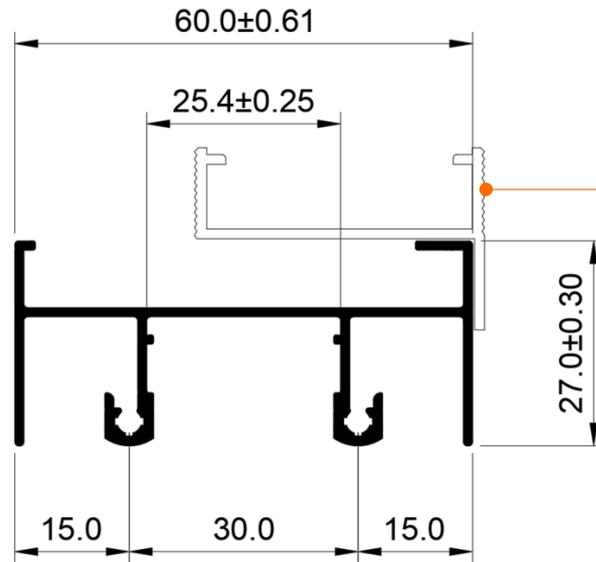
MP - 347

Arremate
0,184 Kg/m



20SP – M02

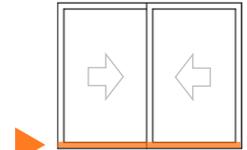
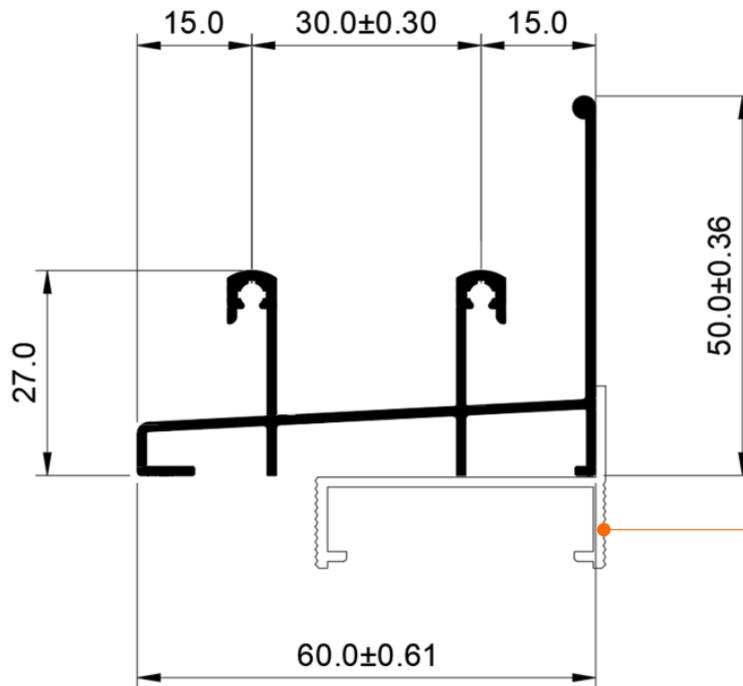
Marco superior 2 planos
0,596 Kg/m



Sugestão: utilizar
CM - 060 ou CM - 200

20SP – M01

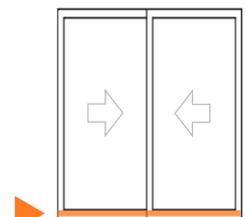
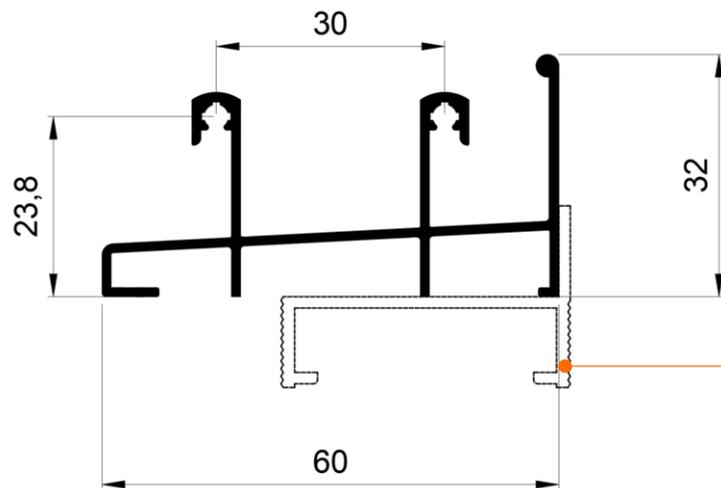
Marco inferior 2 planos
0,674 Kg/m



Sugestão: utilizar
CM - 060 ou CM - 200

20SP – M95

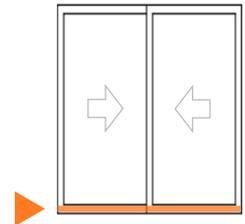
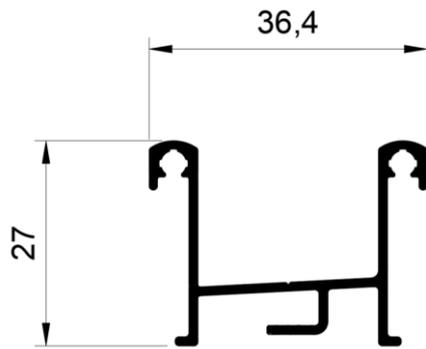
Marco inferior 2 planos
0,611 Kg/m



Sugestão: utilizar
CM - 060 ou CM - 200

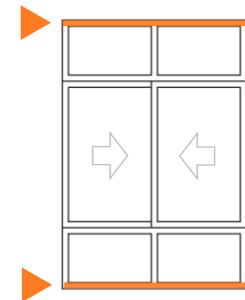
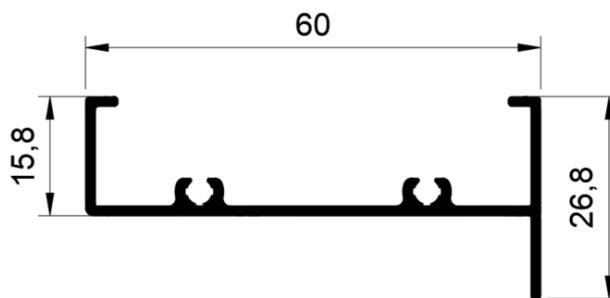
20SP – M89

Trilho inferior - Soleira
0,383 Kg/m



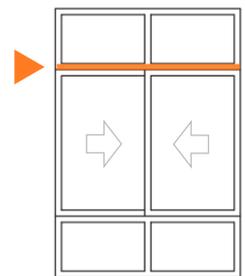
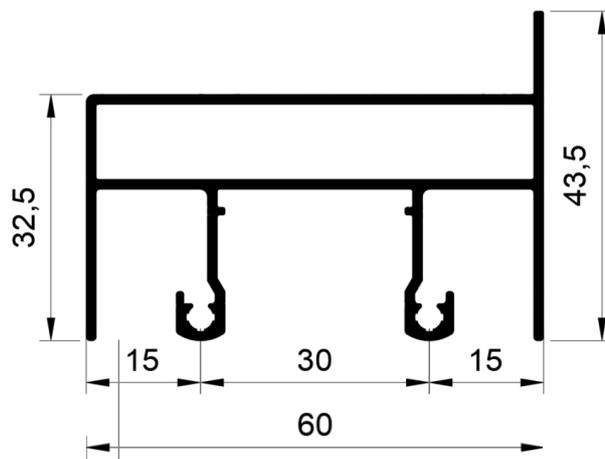
20SP – M952

Marco Superior / Inferior
0,443 Kg/m



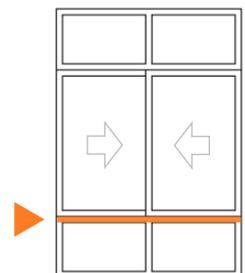
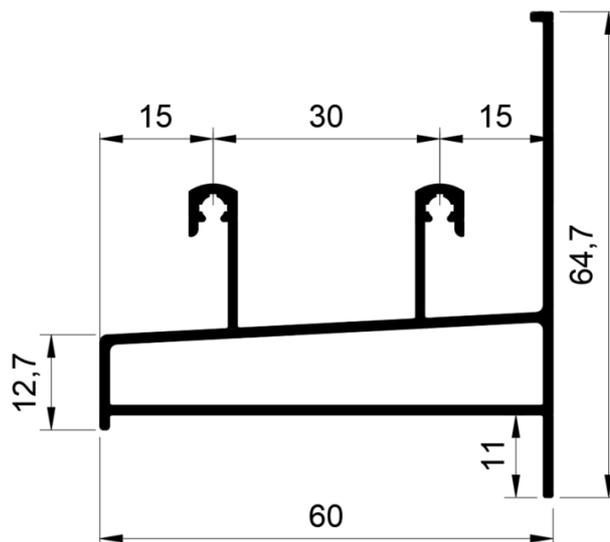
20SP – M954

Marco intermediário – Peitoril
0,899 Kg/m



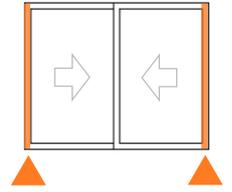
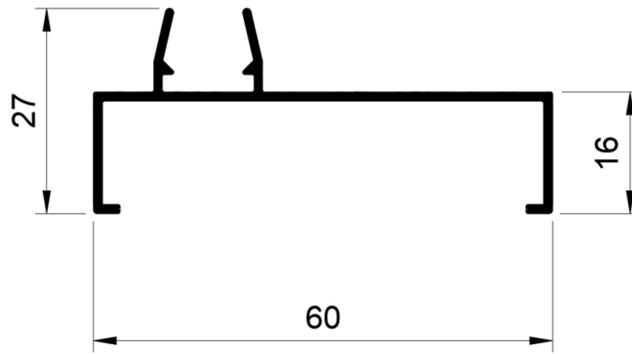
20SP – M953

Marco intermediário – Peitoril
0,894 Kg/m



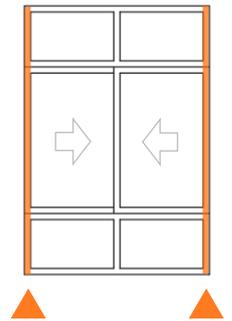
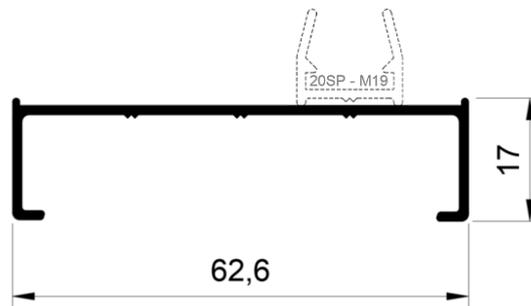
20SP – M03

Marco lateral 2 planos
0,382 Kg/m0



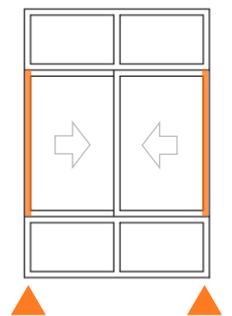
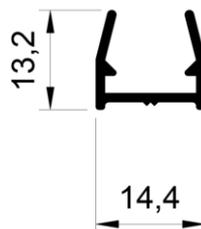
20SP – M43

Marco Lateral
0,352 Kg/m



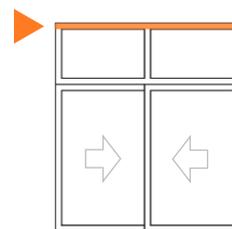
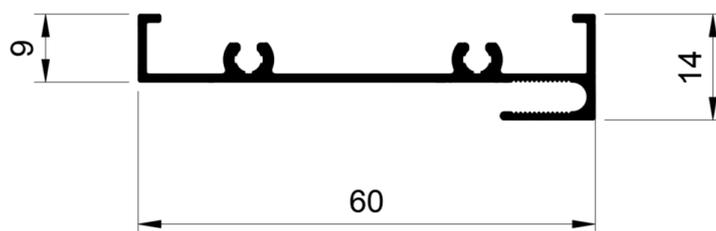
20SP – M19

Mata junta lateral do marco
0,138 Kg/m



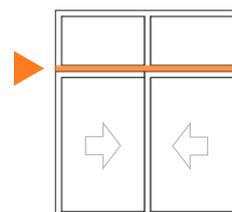
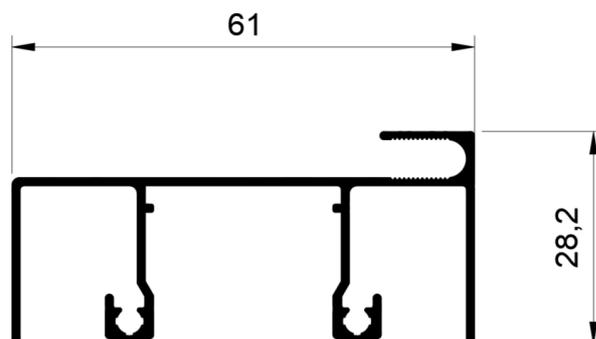
20SP – M78

Marco superior 2 planos - Tela
0,362 Kg/m



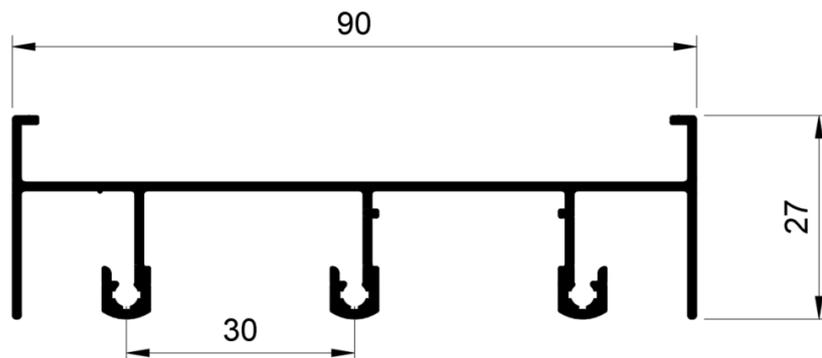
20SP – M76

Marco Intermediário 2 planos - Tela
0,578 Kg/m



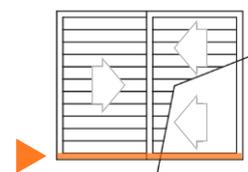
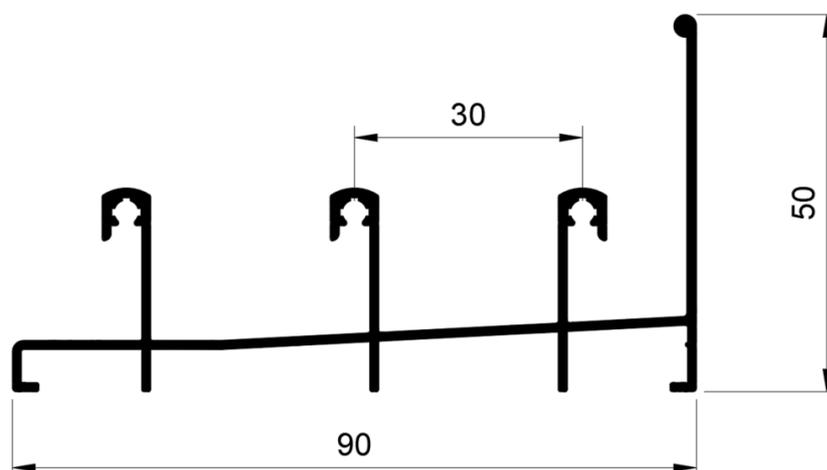
20SP – M05

Marco superior 3 planos
0,786 Kg/m



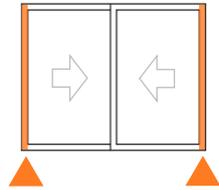
20SP – M04

Marco inferior 3 planos
0,888 Kg/m



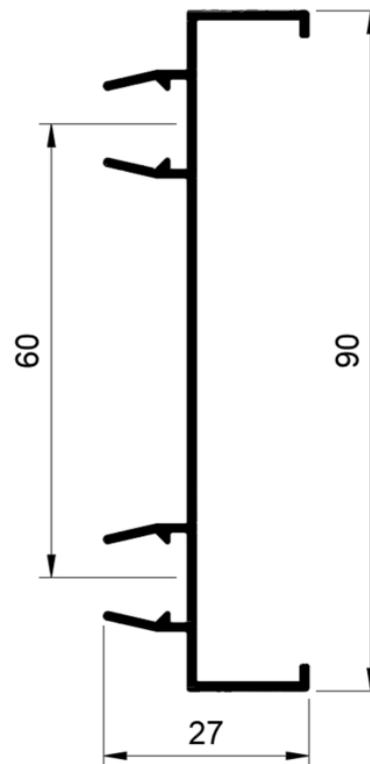
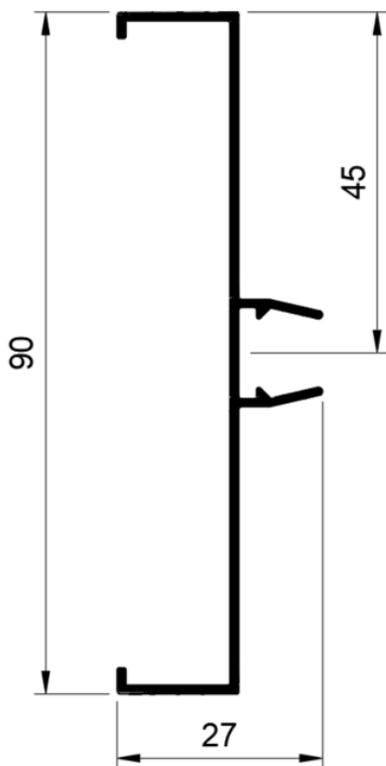
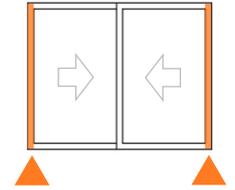
20SP – M06

Marco lateral 3 planos
0,470 Kg/m



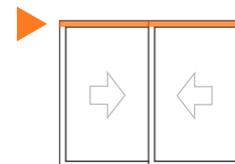
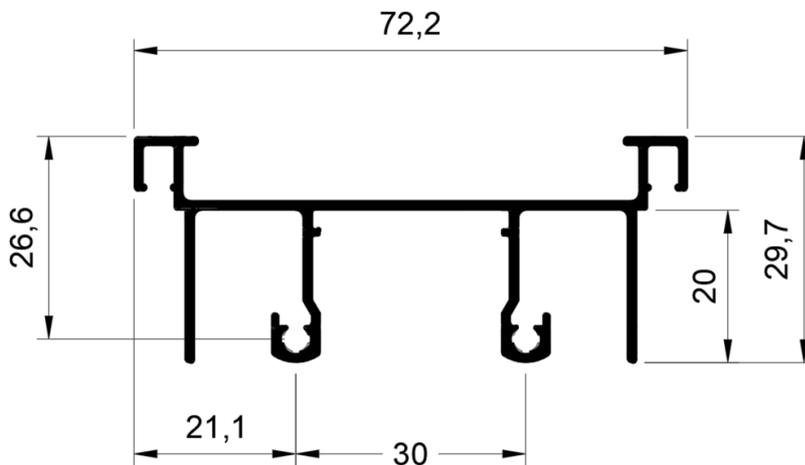
20SP – M07

Marco lateral 3 planos
0,555 Kg/m



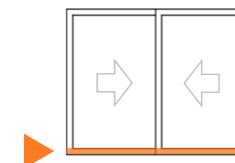
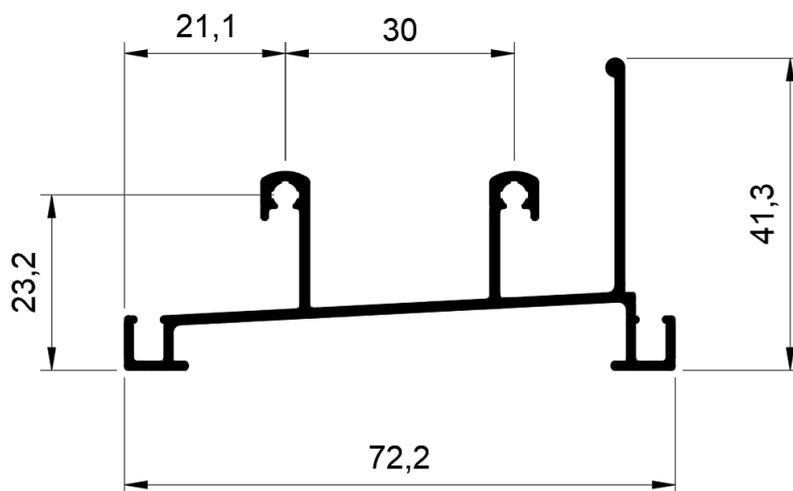
20SP – M66

Marco superior 2 planos
0,730 Kg/m



20SP – M67

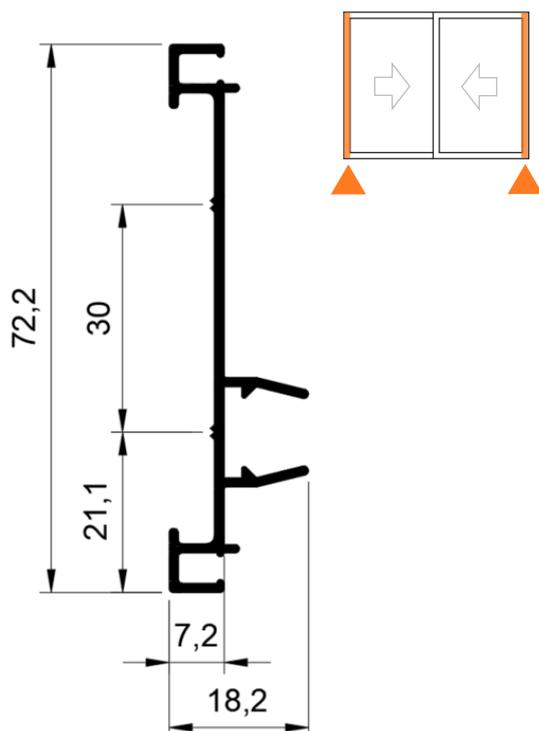
Marco inferior 2 planos
0,674 Kg/m



20SP – M68

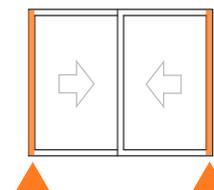
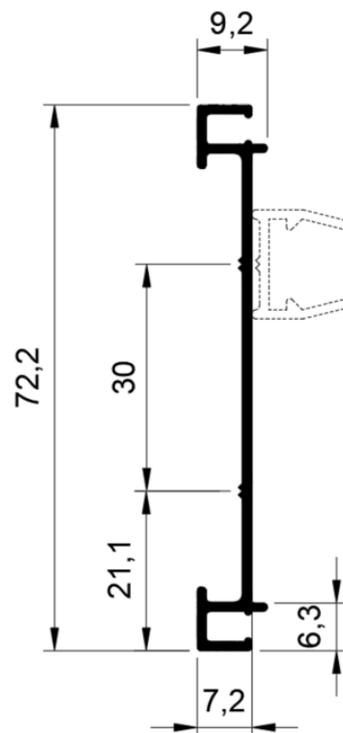
Marco lateral – 2 planos
0,442 Kg/m

PERFIL DE MEDIDA ESPECIAL 6100 mm



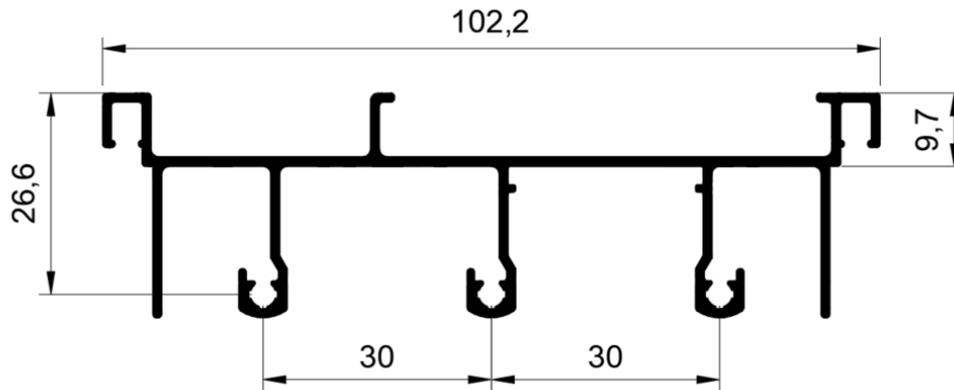
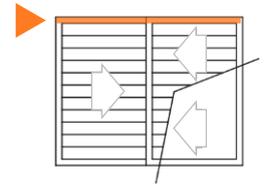
20SP – M87

Marco lateral – 2 planos
0,361 Kg/m



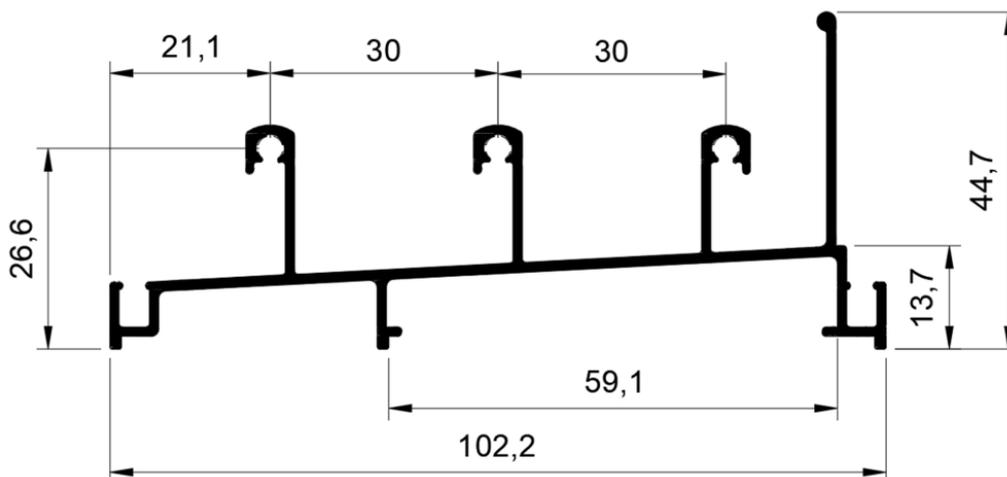
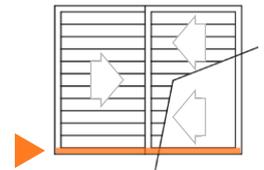
20SP – M37

Marco superior 3 planos
0,954 Kg/m



20SP – M38

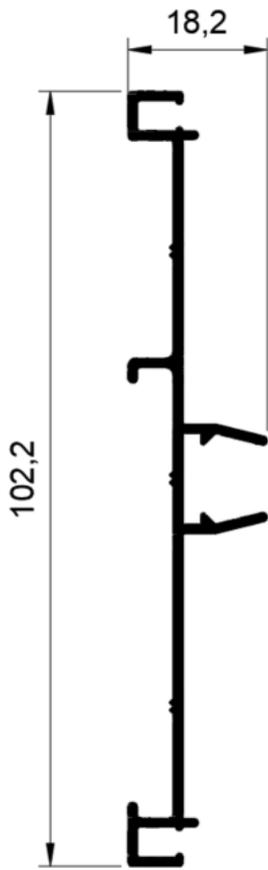
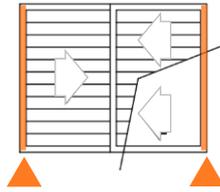
Marco inferior 3 planos
0,921 Kg/m



20SP – M35

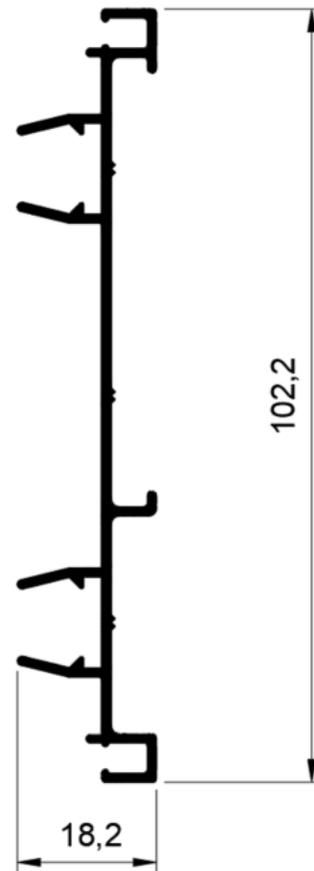
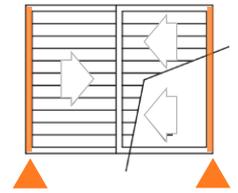
Marco lateral 3 planos
0,568 Kg/m

**PERFIL DE MEDIDA
ESPECIAL 6100 mm**



20SP – M36

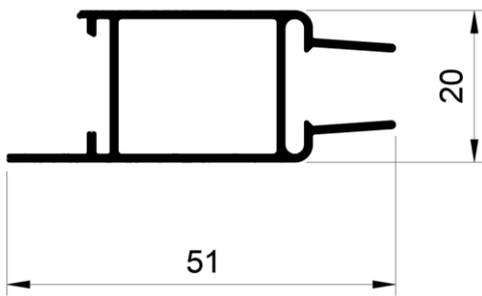
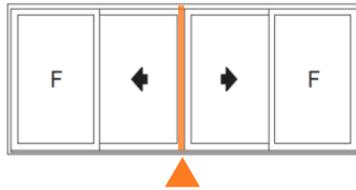
Marco lateral 3 planos
0,651 Kg/m



20SP – F42

Montante da folha
0,420 Kg/m

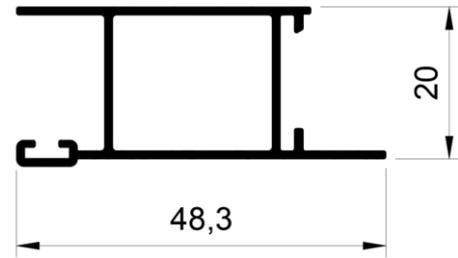
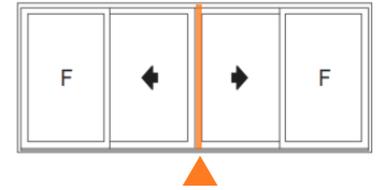
SOB CONSULTA



$Jx = 0,930 \text{ cm}^4$	$Wx = 0,871 \text{ cm}^3$
$Jy = 2,679 \text{ cm}^4$	$Wy = 0,995 \text{ cm}^3$

20SP – F43

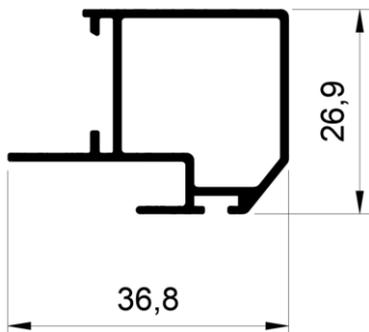
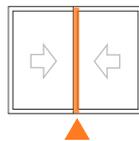
Montante da folha
0,401 Kg/m



$Jx = 1,040 \text{ cm}^4$	$Wx = 0,929 \text{ cm}^3$
$Jy = 2,452 \text{ cm}^4$	$Wy = 0,931 \text{ cm}^3$

20SP – F50

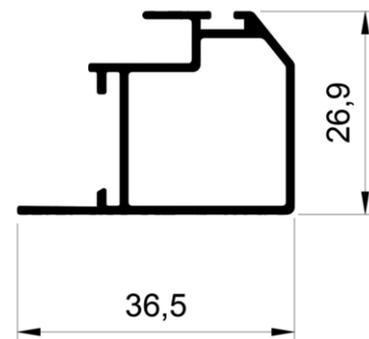
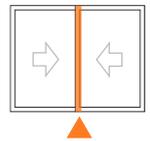
Montante mão de amigo
0,378 Kg/m



$Jx = 1,228 \text{ cm}^4$	$Wx = 0,895 \text{ cm}^3$
$Jy = 1,368 \text{ cm}^4$	$Wy = 0,611 \text{ cm}^3$

20SP – F59

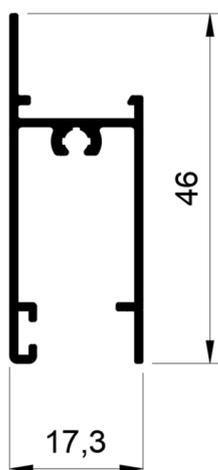
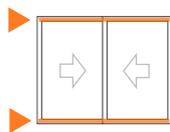
Montante mão de amigo
0,378 Kg/m



$Jx = 1,356 \text{ cm}^4$	$Wx = 0,919 \text{ cm}^3$
$Jy = 1,368 \text{ cm}^4$	$Wy = 0,611 \text{ cm}^3$

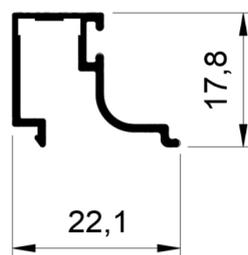
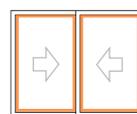
20SP – F52

Montante da folha
0,350 Kg/m



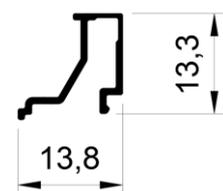
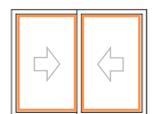
20SP – F34

Baguete
0,161 Kg/m



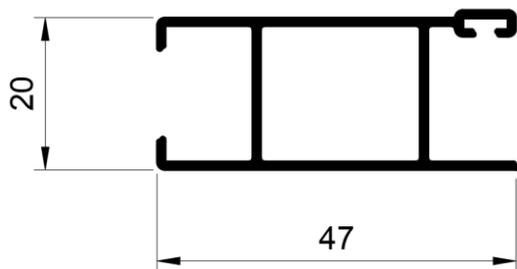
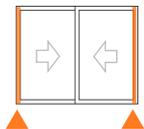
20SP – F35

Baguete
0,097 Kg/m



20SP – F01

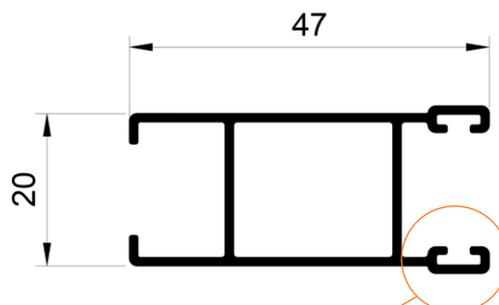
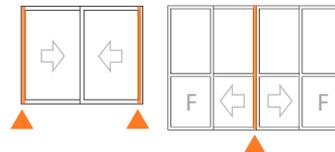
Montante Lateral da folha
0,422 Kg/m



$J_x = 1,127 \text{ cm}^4$	$W_x = 1,068 \text{ cm}^3$
$J_y = 2,965 \text{ cm}^4$	$W_y = 1,270 \text{ cm}^3$

20SP – F01A

Montante Lateral da folha
0,444 Kg/m

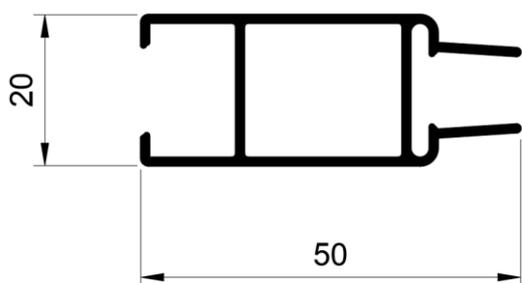
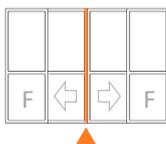


Perfil com **VEDAÇÃO DUPLA**

$J_x = 1,200 \text{ cm}^4$	$W_x = 1,090 \text{ cm}^3$
$J_y = 3,238 \text{ cm}^4$	$W_y = 1,321 \text{ cm}^3$

20SP – F02

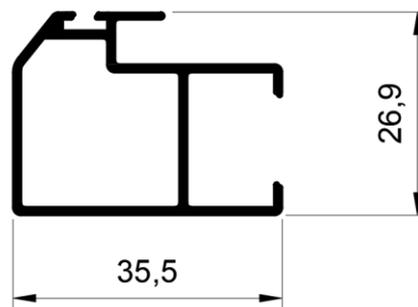
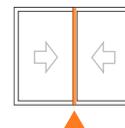
Montante Central da folha
0,422 Kg/m



$J_x = 1,007 \text{ cm}^4$	$W_x = 1,007 \text{ cm}^3$
$J_y = 3,233 \text{ cm}^4$	$W_y = 1,266 \text{ cm}^3$

20SP – F03

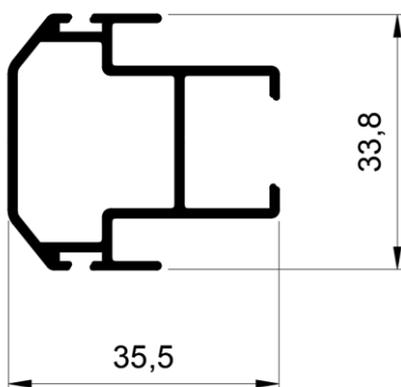
Montante mão de amigo
0,399 Kg/m



$J_x = 1,375 \text{ cm}^4$	$W_x = 0,973 \text{ cm}^3$
$J_y = 1,720 \text{ cm}^4$	$W_y = 0,867 \text{ cm}^3$

20SP – F04

Montante mão de amigo
0,464 Kg/m

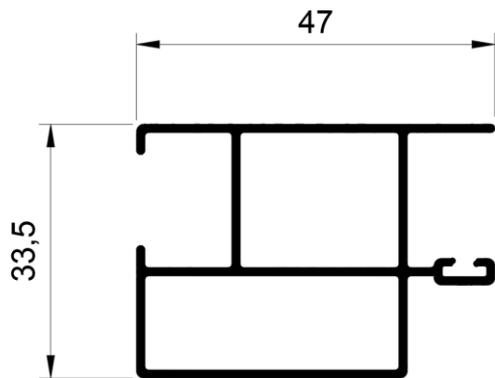
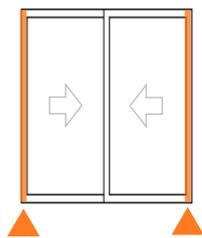


$J_x = 2,144 \text{ cm}^4$	$W_x = 1,268 \text{ cm}^3$
$J_y = 1,832 \text{ cm}^4$	$W_y = 0,893 \text{ cm}^3$

20SP – F06

Montante da folha
0,602 Kg/m

**PERFIL DE MEDIDA
ESPECIAL 4600 mm**

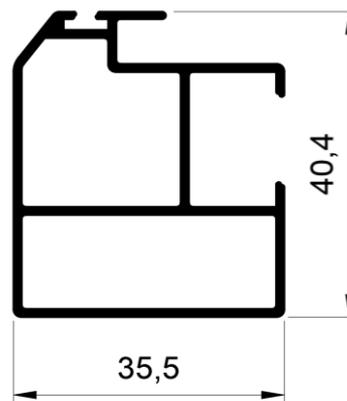
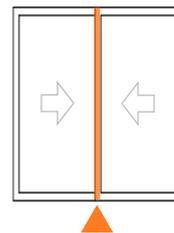


Jx= 3,037 cm ⁴	Wx= 1,769 cm ³
Jy= 4,335 cm ⁴	Wy= 1,725 cm ³

20SP – F07

Montante mão de amigo
0,580 Kg/m

**PERFIL DE MEDIDA
ESPECIAL 4600 mm**

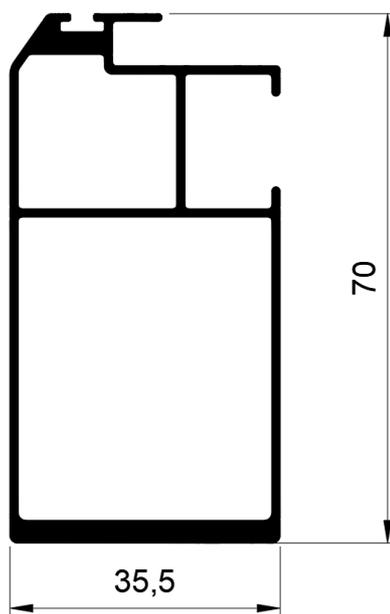
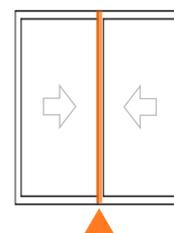


Jx= 3,880 cm ⁴	Wx= 1,826 cm ³
Jy= 2,965 cm ⁴	Wy= 1,546 cm ³

20SP – F08

Montante mão de amigo
0,972 Kg/m

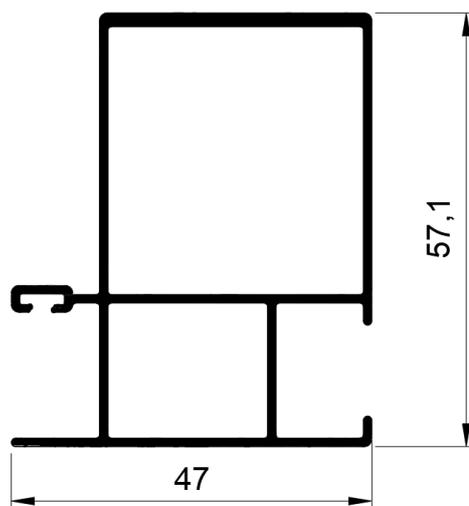
**PERFIL DE MEDIDA
ESPECIAL 4600 mm**



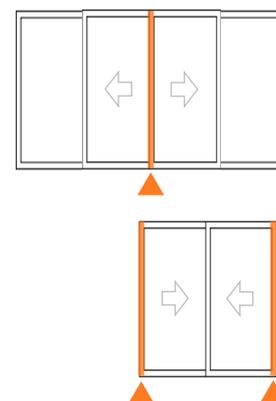
Jx= 23,668 cm ⁴	Wx= 6,286 cm ³
Jy= 5,670 cm ⁴	Wy= 2,967 cm ³

20SP – F11

Montante da folha
0,808 Kg/m



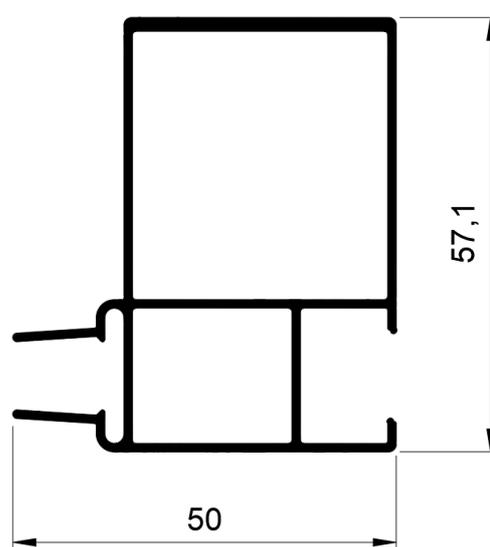
PERFIL DE MEDIDA ESPECIAL 4600 mm



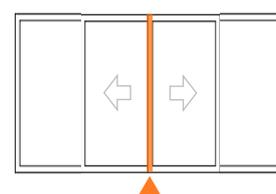
Jx= 12,494 cm ⁴	Wx= 4,199 cm ³
Jy= 6,182 cm ⁴	Wy= 2,363 cm ³

20SP – F12

Montante da folha
0,826 Kg/m



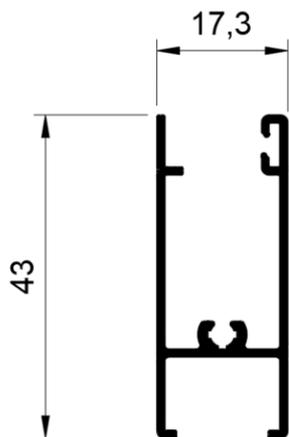
PERFIL DE MEDIDA ESPECIAL 4600 mm



Jx= 12,836 cm ⁴	Wx= 3,042 cm ³
Jy= 6,564 cm ⁴	Wy= 3,074 cm ³

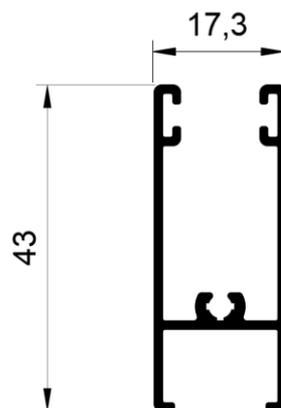
20SP – F05

Travessa da Folha
0,373 Kg/m



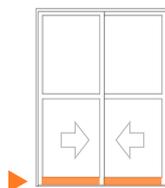
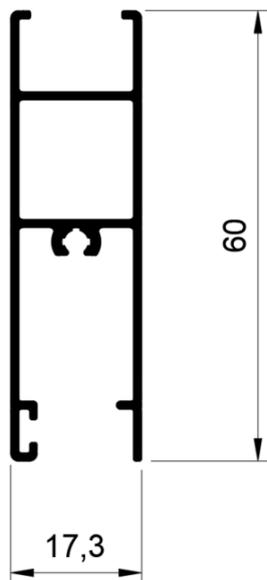
20SP – F05A

Travessa da Folha
0,385 Kg/m



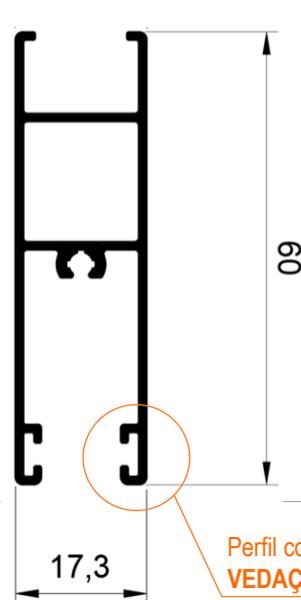
20SP – F09

Travessa da folha
0,520 Kg/m



20SP – F09A

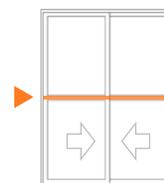
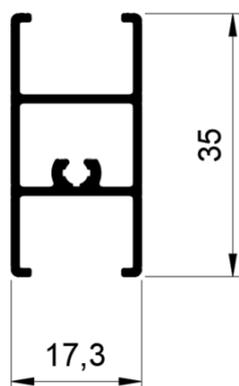
Travessa da folha
0,534 Kg/m



Perfil com
VEDAÇÃO DUPLA

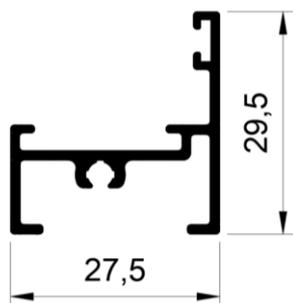
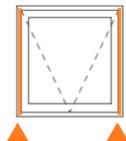
20SP – F10

Travessa intermediária
0,350 Kg/m



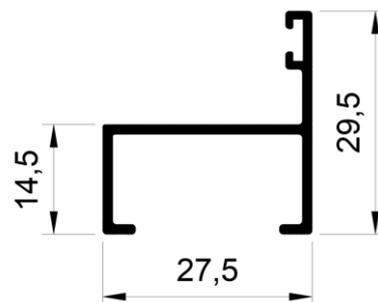
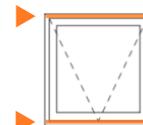
20SP – M24

Marco Lateral
0,341 Kg/m



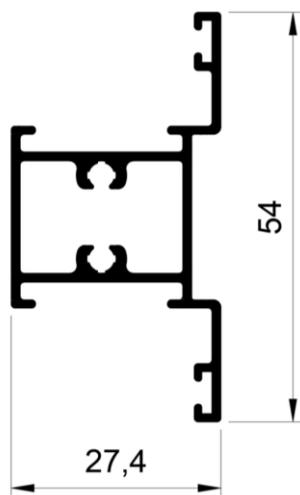
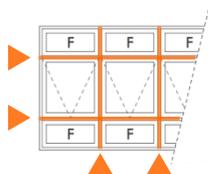
20SP – M75

Marco Largura
0,247 Kg/m



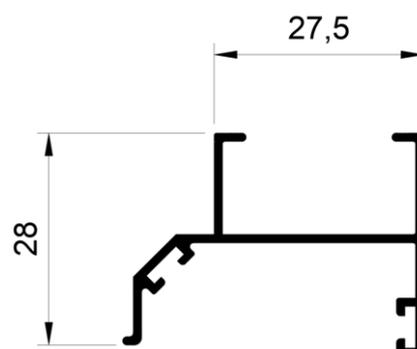
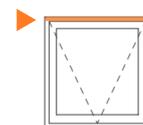
20SP – M25

Travessa e Coluna janela Maxim-ar
0,552 Kg/m



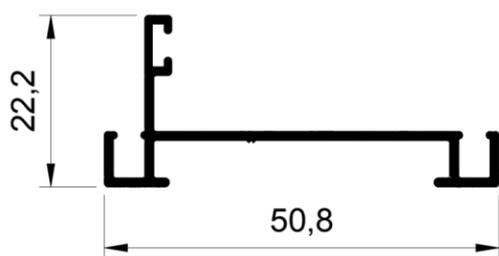
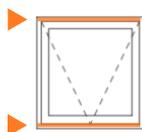
20SP – M71

Travessa Superior e Pingadeira
Janela Maxim-ar
0,336 Kg/m



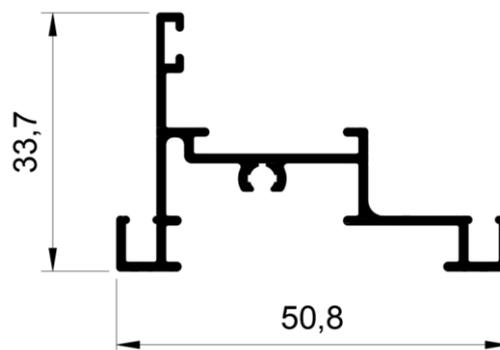
20SP – M69

Marco Largura (PACOTE)
0,326 Kg/m



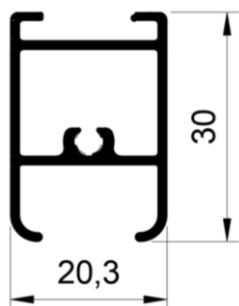
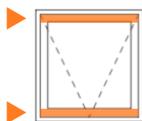
20SP – M70

Marco Lateral (PACOTE)
0,469 Kg/m



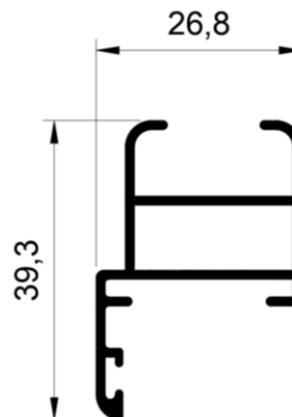
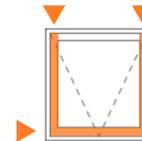
20SP – M22

Travessa Superior / Inferior – Folha
0,377 Kg/m



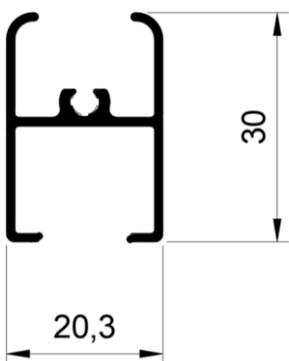
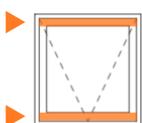
20SP – M21

Folha Maxim-ar
0,417 Kg/m



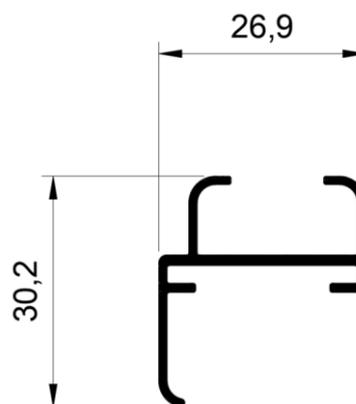
20SP – M30

Travessa Superior / Inferior – Folha
0,304 Kg/m



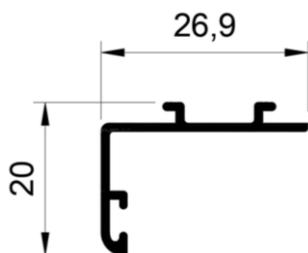
20SP – M29

Montante lateral – Folha
0,273 Kg/m



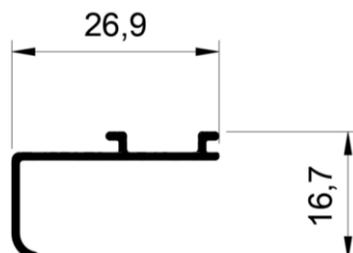
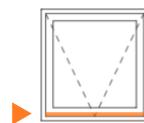
20SP – M23

Pingadeira da folha
0,173 Kg/m



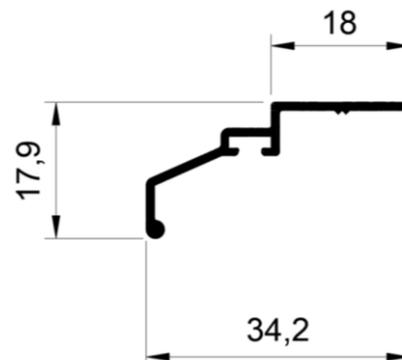
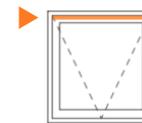
20SP – M31

Pingadeira da Folha
0,135 Kg/m



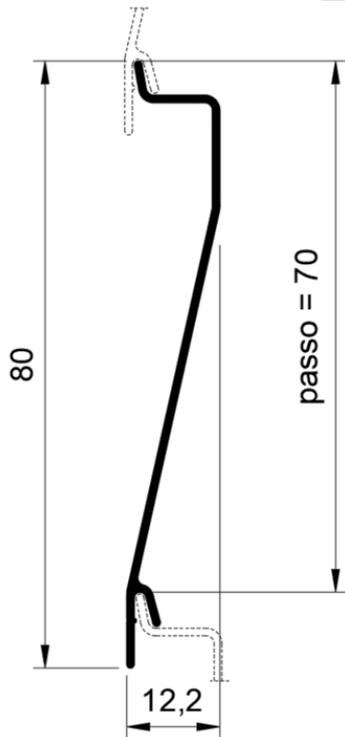
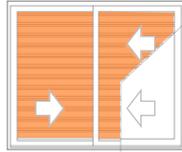
20SP – M28

Pingadeira do Marco
0,162 Kg/m



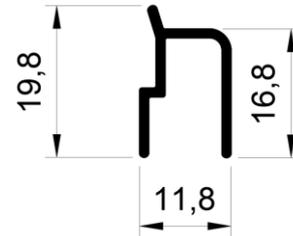
20SP – P01

Palheta
0,246 Kg/m



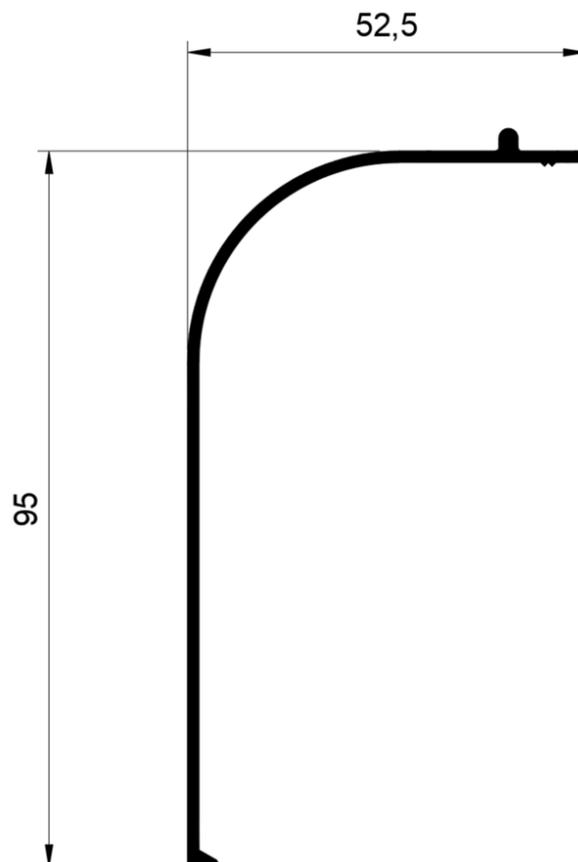
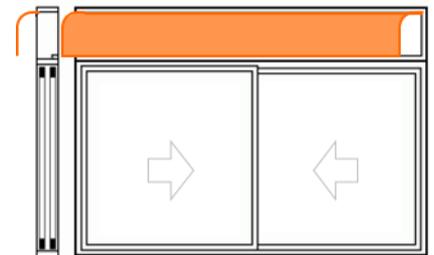
20SP – F20

Complemento
0,135 Kg/m



20SP – M77

Pingadeira
0,576 Kg/m



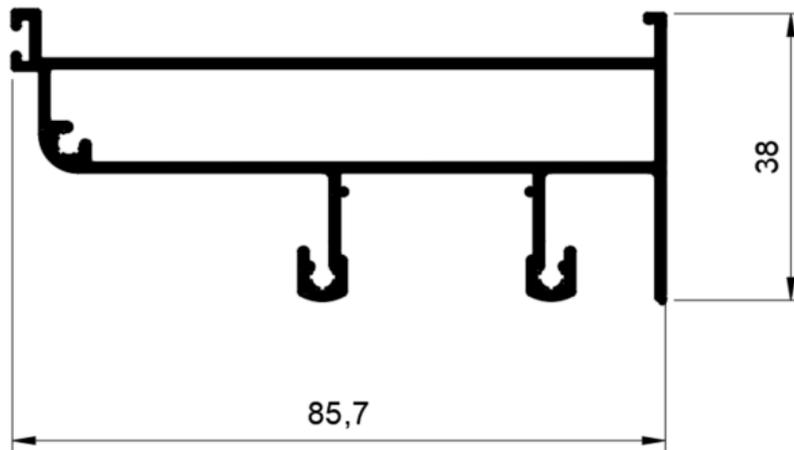
SPI – M14

Marco superior
0,893 Kg/m



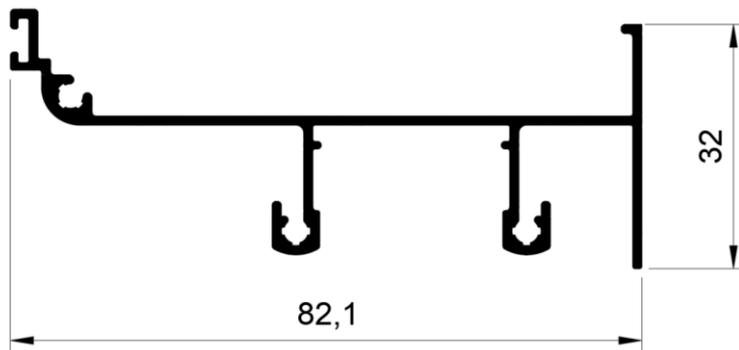
SPI – M15

Travessa intermediária da caixa
1,102 Kg/m



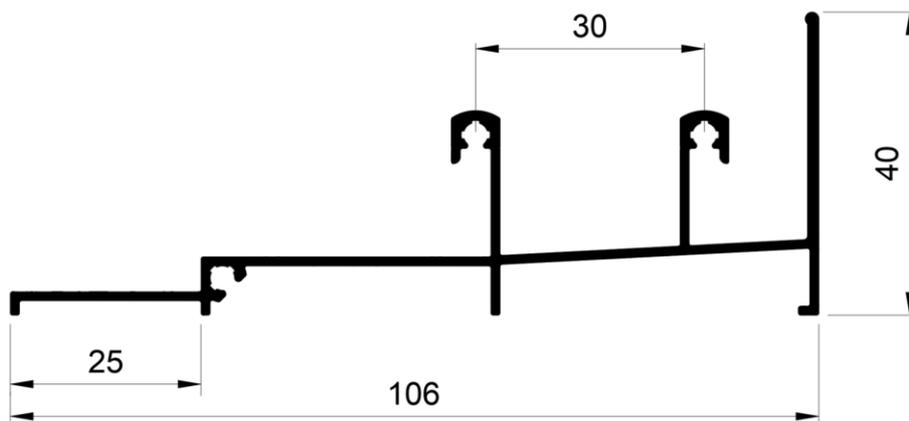
SPI – M59S

Travessa intermediária da caixa
0,653 Kg/m



SPI – M18

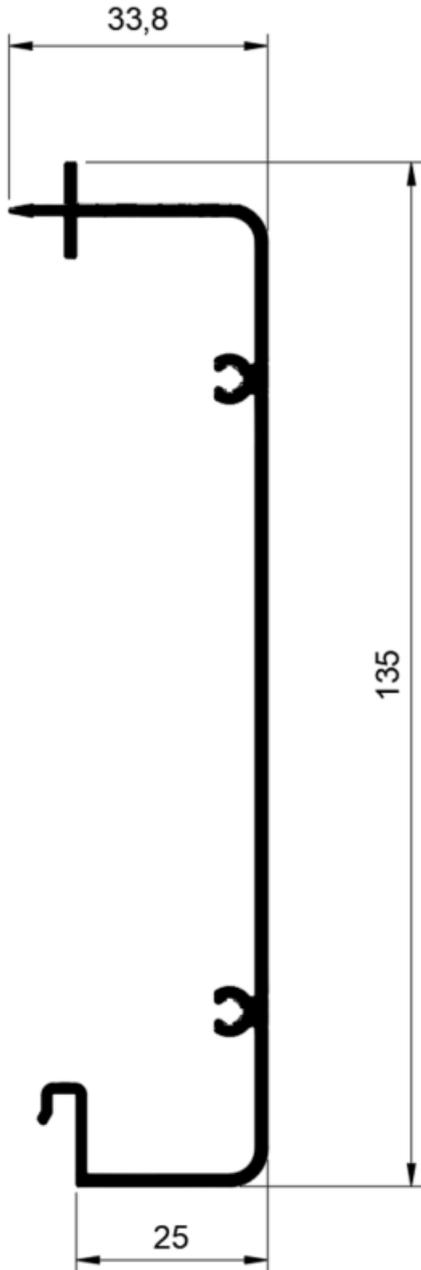
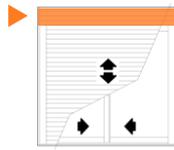
Marco inferior
0,788 Kg/m



SPI – M17

Tampa interna
0,994 Kg/m

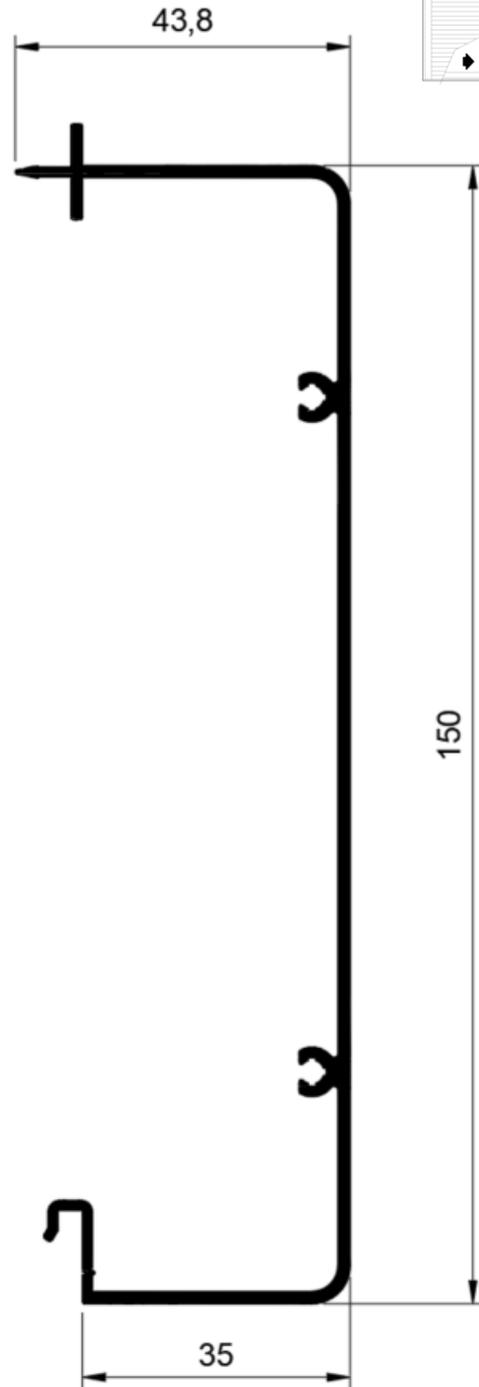
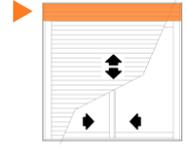
**PARA PERSIANA
DE ATÉ 1200 MM**



SPI – M98

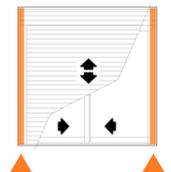
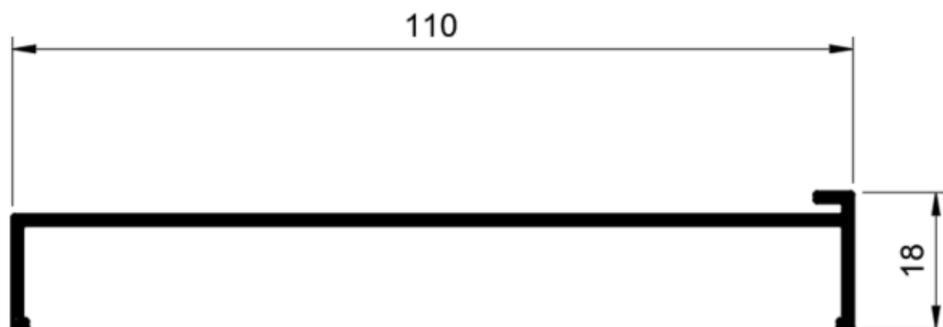
Tampa interna
1,149 Kg/m

**PARA PERSIANA
DE ATÉ 1500 MM**



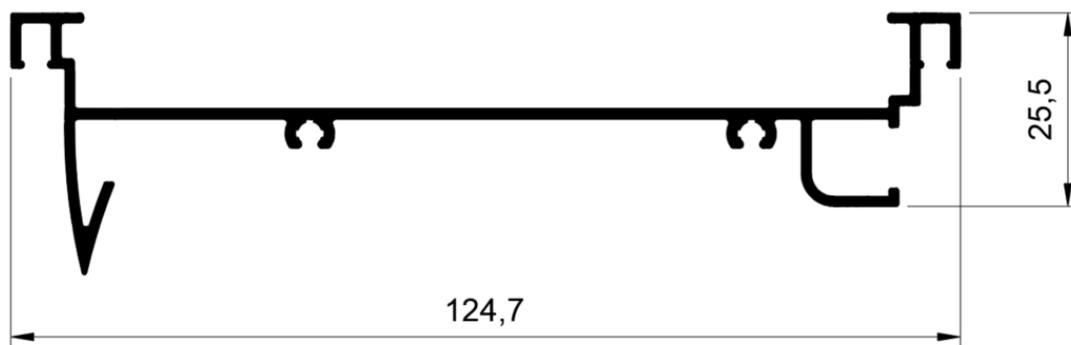
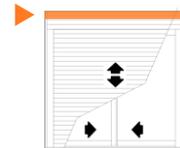
SPI – M11

Marco lateral
0,599 Kg/m



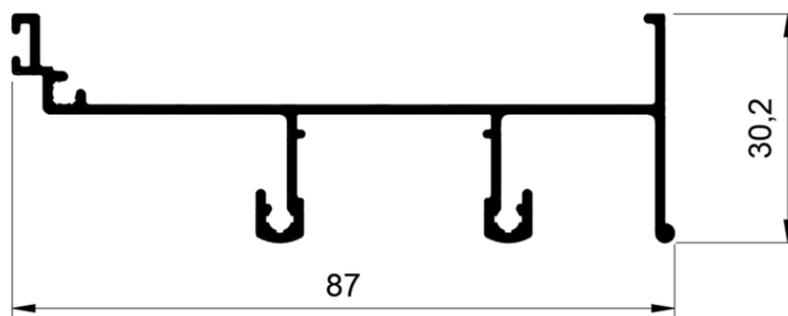
SPI – M58

Marco superior
0,889 Kg/m



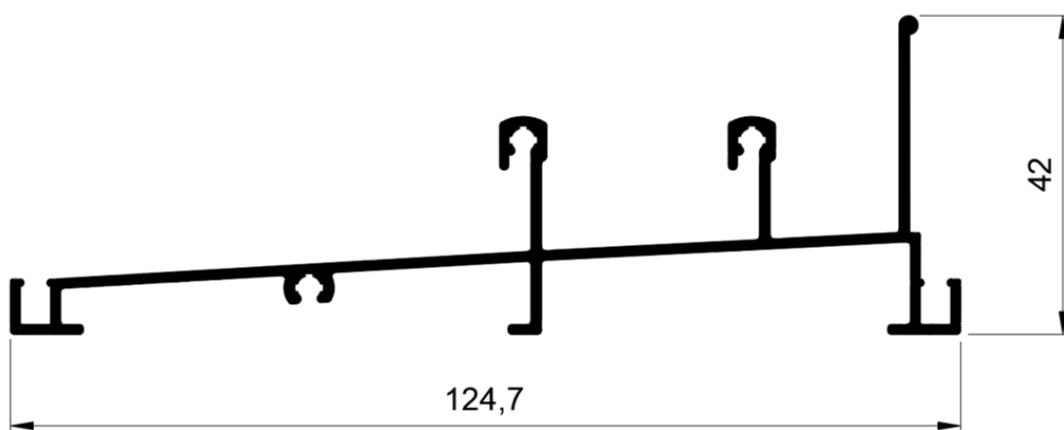
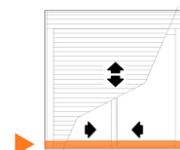
SPI – M59

Travessa intermediária da caixa
0,656 Kg/m



SPI – M57

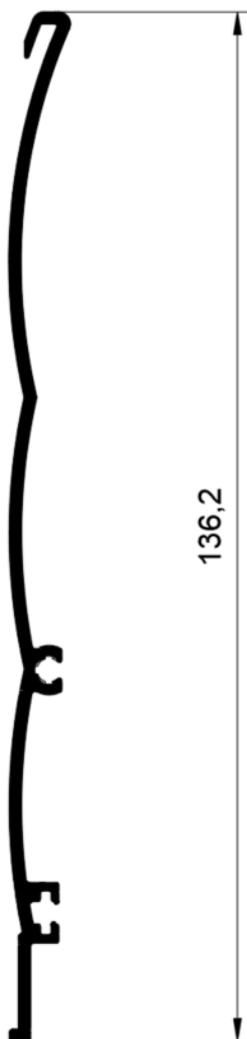
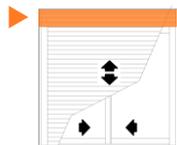
Marco inferior
0,980 Kg/m



SPI – M16

Tampa externa
0,698 Kg/m

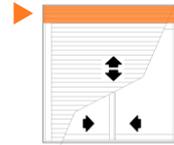
**PARA PERSIANA
DE ATÉ 1200 MM**



SPI – M99

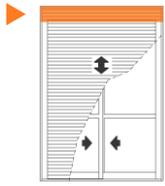
Tampa externa
0,765 Kg/m

**PARA PERSIANA
DE ATÉ 1500 MM**

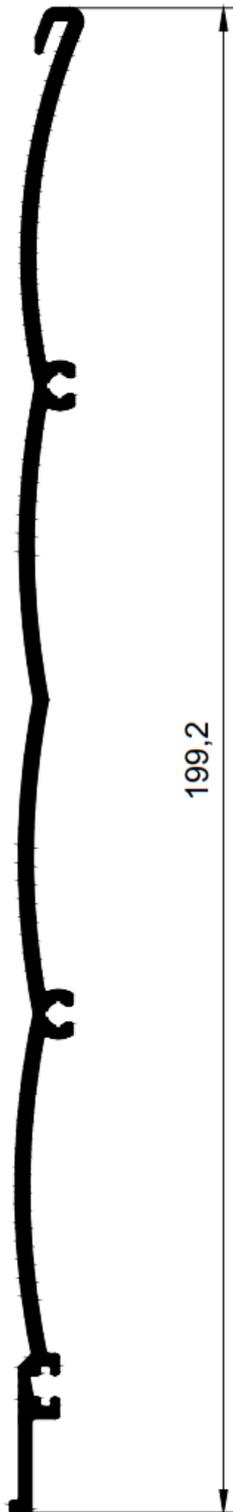


SPI – M6364

Tampa Externa da Caixa da Integrada
1,100 Kg/m



**PARA PERSIANA
DE ATÉ 2300 MM**

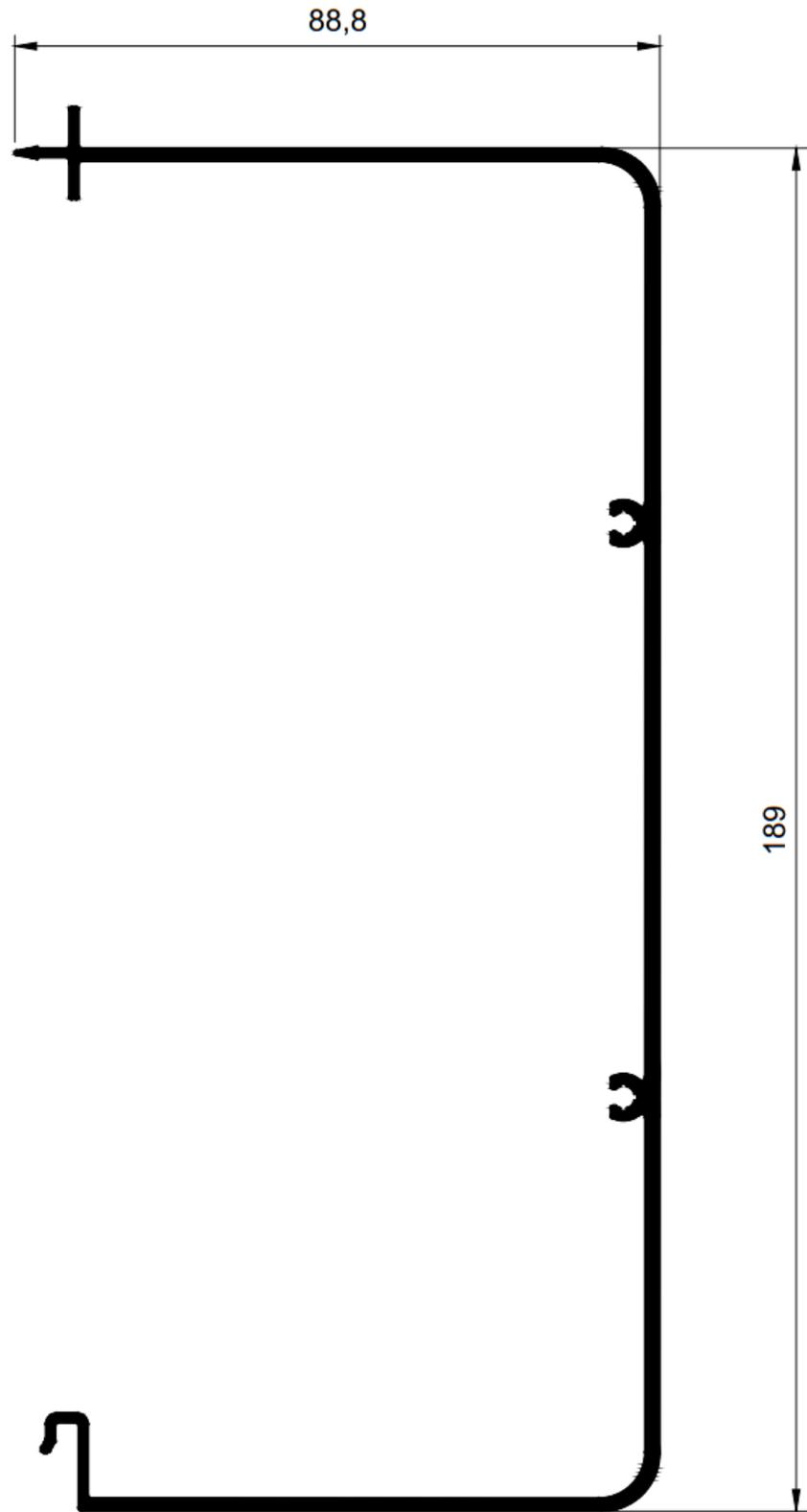


199,2

SPI – M6162

Tampa Interna da Caixa da Integrada
1,992 Kg/m

**PARA PERSIANA
DE ATÉ 2300 MM**

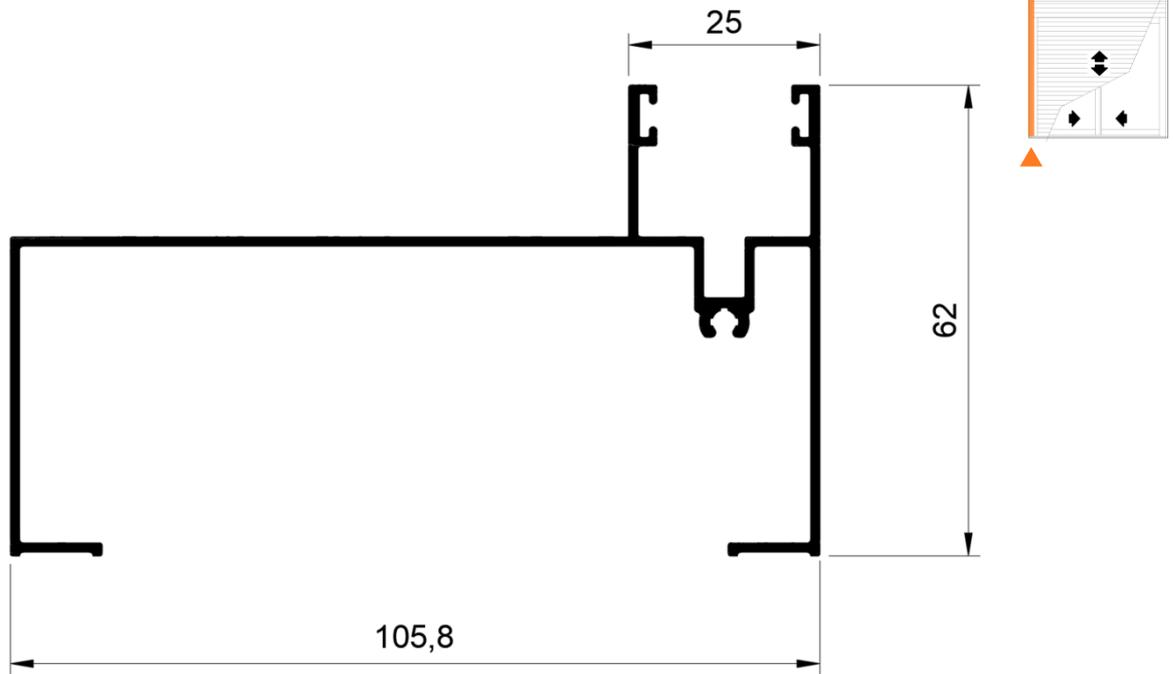


88,8

189

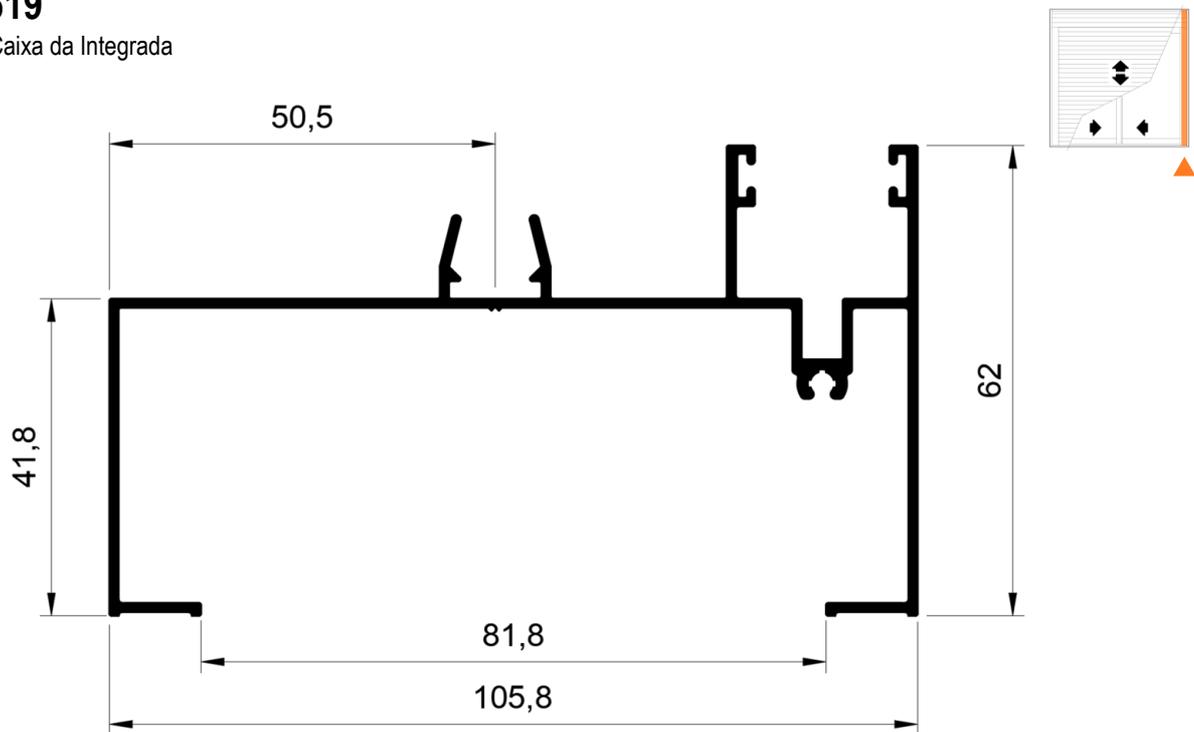
SPI – M56

Guia lateral
0,960 Kg/m



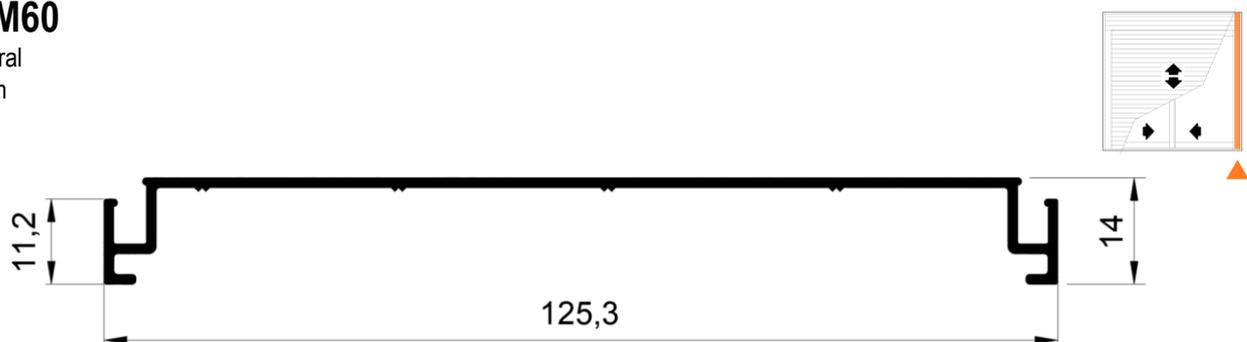
SPI – M5619

Guia lateral da Caixa da Integrada
1,057 Kg/m



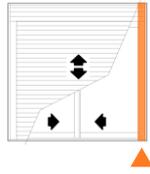
SPI – M60

Marco lateral
0,599 Kg/m



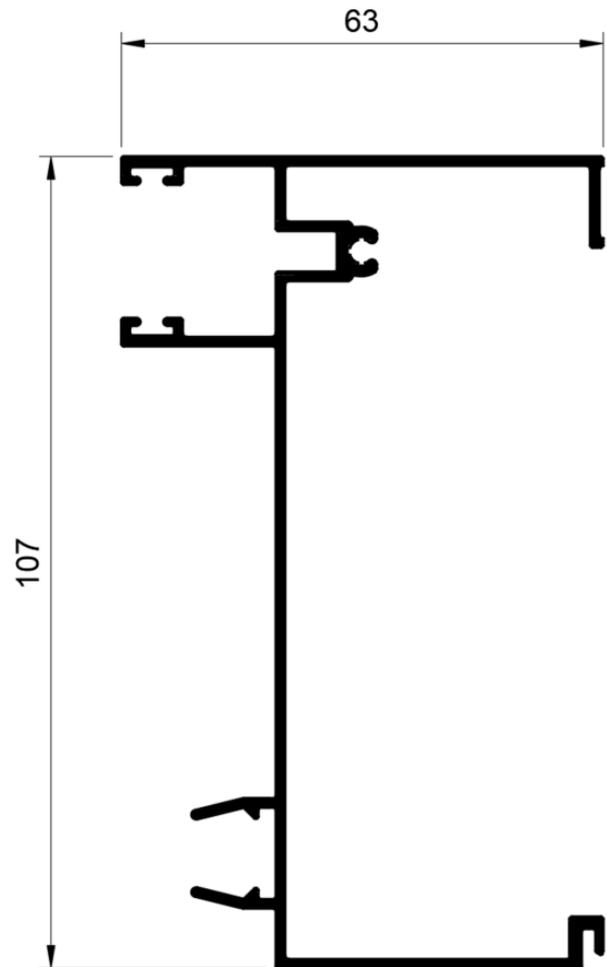
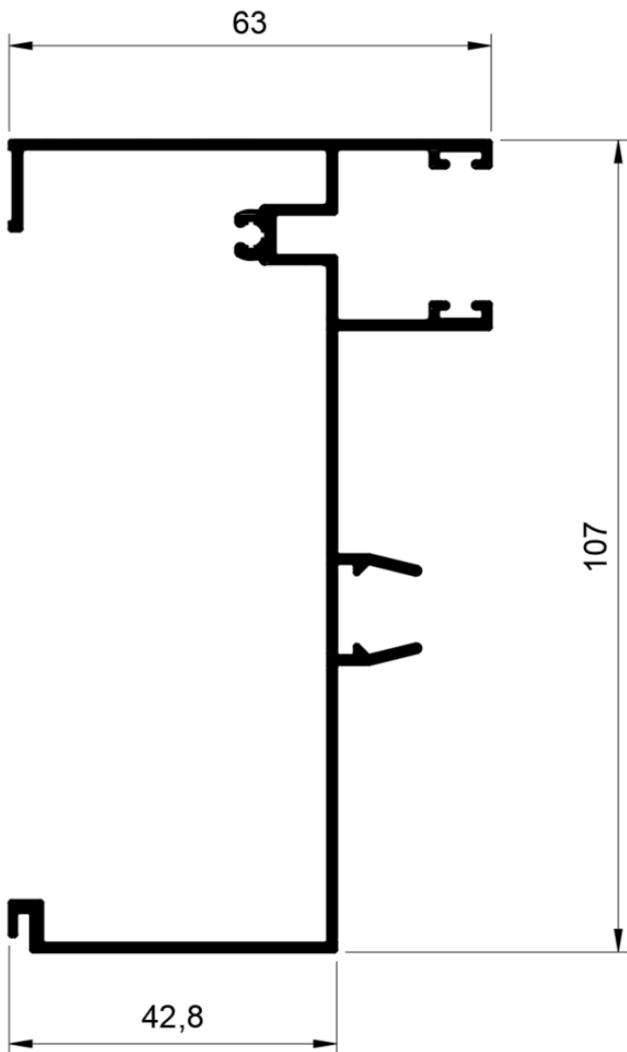
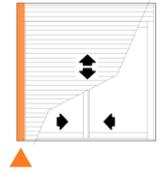
SPI – M12

Guia lateral
1,267 Kg/m



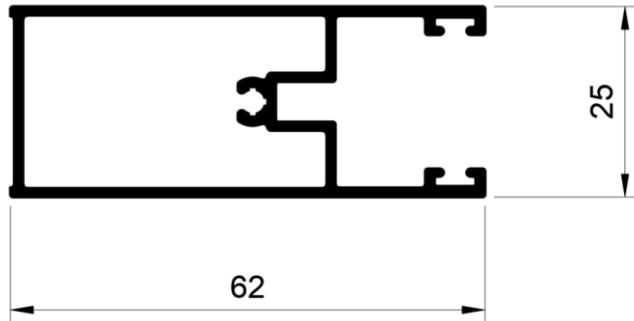
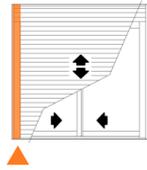
SPI – M13

Guia lateral
1,267 Kg/m



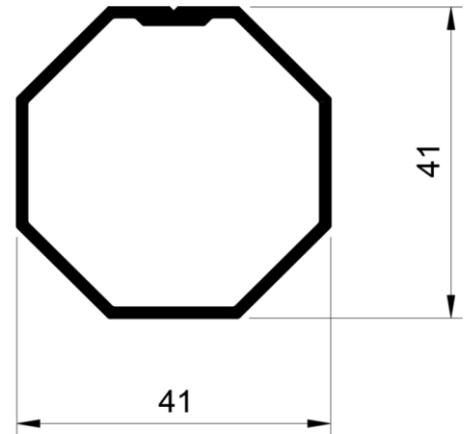
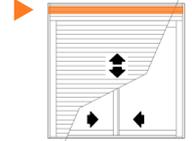
SPI - 104

Guia lateral
0,687 Kg/m



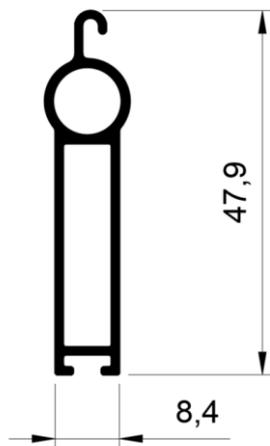
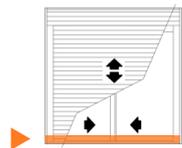
DS - 238

Arremate
0,485 Kg/m



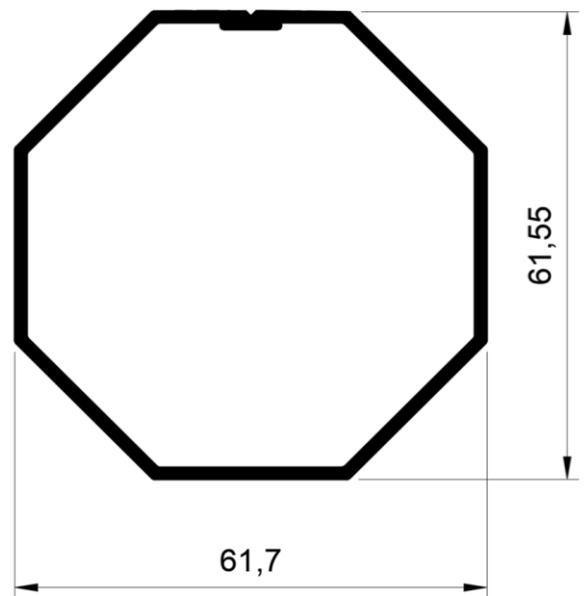
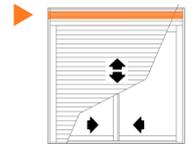
MN - 055

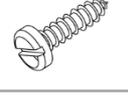
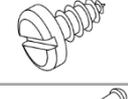
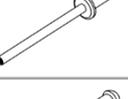
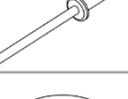
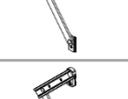
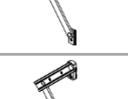
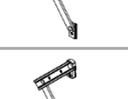
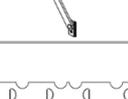
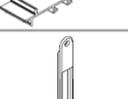
Terminal da persiana
0,376 Kg/m

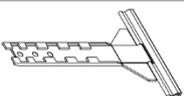
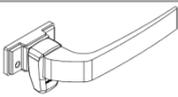
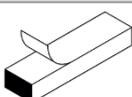
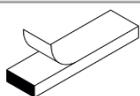
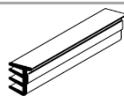
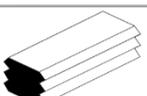


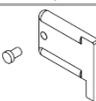
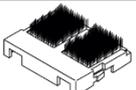
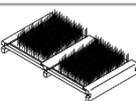
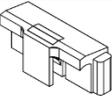
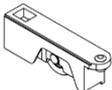
MN - 015

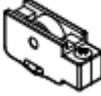
Tubo recolhedor
0,843 Kg/m



ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	PAR-215	PARFZAPF03916	Parafuso A.A. cabeça panela 3,9 x 25 AZ
	PAR-428	PARFIPPF04832	Parafuso cabeça panela P.P. 4,8 x 32
	PAR-434	PARFIAPF04295	Parafuso auto atarrachante 3,9 x 9,5
	PAR-691	PARFIAPF04813	Parafuso auto atarrachante cabeça panela 4,8 x 13
	PAR-703	PARFIAPF03595	Parafuso auto atarrachante cabeça panela 3,5 x 9,5
	PAR-704	PARFIAPF03965	Parafuso auto atarrachante cabeça panela 3,5 x 6,5
	REB-115	REBTAPE40102	Rebite POP al. 4,0 x 10,2
	REB-117	REBTAPE32102	Rebite POP al. 3,2 x 10,2
	ARR-569	ARRU00569	Arruela Lisa 4,3 x 9 Aço Inox
	BRA-705	BRAC00705	Braço max com 250 mm
	BRA-702	BRAC00702	Braço max com 500 mm
	BRA-703	BRAC00703	Braço com 750 mm
	BRA-725	BRAC00725	Braço com 810 mm
	CHU-787	CHUM00787	Chumbador aço zincado
	CHU-840	CHUM00857	Chumbador alumínio
	FEC-280	CONC00280	Concha alumínio sem Trava

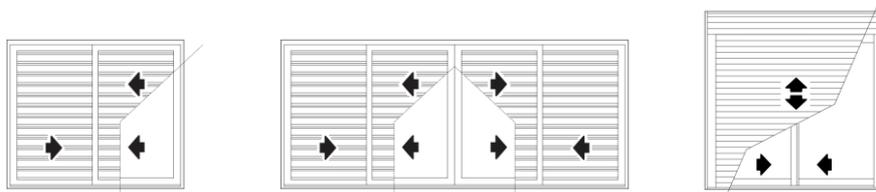
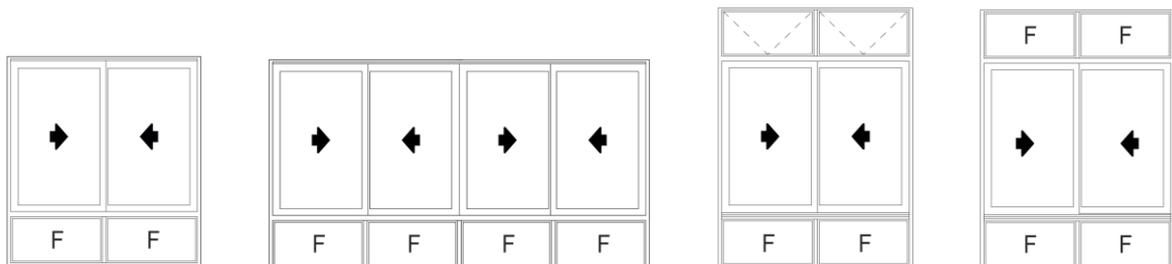
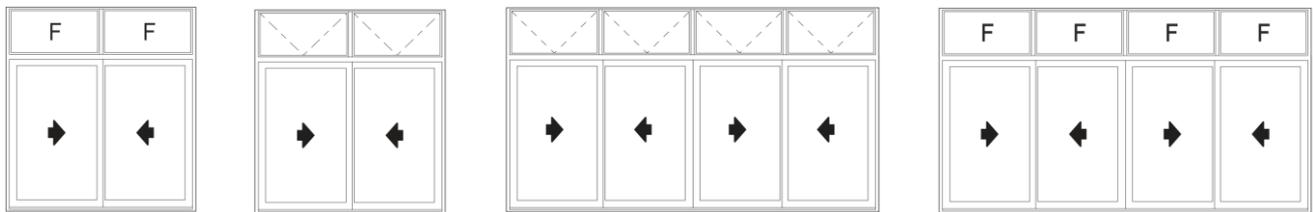
ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	FEC-370	CONF00370	Contra fecho lateral
	F-07	TAMP10027	Tampa do perfil 20SP-F07 / 20SP-F06
	F-08	TAMP10028	Tampa do perfil 20SP-F08
	FEC-059	HAST00059	Haste de comando janela projetante
	FEC-645	FECH00645	Fecho concha com chave com trava reta
	FEC-636	FECH00636	Fecho concha com trava reta
	FIT-214	FITA050X100	Fita de vedação PB-481000 3P
	PRE-04	FITAD012X012	Presilha de fixação da esteira
	FEC-063	FECH10023D	Fecho frontal mini 95 mm – Maxim-ar
	GUA-157	GUAR00157	Guarnição adesiva vidro 6 X 11 mm
	GUA-171	GUAR00171	Guarnição esponja adesiva 3 X 11,2 mm
	GUA-256	GUAR00256	Guarnição EPDM cunha
	GUA-007	GUAR00007	Guarnição pingadeira 11 mm EPDM
	GUA-228	GUAR00228	Guarnição adesiva veneziana
	GUA-284	GUAR00284	Guarnição EPDM 4 mm
	GUA-290	GUAR00290	Guarnição externa EPDM

ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	NYL-600	TAMP10030	Tampa lateral de caixa da integrada SPI – M98
	NYL-042	NYLO00042	Botão tampa furo 3/8 NYL
	NYL-357	NYLO00357	Tampa dos perfis PU-047 / 048
	NYL-369	NYLO00369	Guia e limitador da veneziana
	NYL-370	NYLO00037	Guia da persiana de enrolar
	NYL-375	NYLO00375	Tampa da persiana
	NYL-411	NYLO00411	Tampa de topo do perfil SPI - M17
	NYL-601	TAMP10047	Tampa lateral da caixa integrada SPI – M6162
	NYL-412	NYLO00412	Caixa de dreno e planos
	NYL-413	NYLO00413	Vedação superior 2 Planos
	NYL-442	NYLO00442	Batedeira para porta / janela
	NYL-444	NYLO00444	Guia de vedação e limitador da Folha
	PIV-752	PIVO00752	Pivo para bandeira projetante
	REC-011	RECD00011	Recolhedor com fita 20 mm
	ROL-464	ROLD00464	Roldana com regulagem com rolamento

ACESSÓRIO	CÓDIGO	CÓDIGO UNIVERSAL	DESCRIÇÃO
	ROL-465	ROLD00465	Roldana sem regulagem sem rolamento
	ROL-56	ROLD10020	Roldana FERMAX janela
	PCS-100	PLTC0396000	Palheta janela integrada branca A-39 CEGA
		PLTC0416000	
		PLTC0436000	
		PLTC0456000	
	PCS-015	PLTV0396000	Palheta janela integrada branca
		PLTV0416000	
		PLTV0436000	
		PLTV0456000	

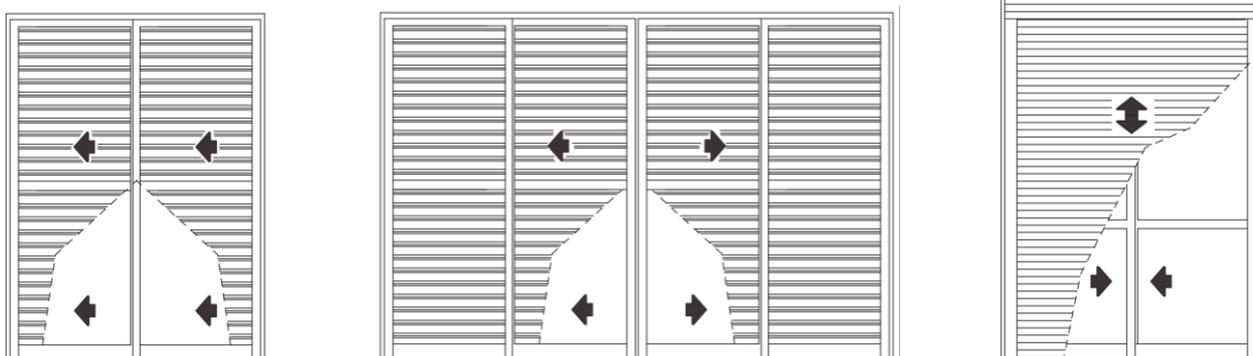
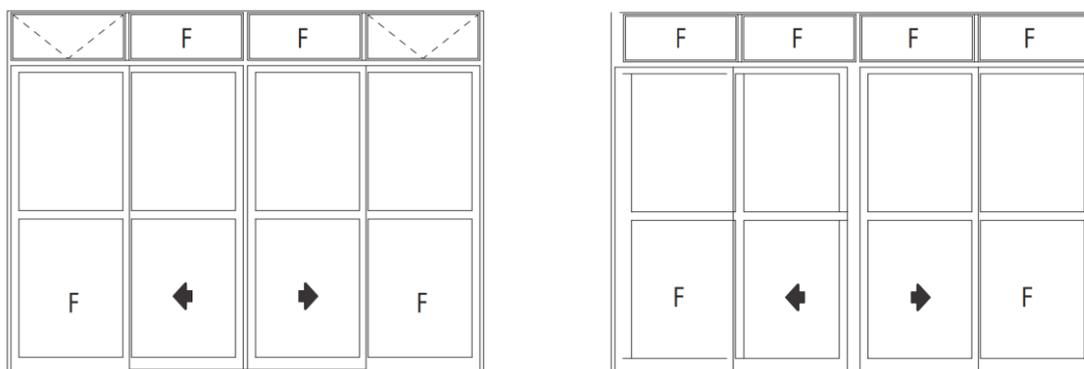
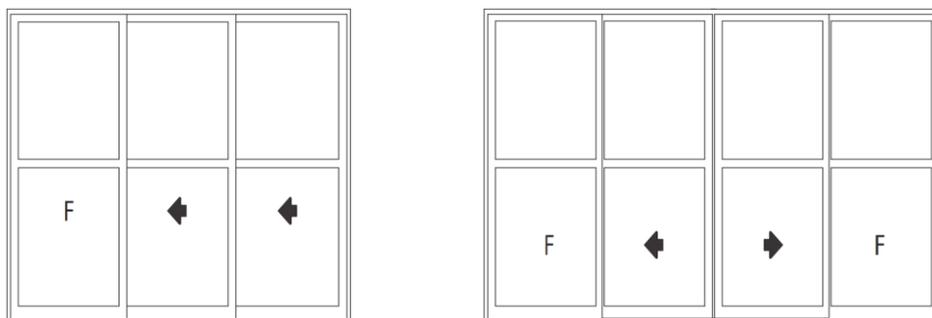
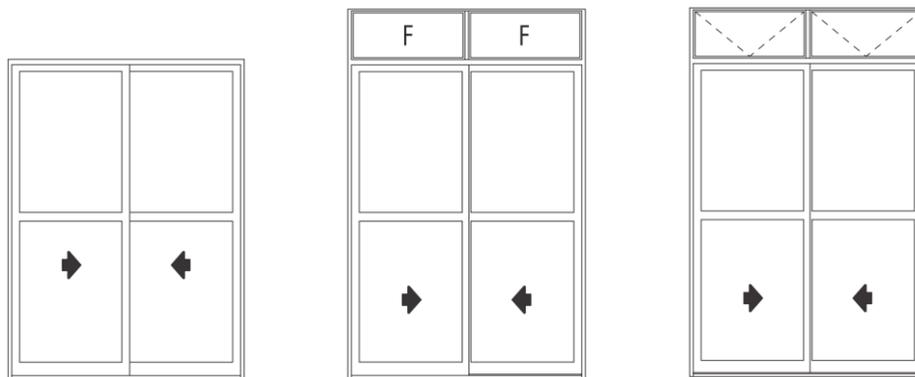
Janelas de 02, 03, 04 e 06 folhas de correr

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



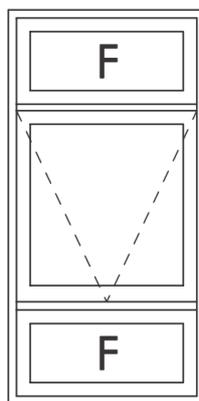
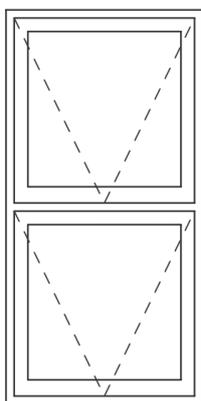
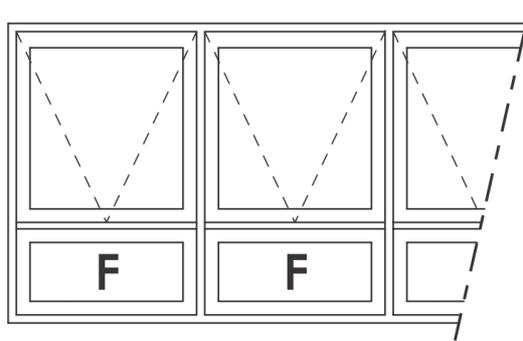
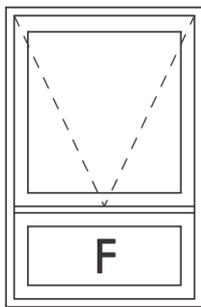
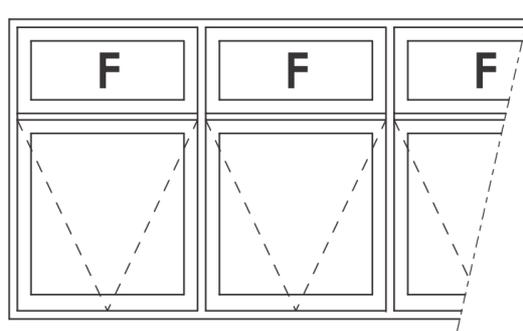
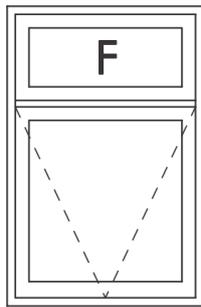
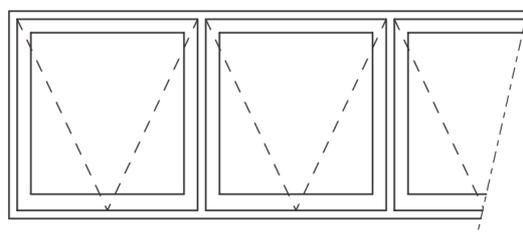
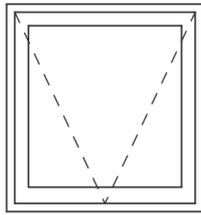
Portas de 02, 03, 04 e 06 folhas de correr

Opcionais: Persiana Integrada, Basculante Superior, Venezianas



Maxim-ar

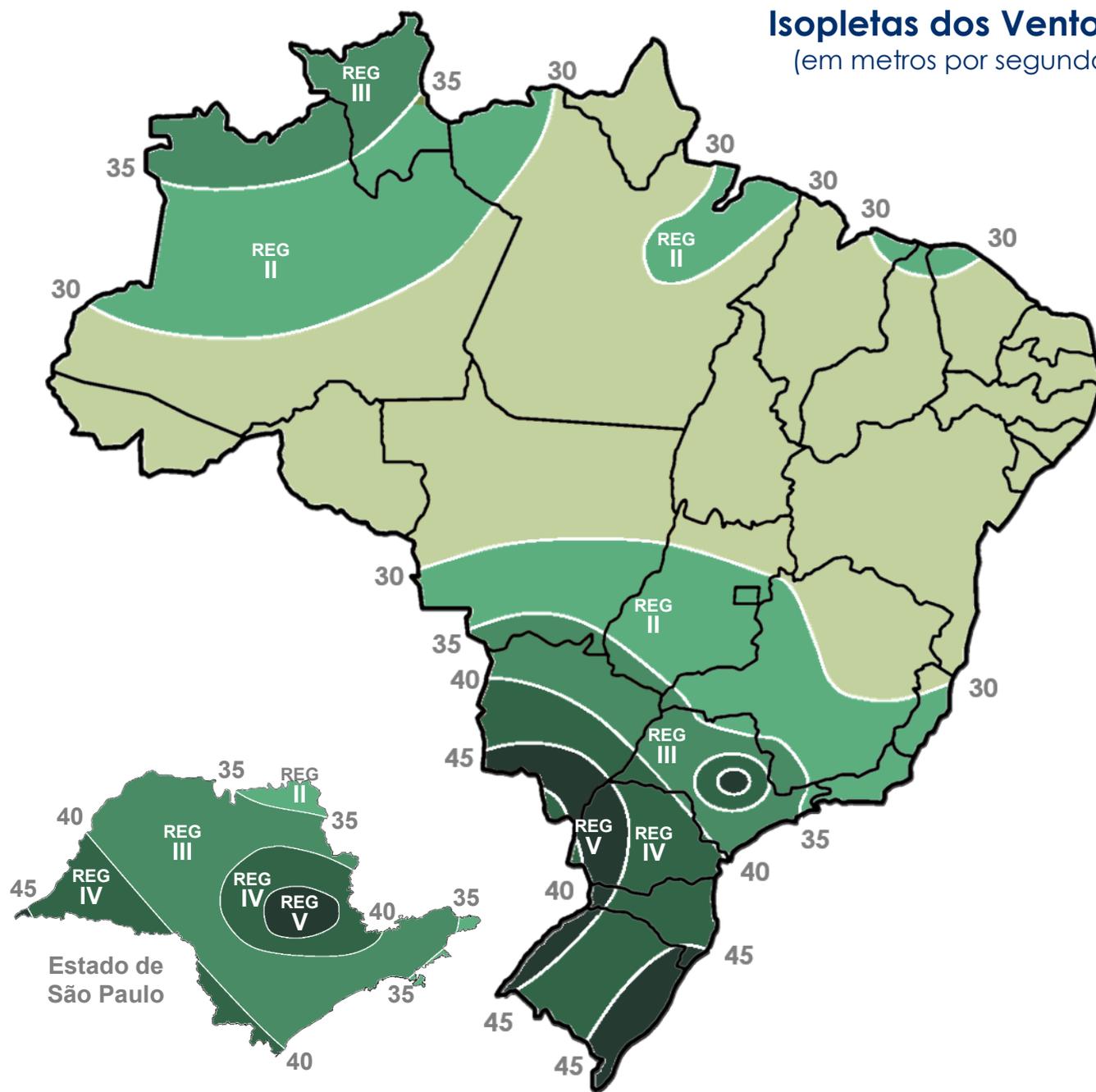
Fixo, Inferior, Superior e Múltiplo



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

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

Isopletas dos Ventos
(em metros por segundo)

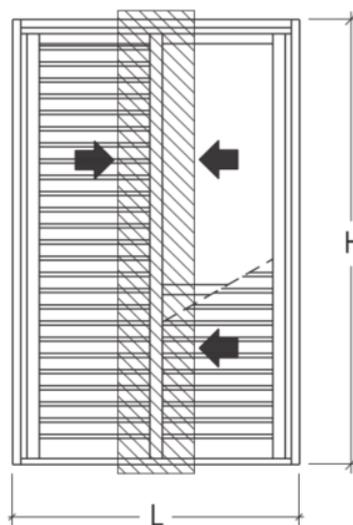


VELOCIDADE DO VENTO POR REGIÃO CONSIDERADA NA NORMA ABNT NBR 10.821

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

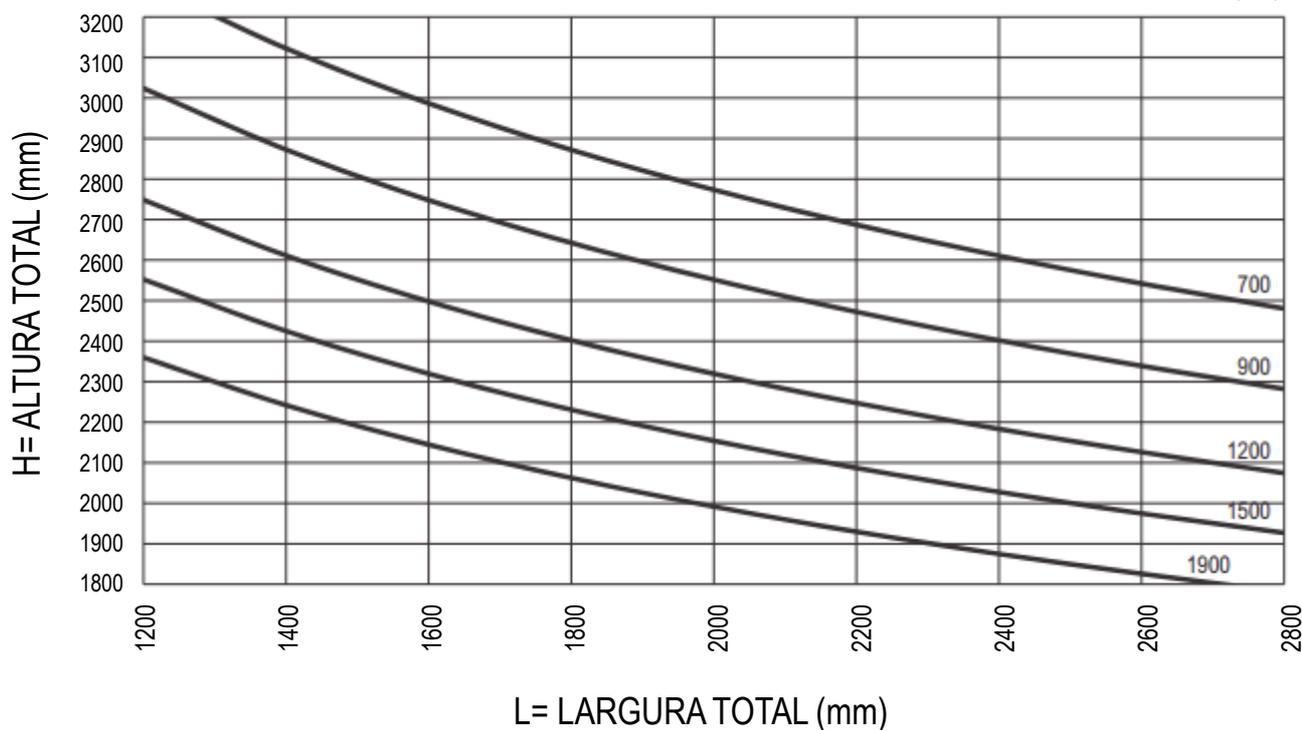
QUANTIDADE DE PAVIMENTOS	ALTURA MÁXIMA	REGIÕES DO PAÍS	PRESSÃO DO ENSAIO	PRESSÃO DE SEGURANÇA	PRESSÃO DE ÁGUA
			Pe em (Pa) Positiva e negativa $Pe - Pp \times 1,2$	Ps em (Pa) Positiva e negativa $Ps - Pp \times 1,5$	Pa em (Pa) Positiva e negativa $Pa - Pp \times 0,2$
02	6 m	I	350	520	60
		II	470	700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

PORTA DE CORRER DE 3 FOLHAS

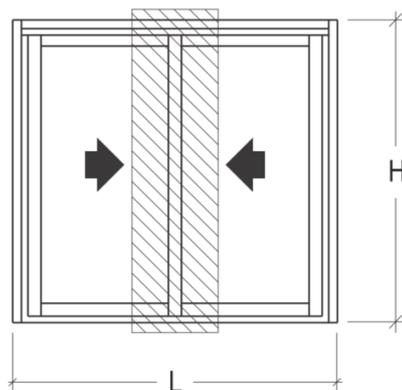
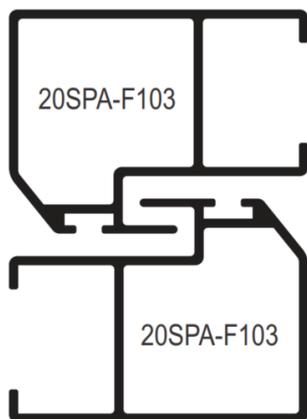


20SP-F08	20SP-F04	20SP-F08
$J_x = 23,668 \text{ cm}^4$	$J_x = 2,144 \text{ cm}^4$	$J_x = 23,668 \text{ cm}^4$
$J_y = 5,670 \text{ cm}^4$	$J_y = 1,832 \text{ cm}^4$	$J_y = 5,670 \text{ cm}^4$
$W_x = 6,286 \text{ cm}^3$	$W_x = 1,268 \text{ cm}^3$	$W_x = 6,286 \text{ cm}^3$
$W_y = 2,967 \text{ cm}^3$	$W_y = 0,893 \text{ cm}^3$	$W_y = 2,967 \text{ cm}^3$
$J_x \text{ Total} = 49,480 \text{ cm}^4$		

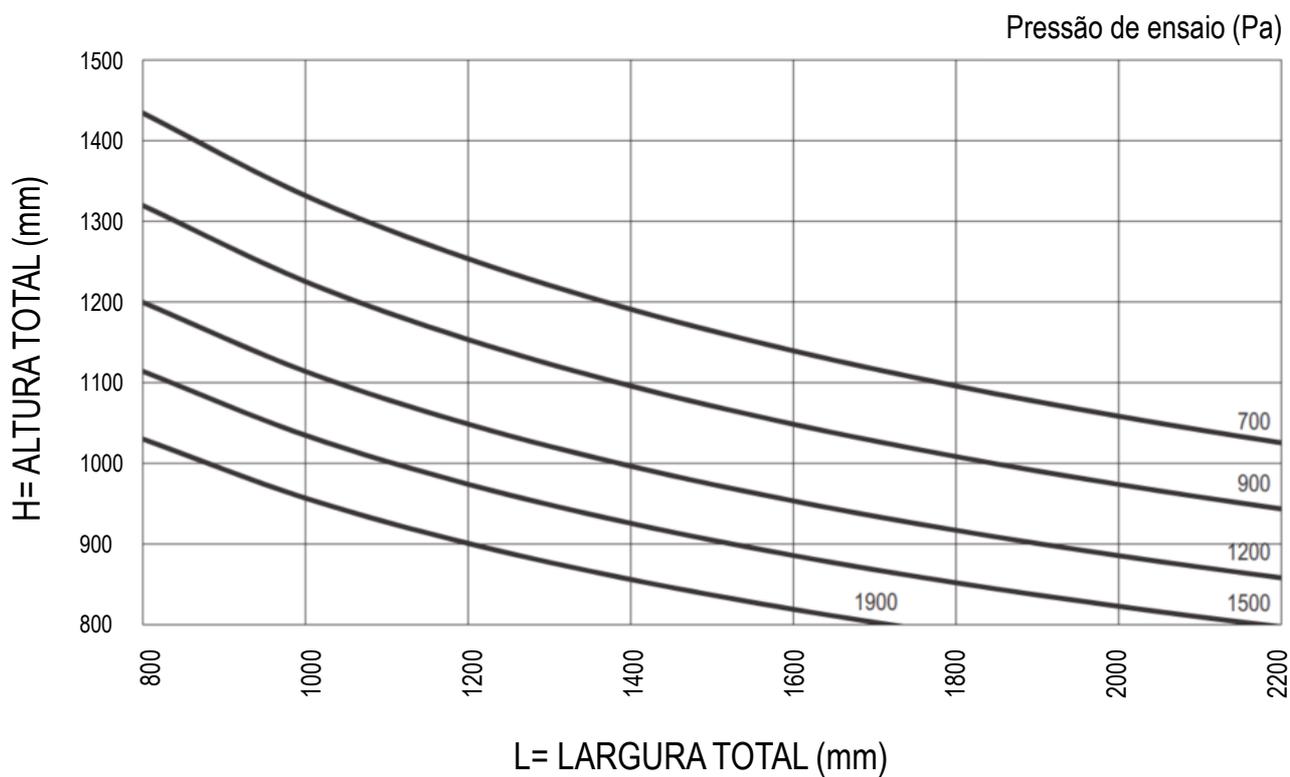
Pressão de ensaio (Pa)



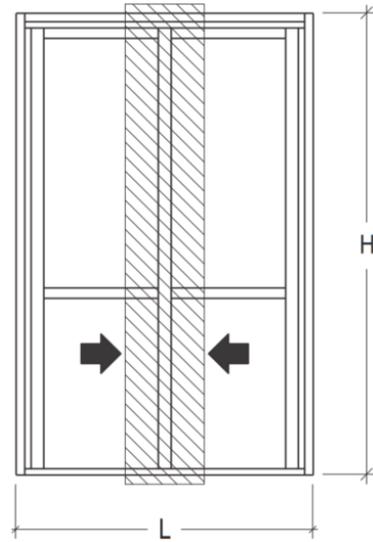
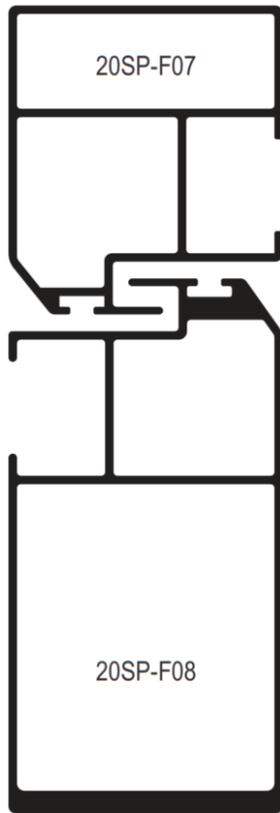
JANELA DE CORRER DE 2 FOLHAS



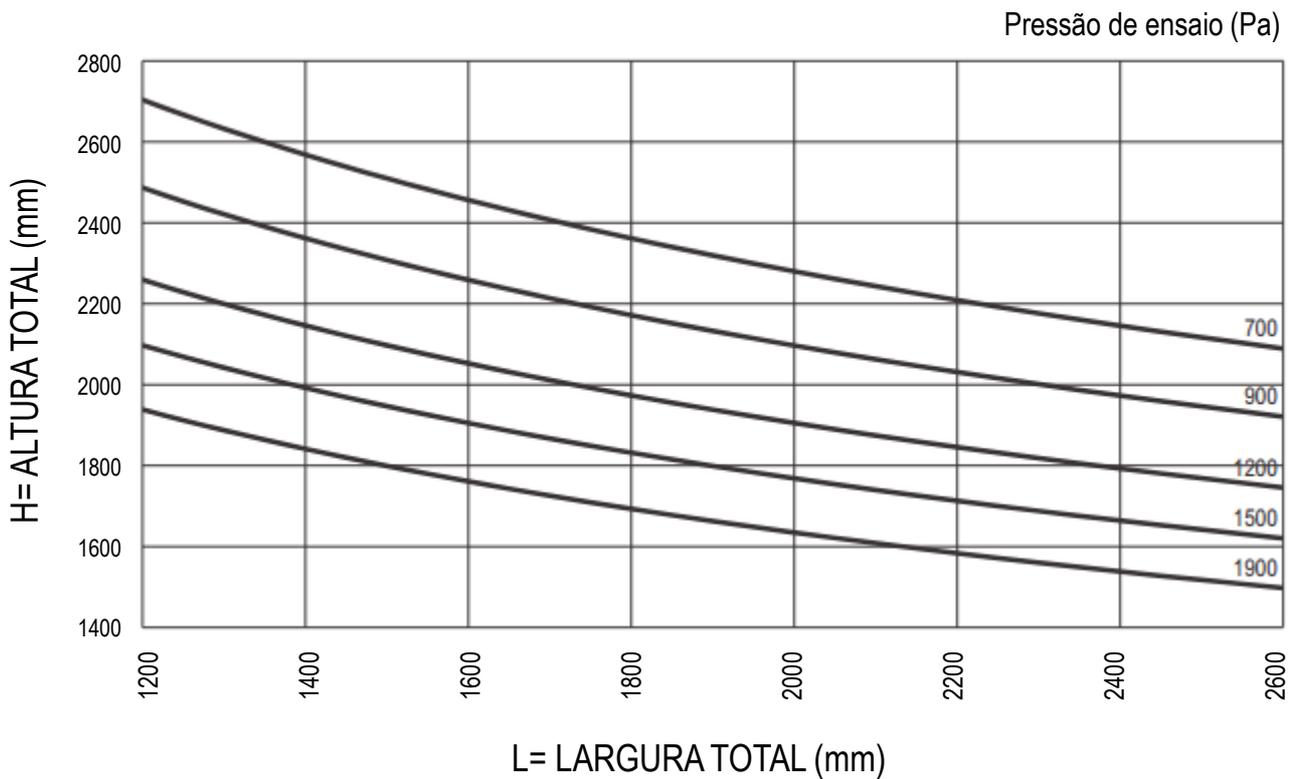
20SPA-F103	20SPA-F103
Jx = 1,375 cm ⁴	Jx = 1,375 cm ⁴
Jy = 1,720 cm ⁴	Jy = 1,720 cm ⁴
Wx = 0,973 cm ³	Wx = 0,973 cm ³
Wy = 0,867 cm ³	Wy = 0,867 cm ³
Jx Total = 2,750 cm ⁴	



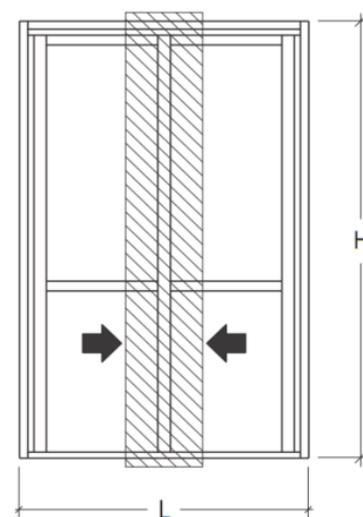
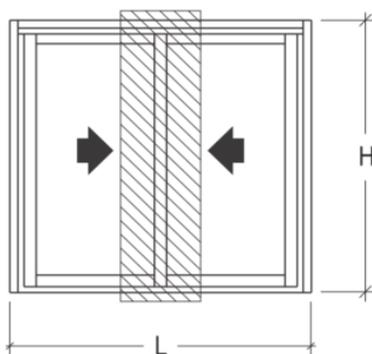
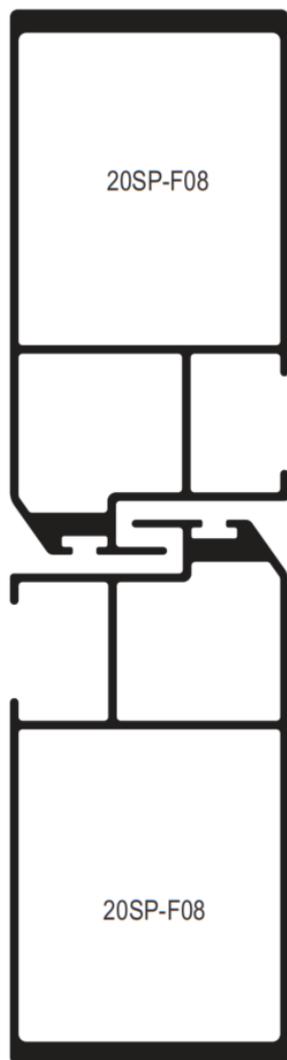
PORTA DE CORRER DE 2 FOLHAS



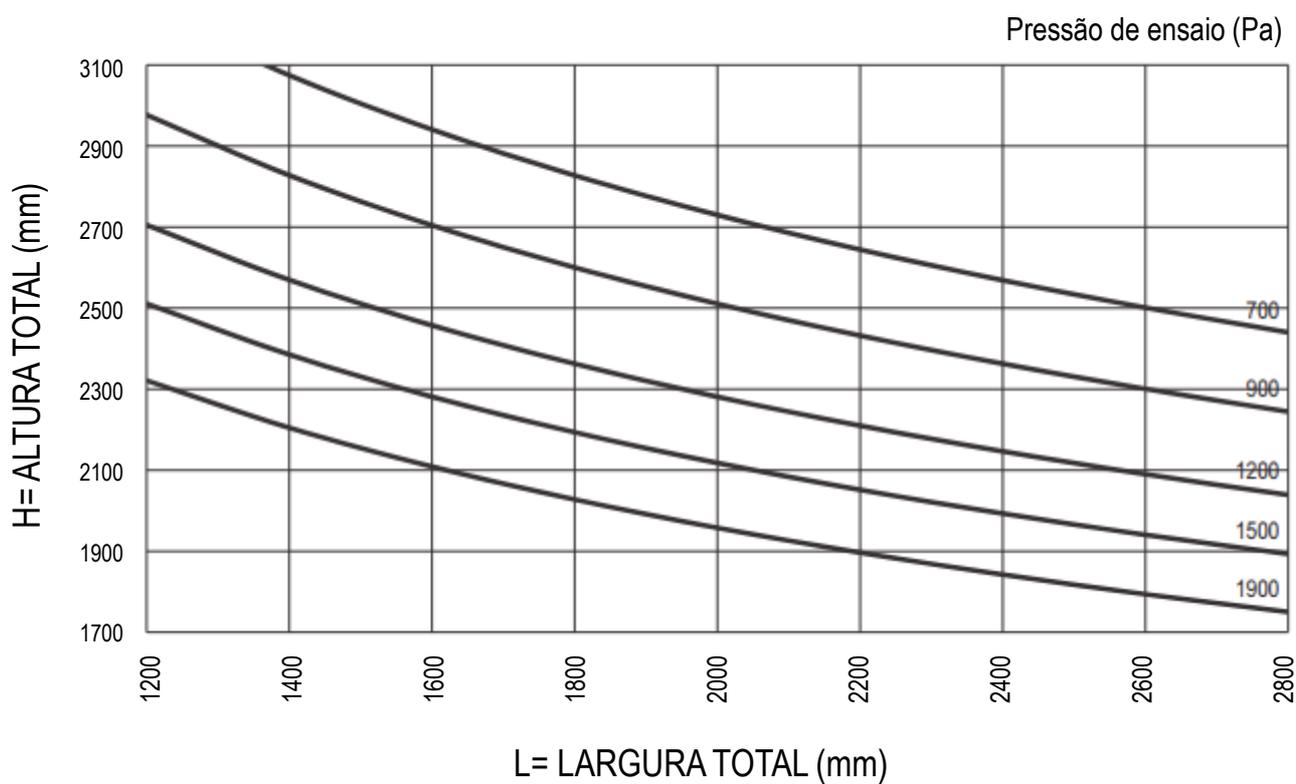
20SP-F07	20SP-F08
Jx = 3,880 cm ⁴	Jx = 23,668 cm ⁴
Jy = 2,965 cm ⁴	Jy = 5,670 cm ⁴
Wx = 1,826 cm ³	Wx = 6,286 cm ³
Wy = 1,546 cm ³	Wy = 2,967 cm ³
Jx Total = 27,548 cm ⁴	



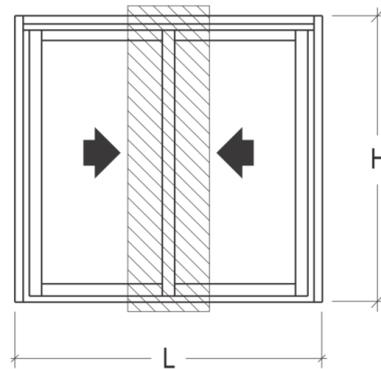
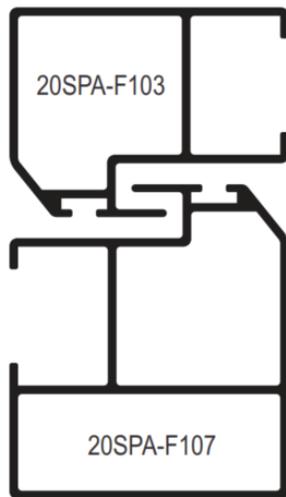
PORTA DE CORRER DE 2 FOLHAS



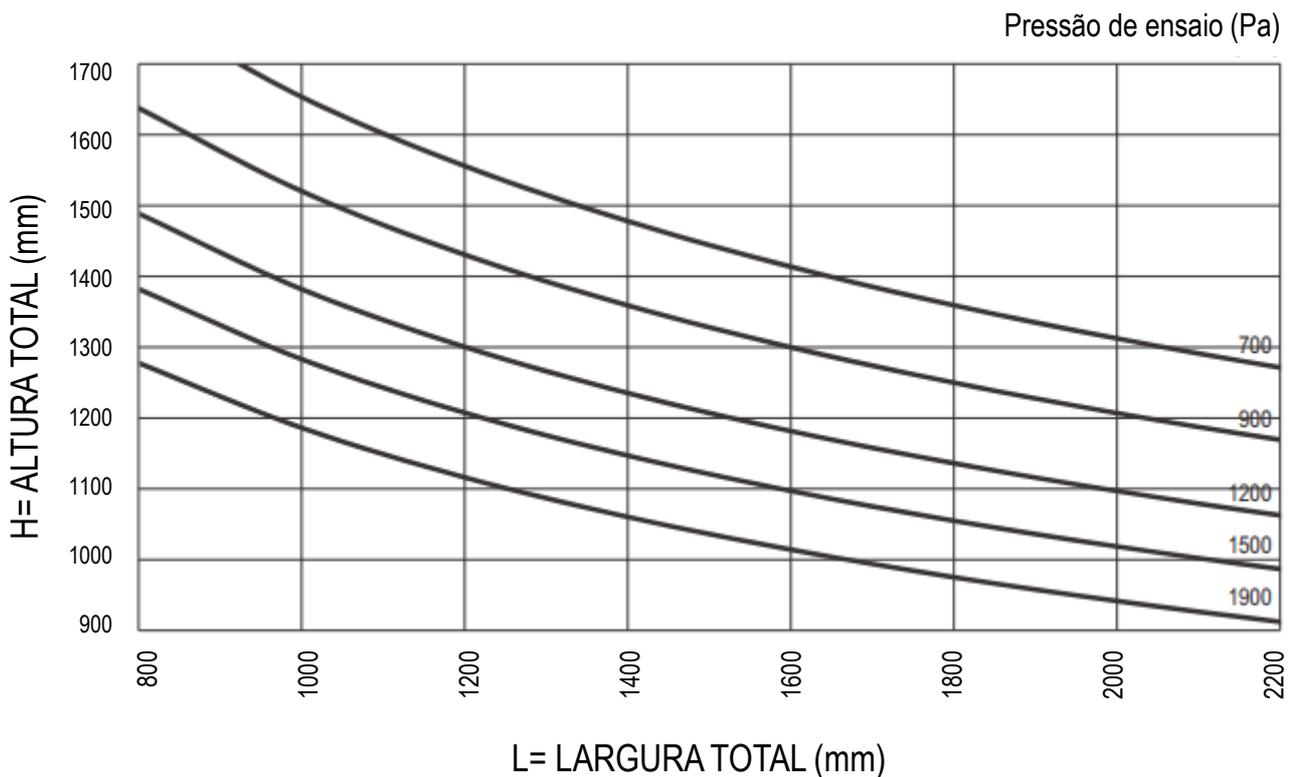
20SP-F08	20SP-F08
$J_x = 23,668 \text{ cm}^4$	$J_x = 23,668 \text{ cm}^4$
$J_y = 5,670 \text{ cm}^4$	$J_y = 5,670 \text{ cm}^4$
$W_x = 6,286 \text{ cm}^3$	$W_x = 6,286 \text{ cm}^3$
$W_y = 2,967 \text{ cm}^3$	$W_y = 2,967 \text{ cm}^3$
$J_x \text{ Total} = 47,336 \text{ cm}^4$	



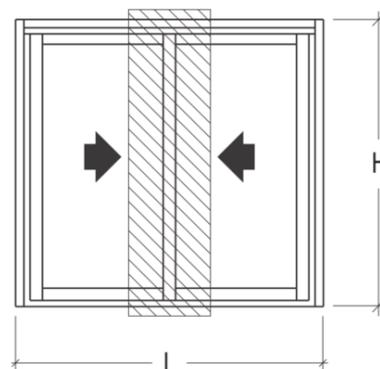
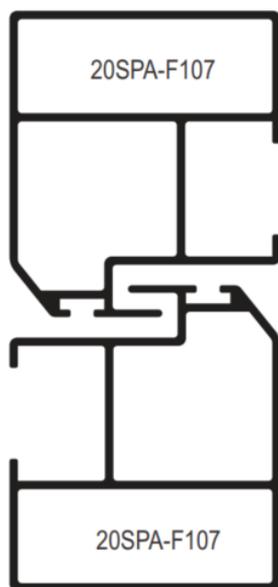
JANELA DE CORRER DE 2 FOLHAS



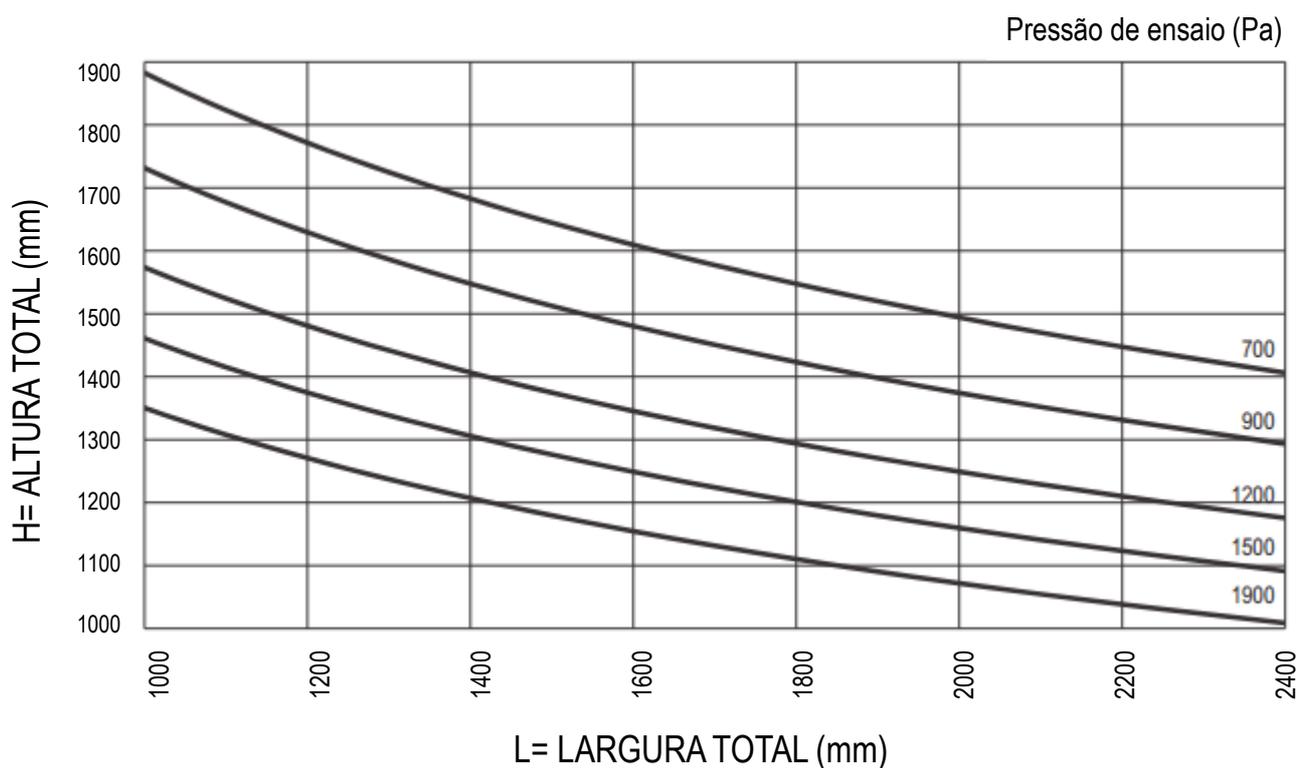
20SPA-F103	20SPA-F107
$J_x = 1,375 \text{ cm}^4$	$J_x = 3,880 \text{ cm}^4$
$J_y = 1,720 \text{ cm}^4$	$J_y = 2,965 \text{ cm}^4$
$W_x = 0,973 \text{ cm}^3$	$W_x = 1,826 \text{ cm}^3$
$W_y = 0,867 \text{ cm}^3$	$W_y = 1,546 \text{ cm}^3$
$J_x \text{ Total} = 5,255 \text{ cm}^4$	



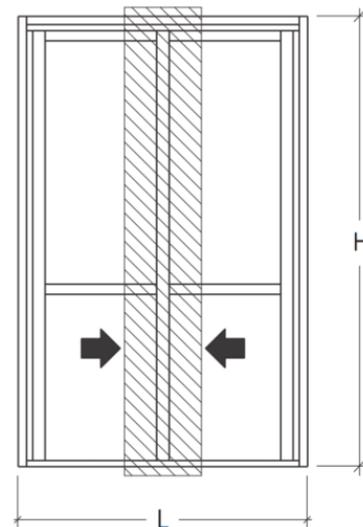
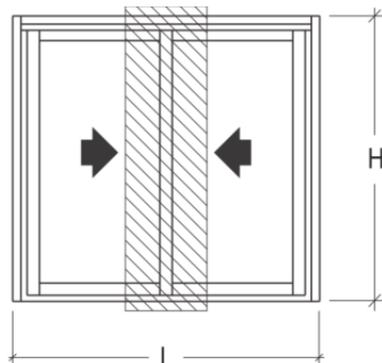
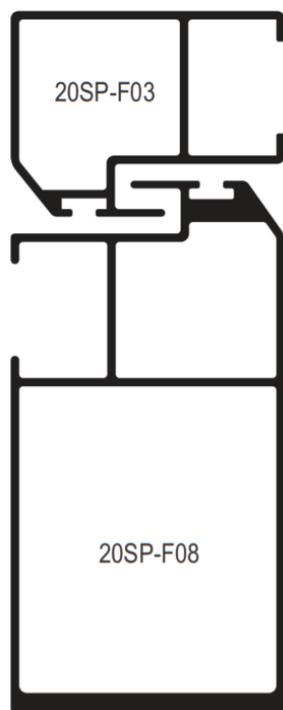
JANELA DE CORRER DE 2 FOLHAS



20SPA-F107	20SPA-F107
Jx = 3,880 cm ⁴	Jx = 3,880 cm ⁴
Jy = 2,965 cm ⁴	Jy = 2,965 cm ⁴
Wx = 1,826 cm ³	Wx = 1,826 cm ³
Wy = 1,546 cm ³	Wy = 1,546 cm ³
Jx Total = 7,760 cm ⁴	

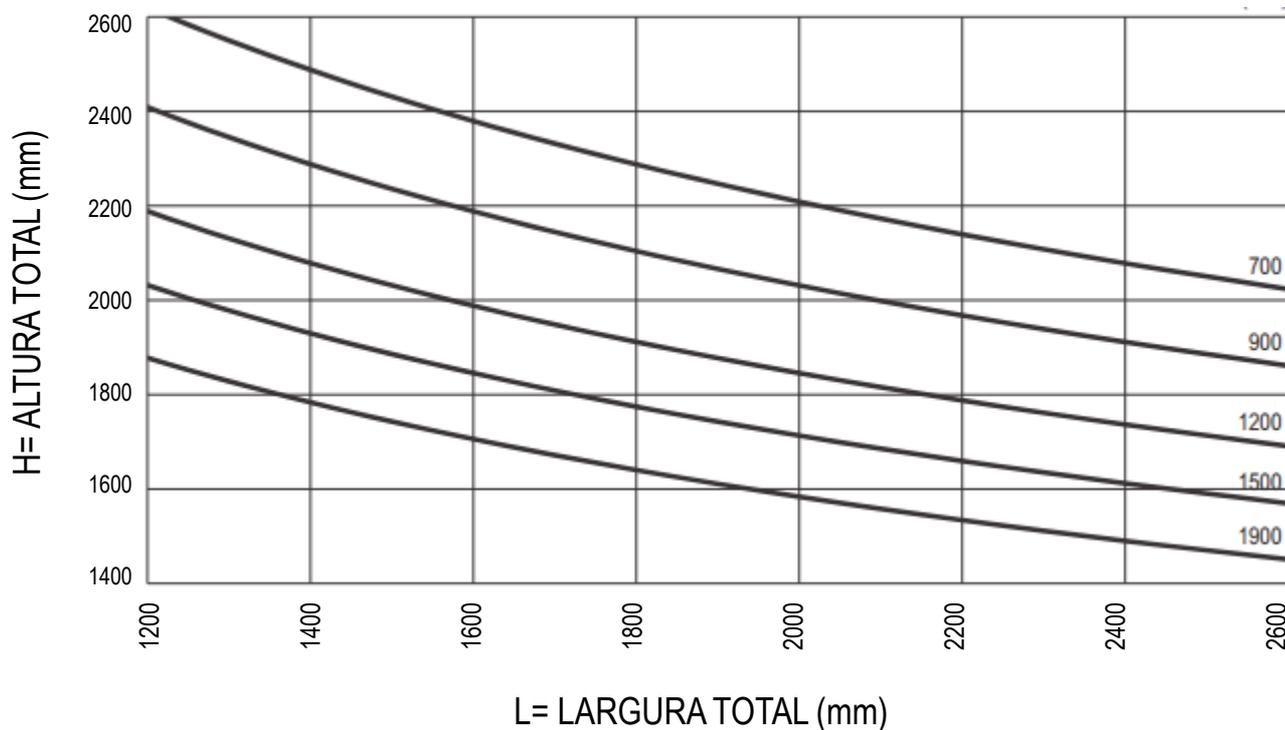


PORTA/JANELA DE CORRER DE 2 FOLHAS

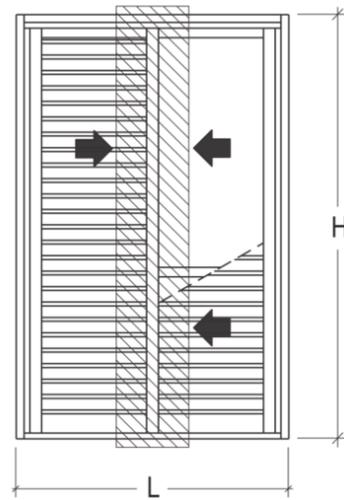
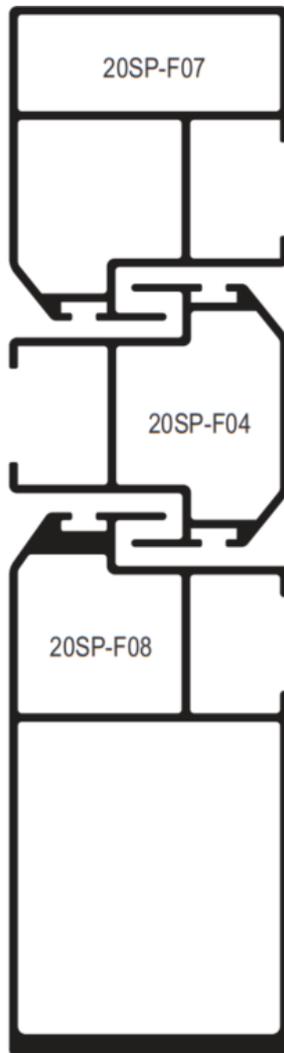


20SP-F03	20SP-F08
Jx = 1,375 cm ⁴	Jx = 23,668 cm ⁴
Jy = 1,720 cm ⁴	Jy = 5,670 cm ⁴
Wx = 0,973 cm ³	Wx = 6,286 cm ³
Wy = 0,867 cm ³	Wy = 2,967 cm ³
Jx Total = 25,043 cm ⁴	

Pressão de ensaio (Pa)

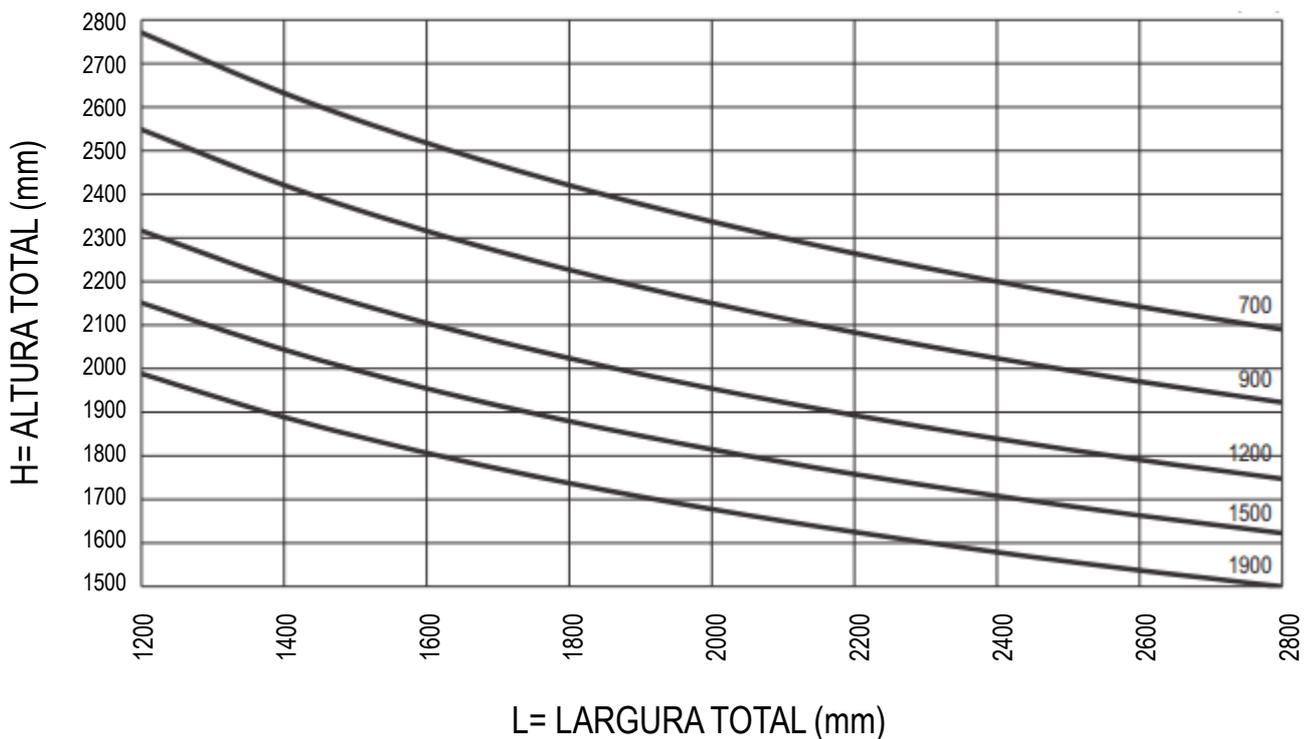


PORTA DE CORRER DE 3 FOLHAS

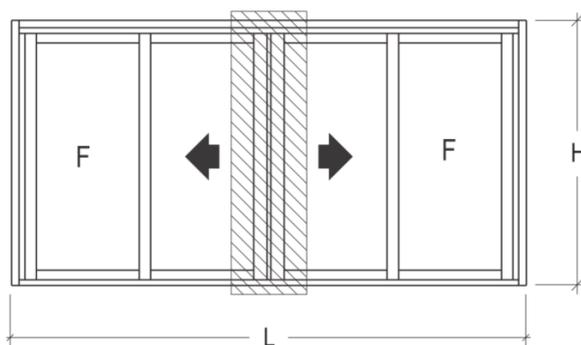


20SP-F07	20SP-F04	20SP-F08
$J_x = 3,880 \text{ cm}^4$	$J_x = 2,144 \text{ cm}^4$	$J_x = 23,668 \text{ cm}^4$
$J_y = 2,965 \text{ cm}^4$	$J_y = 1,832 \text{ cm}^4$	$J_y = 5,670 \text{ cm}^4$
$W_x = 1,826 \text{ cm}^3$	$W_x = 1,268 \text{ cm}^3$	$W_x = 6,286 \text{ cm}^3$
$W_y = 1,546 \text{ cm}^3$	$W_y = 0,893 \text{ cm}^3$	$W_y = 2,967 \text{ cm}^3$
$J_x \text{ Total} = 29,692 \text{ cm}^4$		

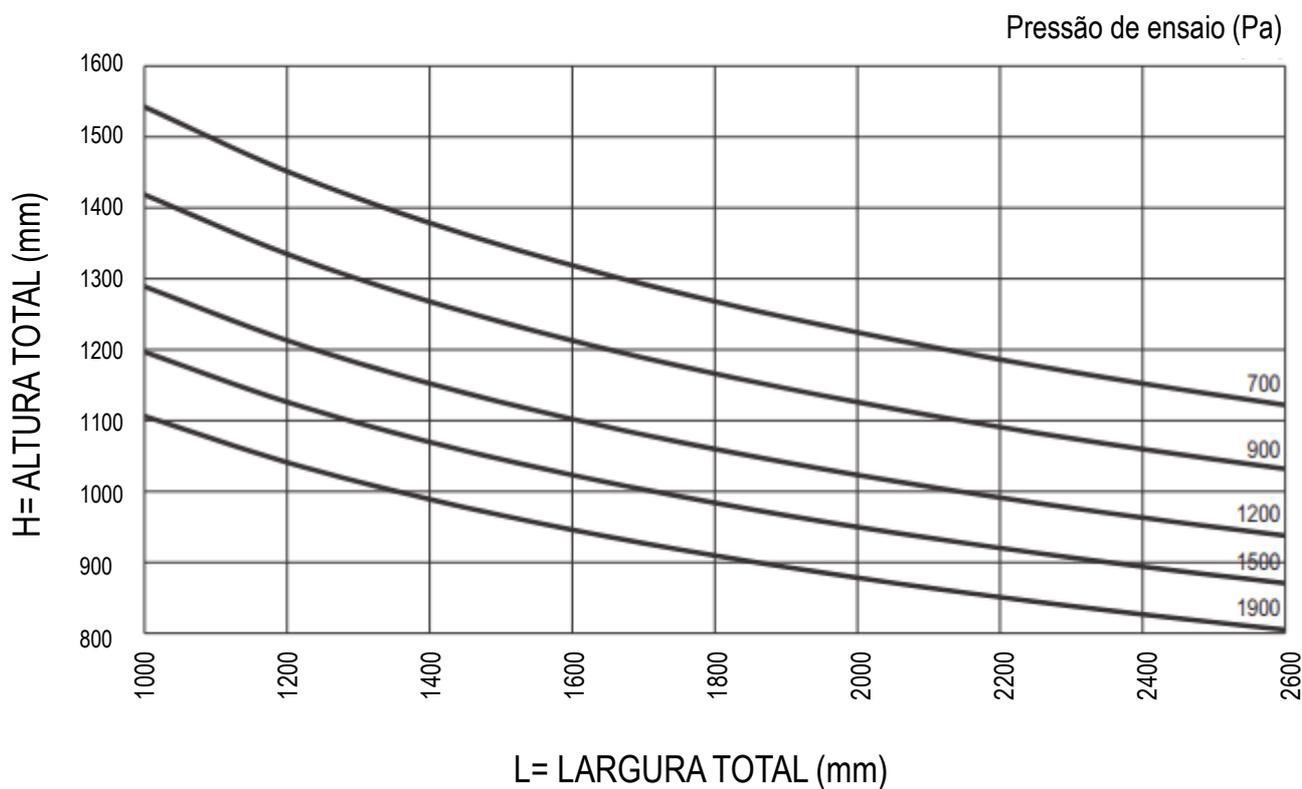
Pressão de ensaio (Pa)



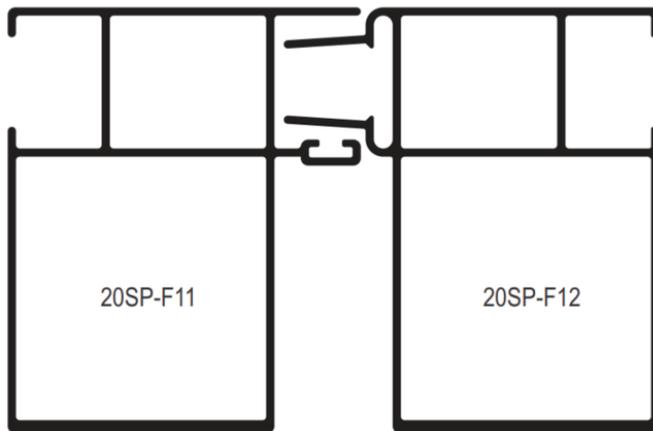
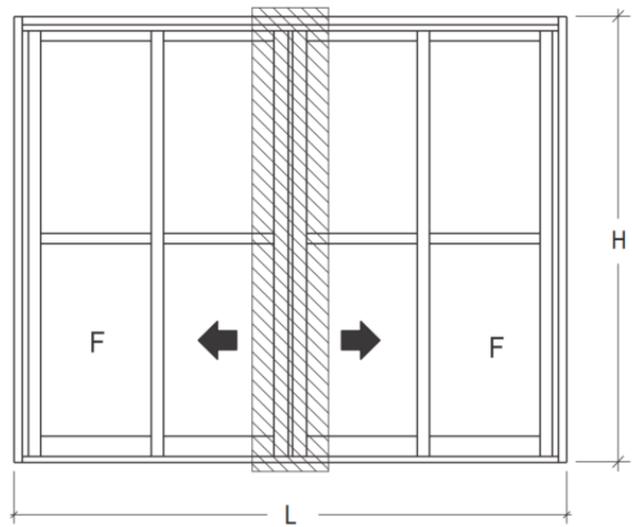
JANELA DE CORRER DE 4 FOLHAS



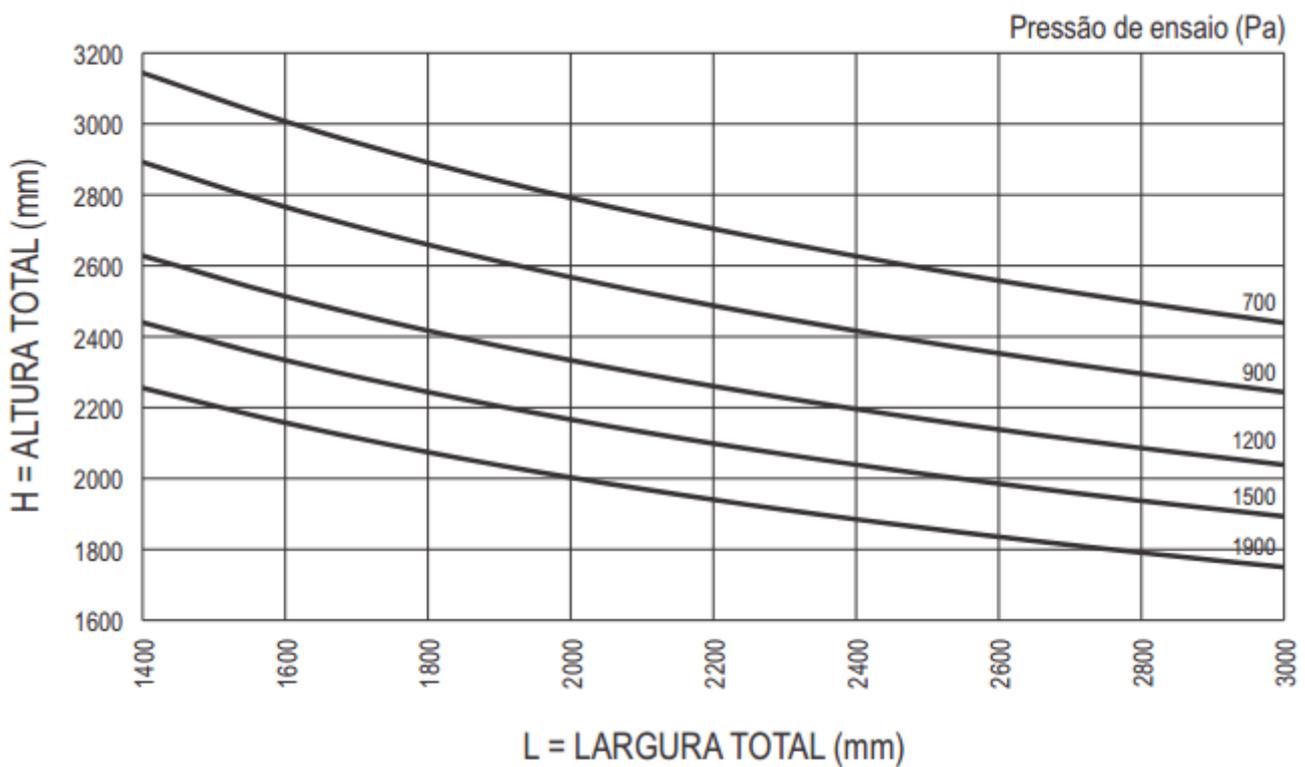
20SP-F01	20SP-F02
Jx = 1,127 cm ⁴	Jx = 1,007 cm ⁴
Jy = 2,959 cm ⁴	Jy = 3,233 cm ⁴
Wx = 1,067 cm ³	Wx = 1,007 cm ³
Wy = 1,251 cm ³	Wy = 1,266 cm ³
Jx Total = 2,134 cm ⁴	



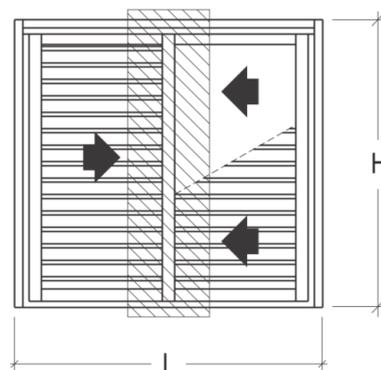
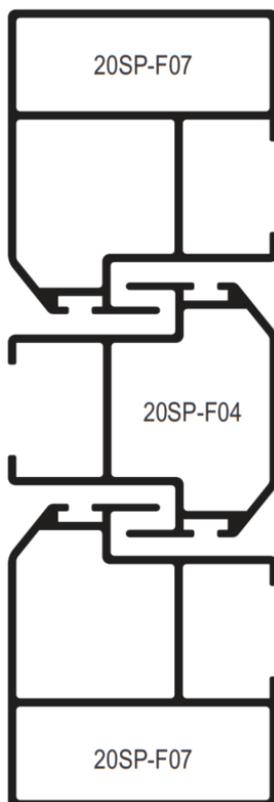
PORTA DE CORRER DE 4 FOLHAS



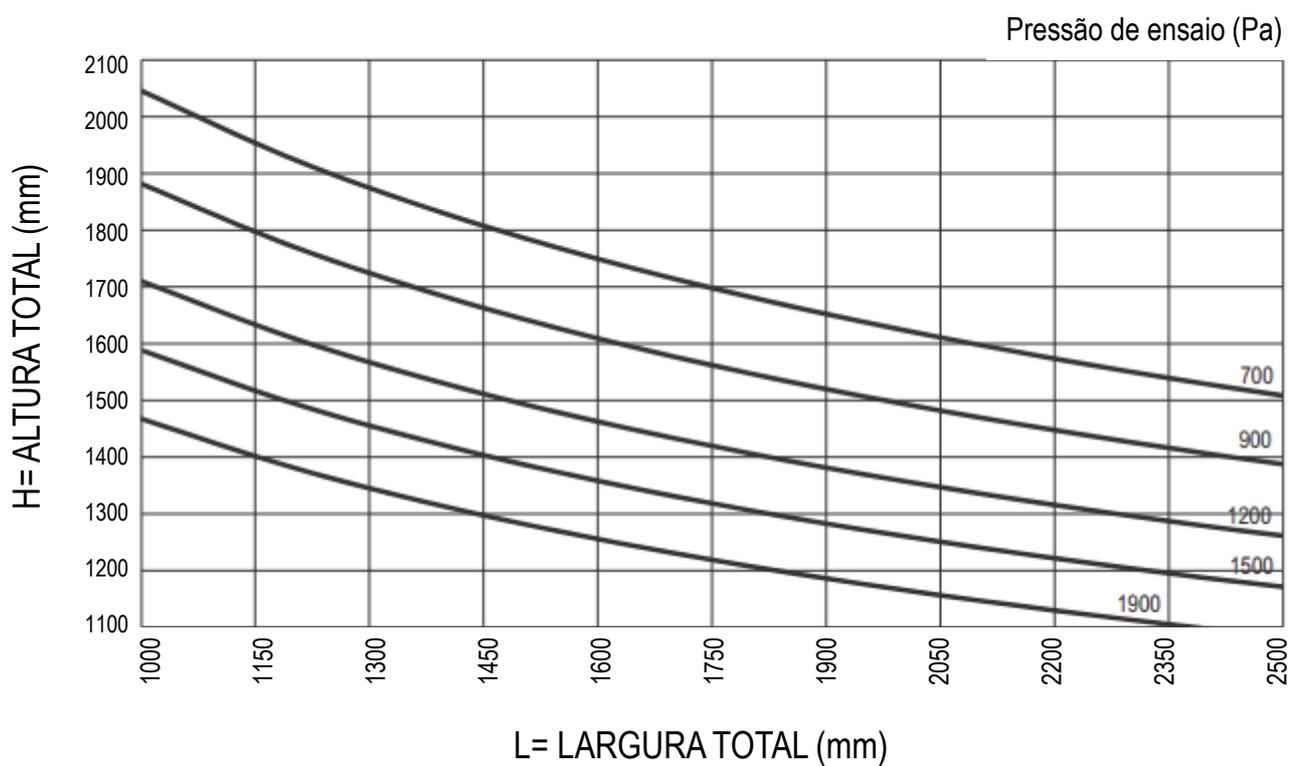
20SP-F11	20SP-F12
$J_x = 12,494 \text{ cm}^4$	$J_x = 12,830 \text{ cm}^4$
$J_y = 6,182 \text{ cm}^4$	$J_y = 6,553 \text{ cm}^4$
$W_x = 4,199 \text{ cm}^3$	$W_x = 4,219 \text{ cm}^3$
$W_y = 2,363 \text{ cm}^3$	$W_y = 2,286 \text{ cm}^3$
$J_x \text{ Total} = 25,324 \text{ cm}^4$	



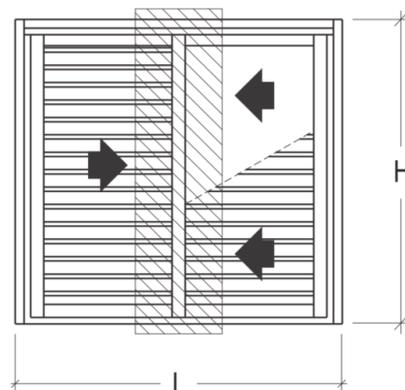
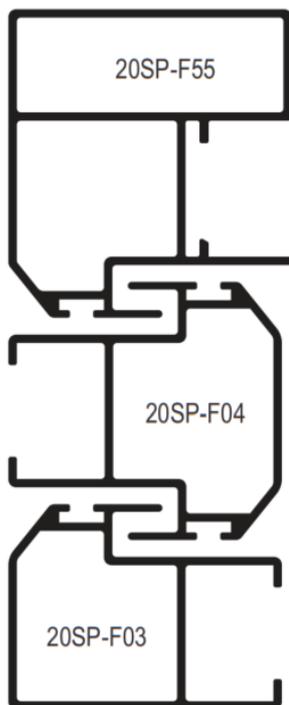
JANELA DE CORRER DE 3 FOLHAS



20SP-F07	20SP-F04	20SP-F07
Jx = 3,880 cm ⁴	Jx = 2,144 cm ⁴	Jx = 3,880 cm ⁴
Jy = 2,965 cm ⁴	Jy = 1,832 cm ⁴	Jy = 2,965 cm ⁴
Wx = 1,826 cm ³	Wx = 1,268 cm ³	Wx = 1,826 cm ³
Wy = 1,546 cm ³	Wy = 0,893 cm ³	Wy = 1,546 cm ³
Jx Total = 9,904 cm ⁴		

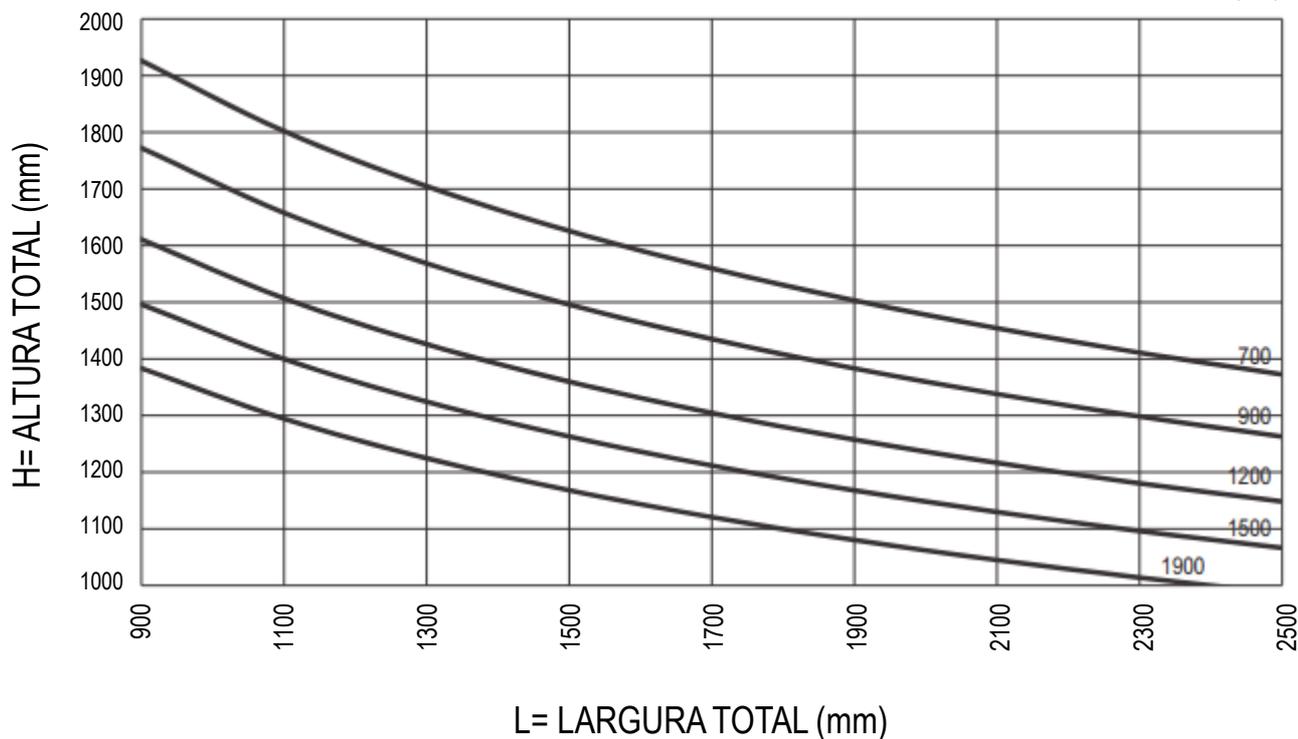


JANELA DE CORRER DE 2 FOLHAS



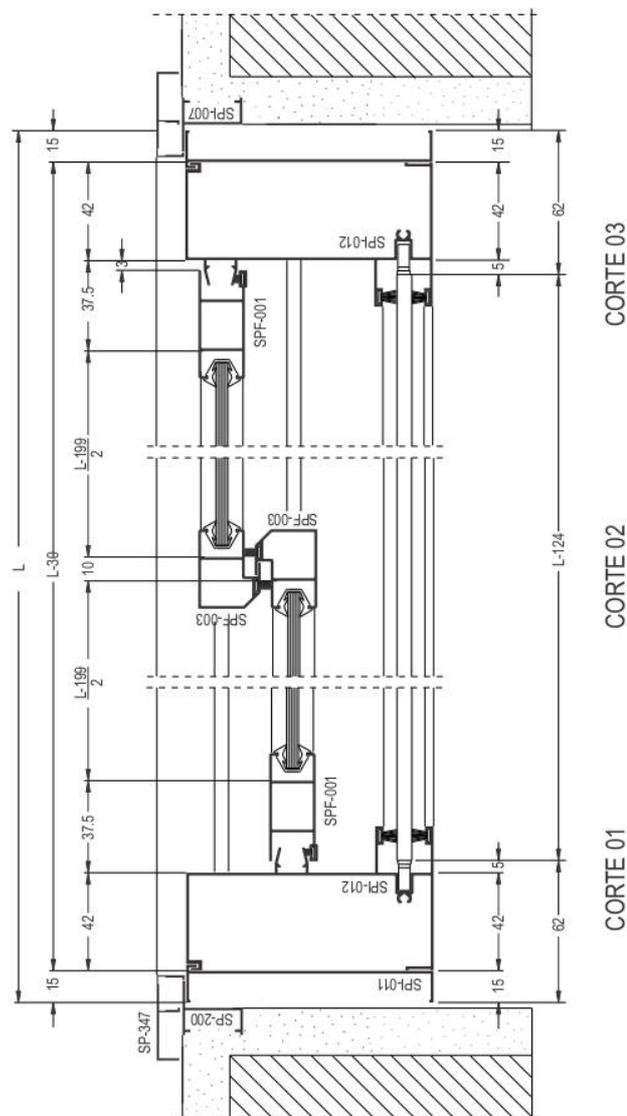
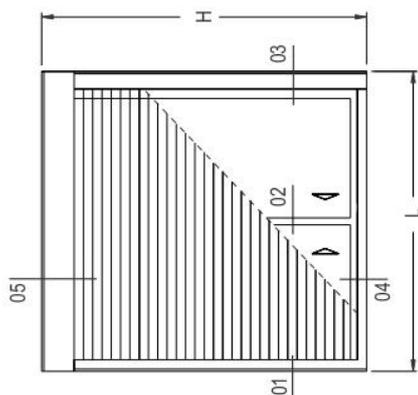
20SP-F55	20SP-F04	20SP-F03
Jx = 3,962 cm ⁴	Jx = 2,144 cm ⁴	Jx = 1,375 cm ⁴
Jy = 3,041 cm ⁴	Jy = 1,832 cm ⁴	Jy = 1,720 cm ⁴
Wx = 1,858 cm ³	Wx = 1,268 cm ³	Wx = 0,973 cm ³
Wy = 1,498 cm ³	Wy = 0,893 cm ³	Wy = 0,867 cm ³
Jx Total = 7,481 cm ⁴		

Pressão de ensaio (Pa)



Janela de Correr 02 Folhas com Persiana Integrada
(Marcos laterais iguais)

ELEVAÇÃO VISTA EXTERNA

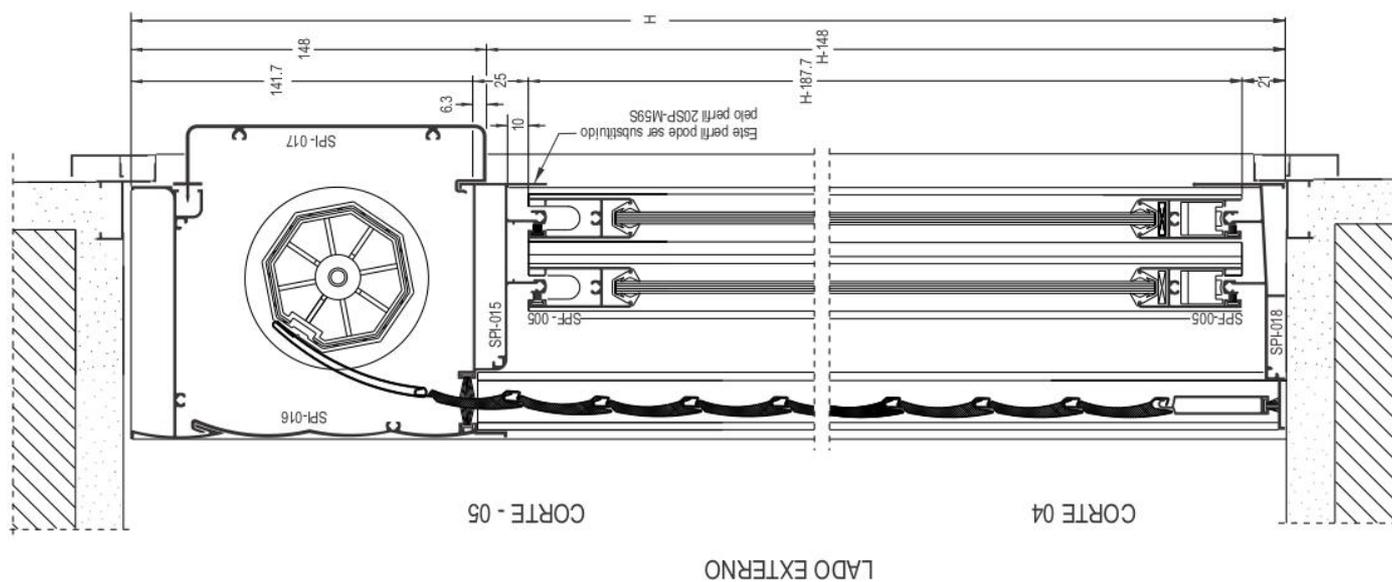


CORTE 03

CORTE 02

CORTE 01

LADO EXTERNO



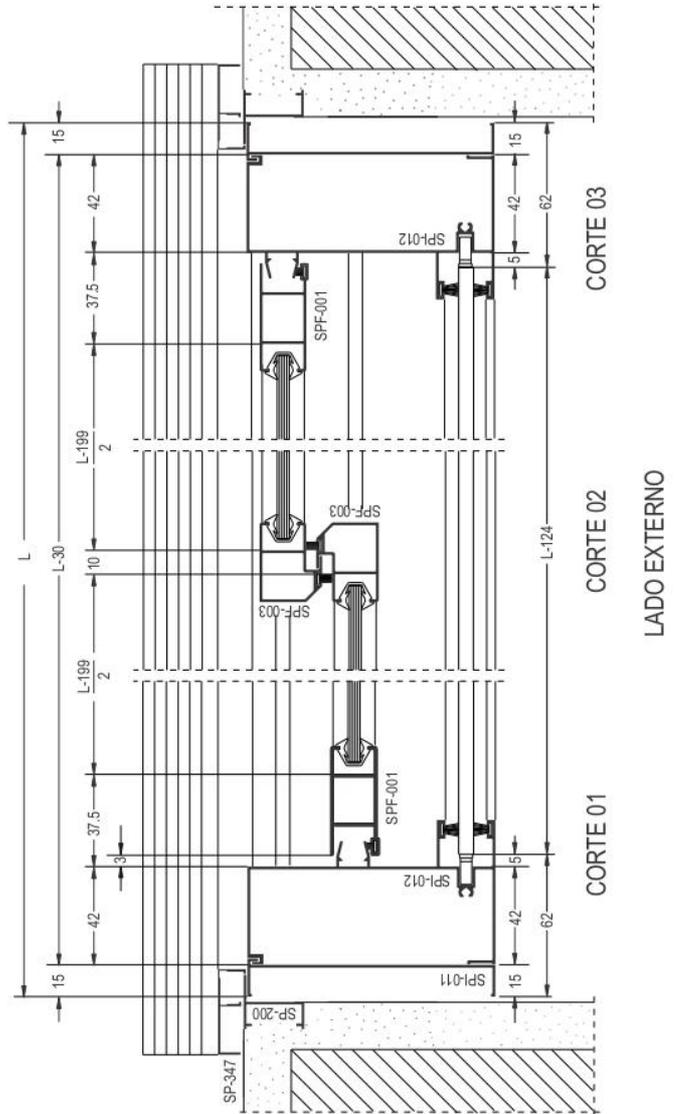
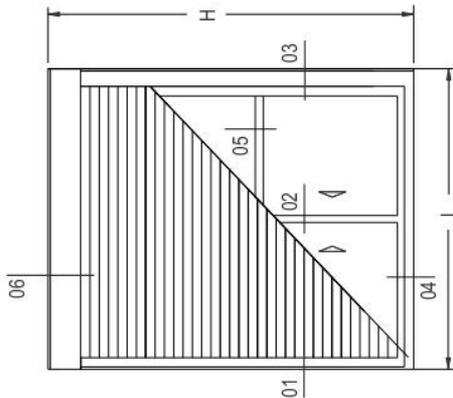
CORTE - 05

CORTE 04

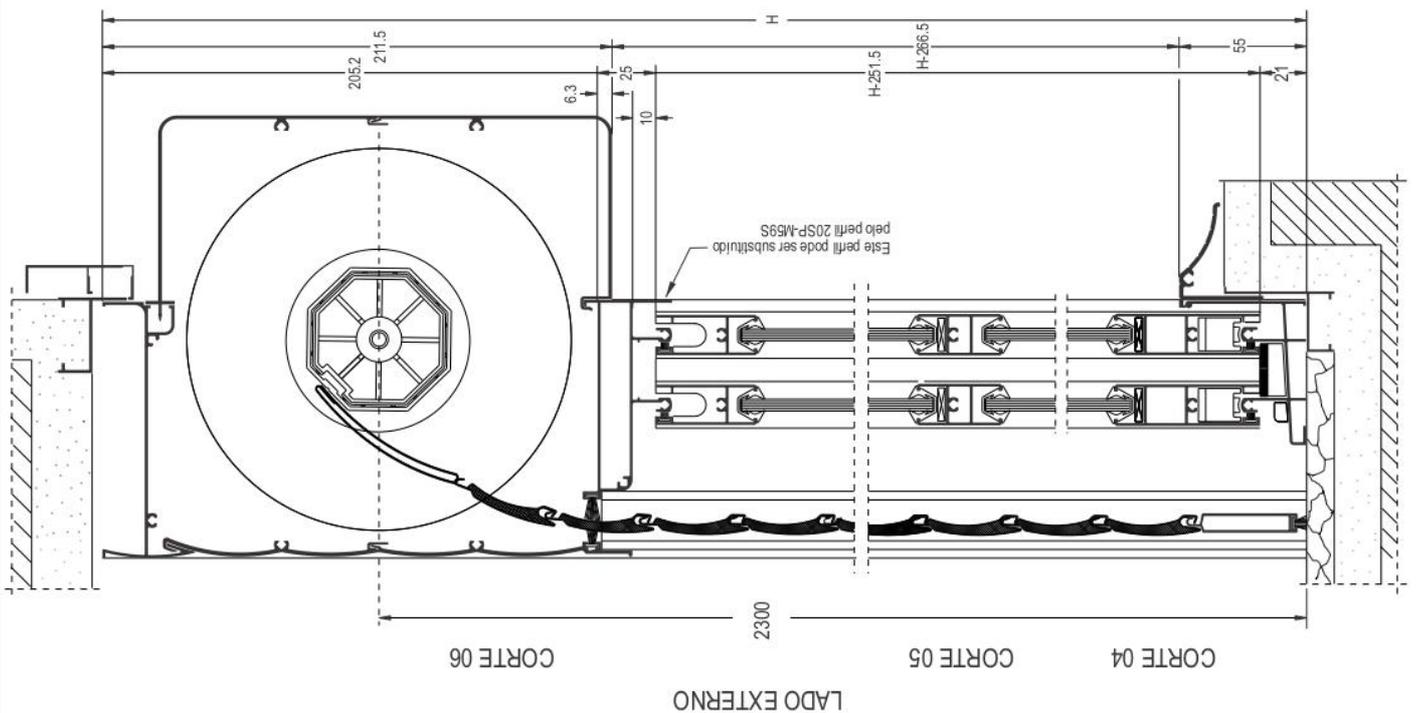
LADO EXTERNO

Porta de Correr 02 Folhas com Persiana Integrada

ELEVAÇÃO VISTA EXTERNA



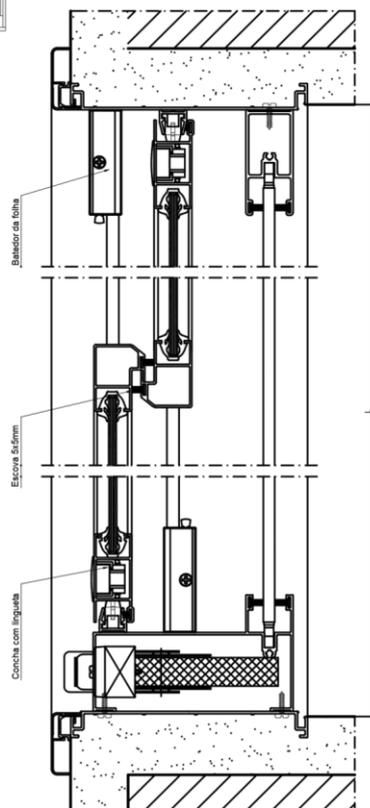
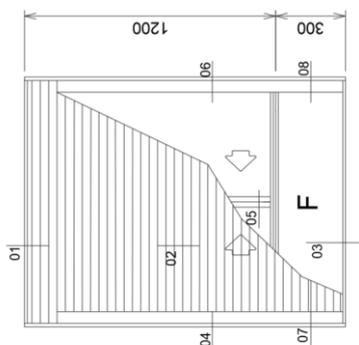
LADO EXTERNO



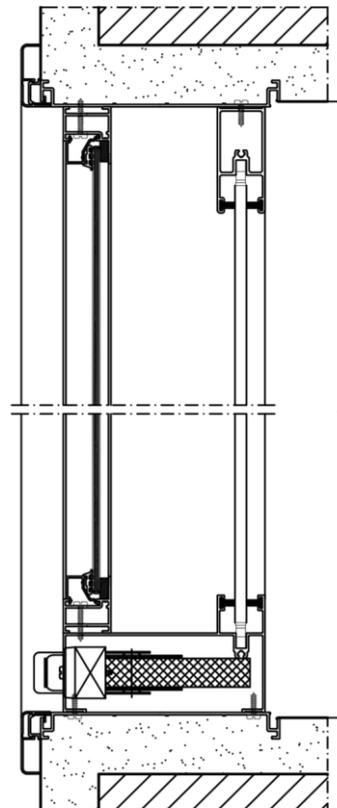
LADO EXTERNO

Porta de Correr 02 Folhas com peitoril e Persiana Integrada

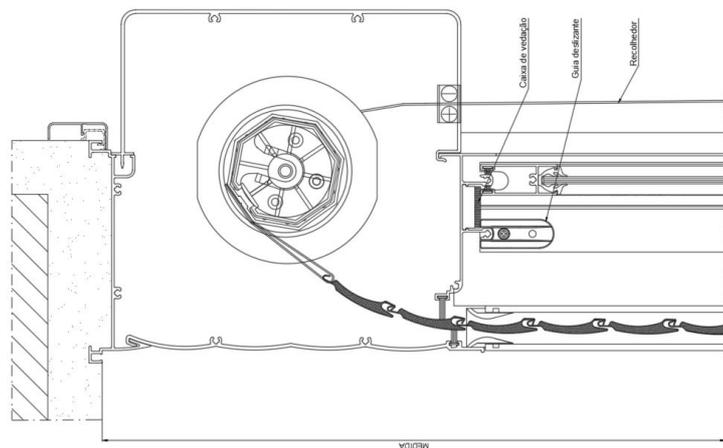
ELEVAÇÃO VISTA EXTERNA
SEM ESCALA



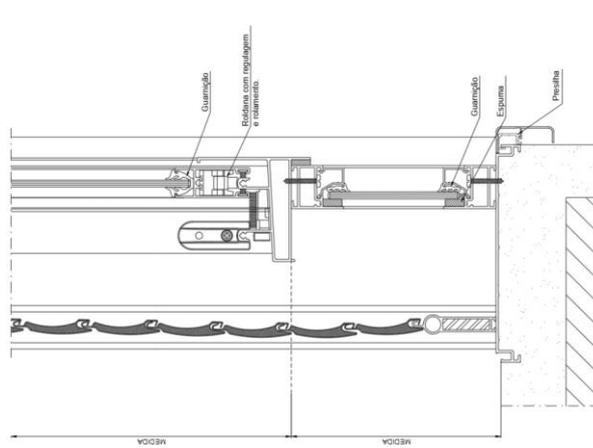
CORTE 04
CORTE 05
LADO EXTERNO



CORTE 06
CORTE 07
LADO EXTERNO
CORTE 08



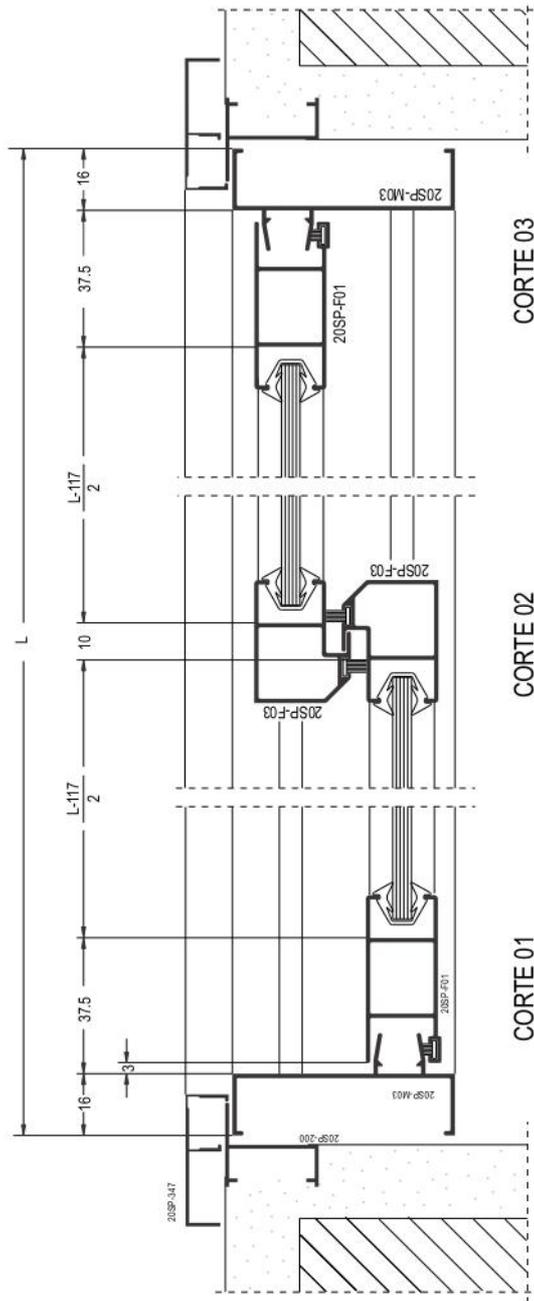
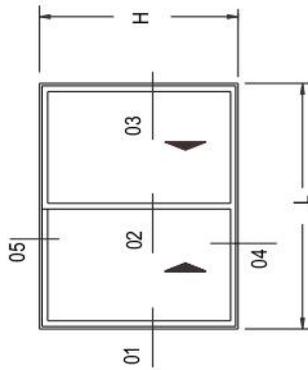
CORTE 01
LADO EXTERNO



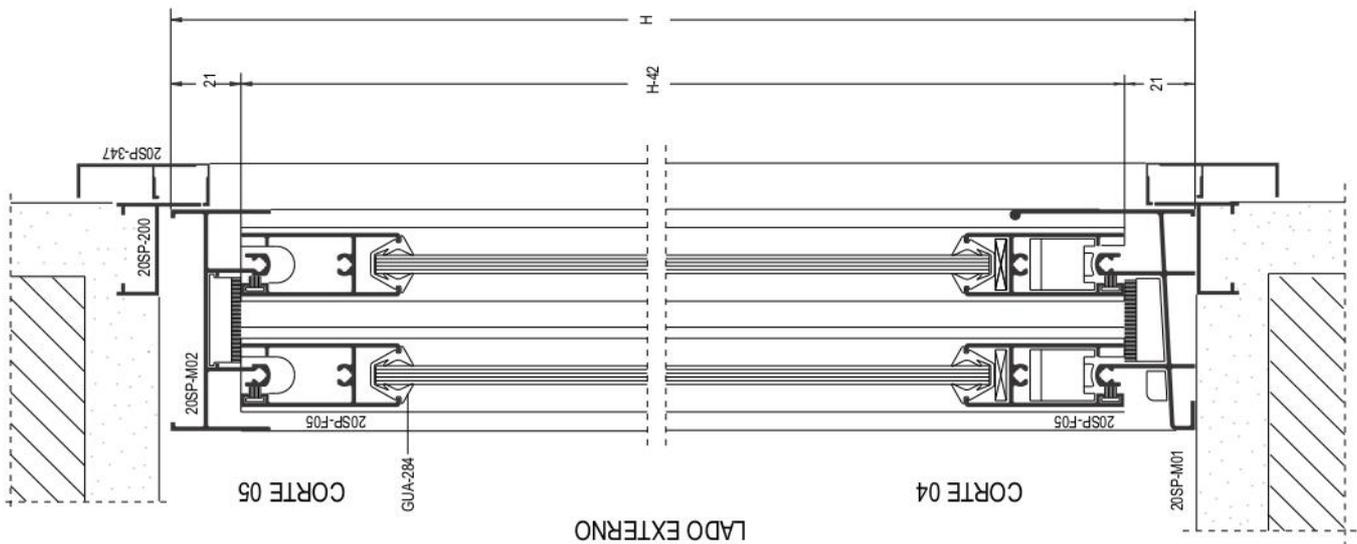
CORTE 02

Janela de Correr 02 Folhas com Persiana Integrada

ELEVAÇÃO VISTA EXTERNA



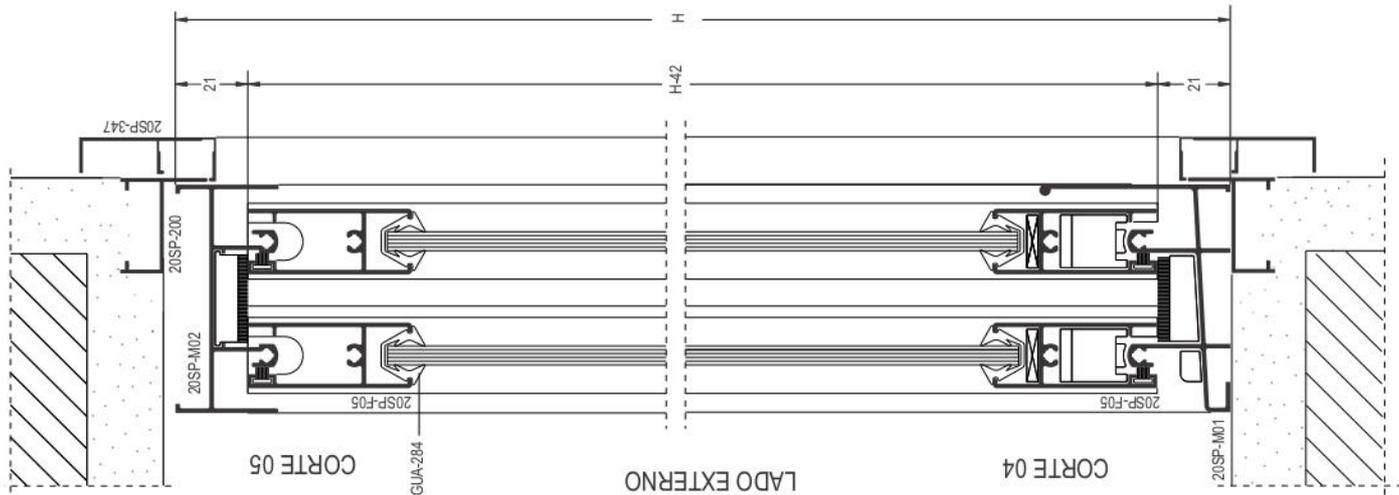
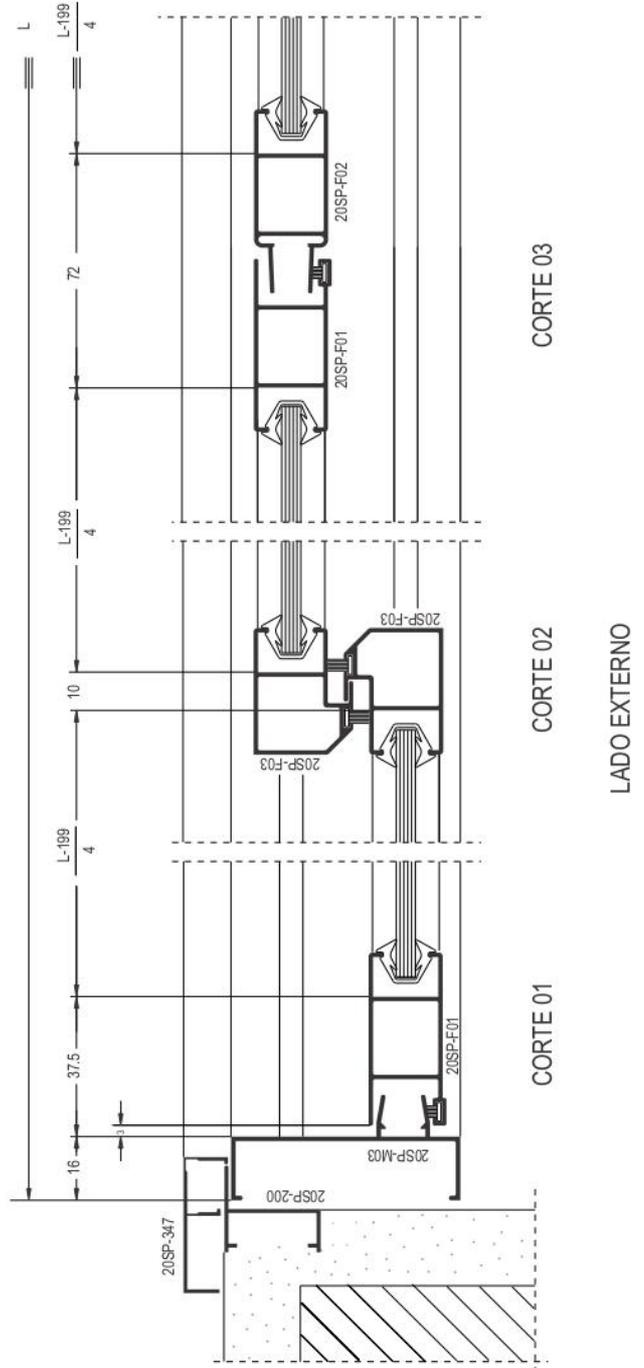
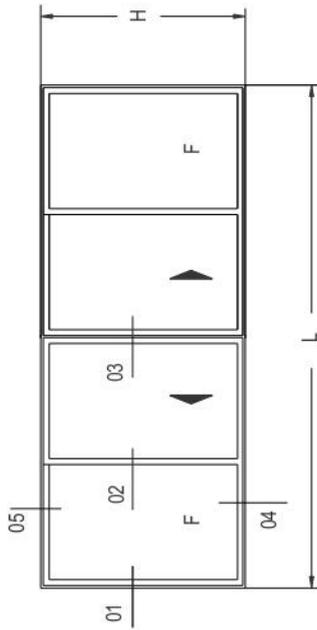
LADO EXTERNO



LADO EXTERNO

Janela de Correr 04 Folhas sendo duas Fixas

ELEVAÇÃO VISTA EXTERNA



Janela de Correr 03 Folhas

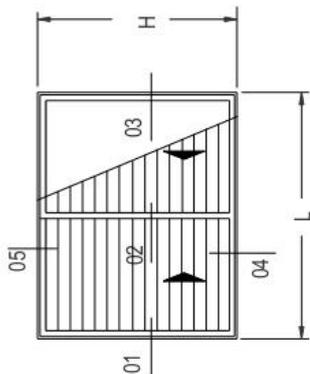
Sendo:

Uma de Palheta cega

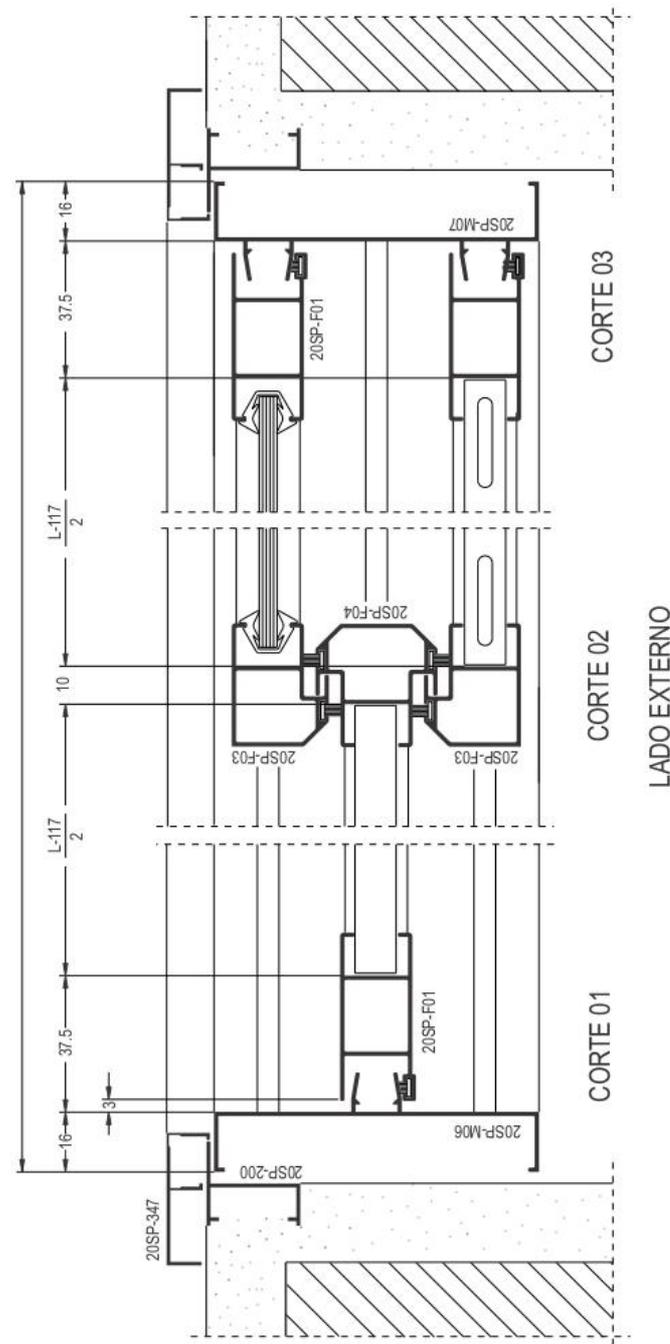
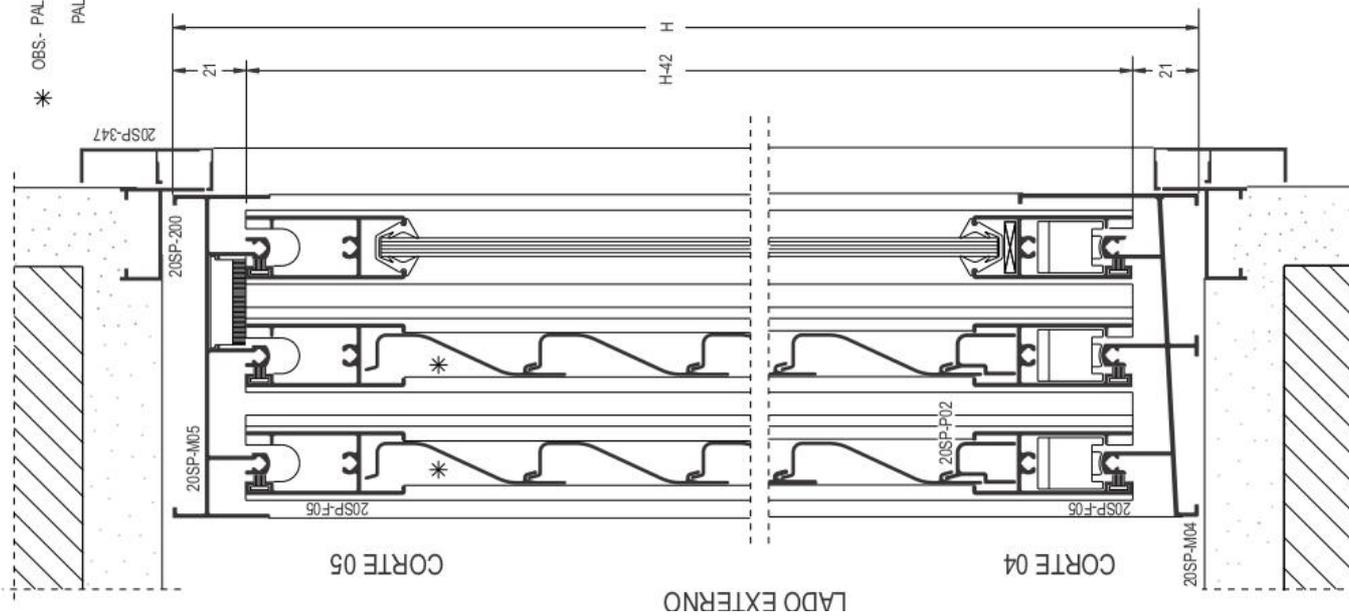
Uma de Palheta perfurada

Uma de vidro

ELEVAÇÃO VISTA EXTERNA



* OBS.- PALHETA N 20SP-P02 = PASSO 45 mm
PALHETA N 20SP-F01 = PASSO 70 mm

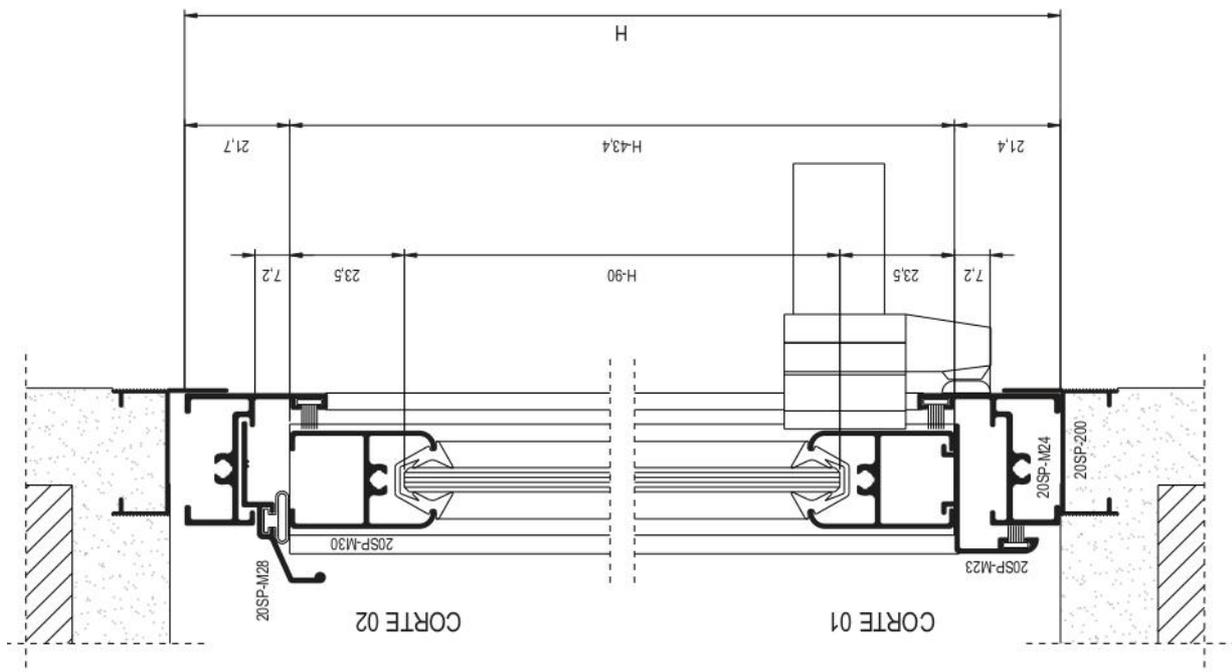
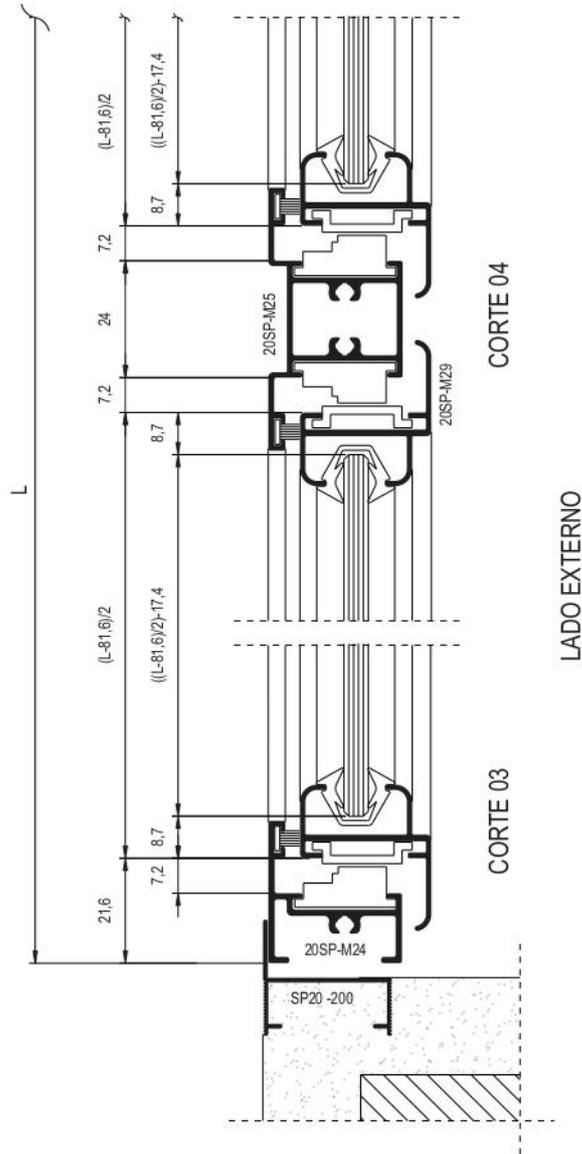
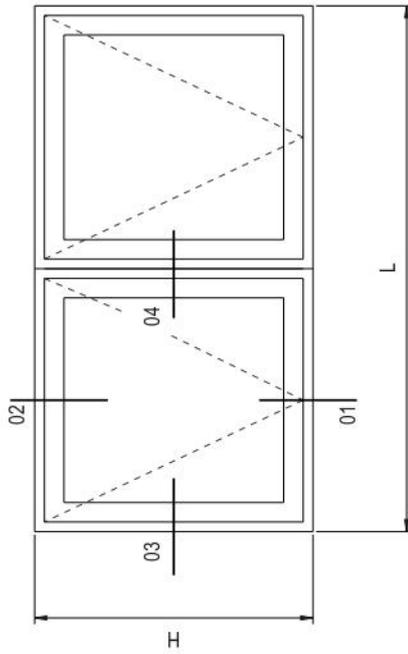


LADO EXTERNO

*dimensões em milímetros

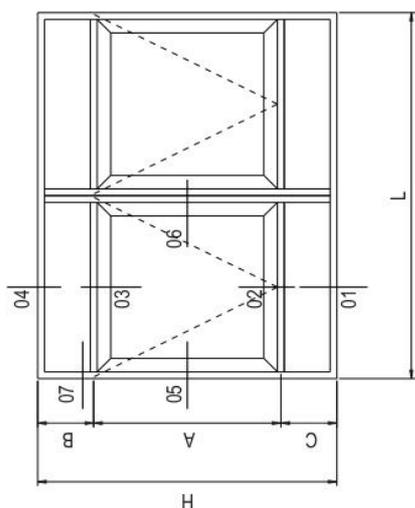
Janela Maxim-ar 02 folhas

ELEVAÇÃO VISTA EXTERNA

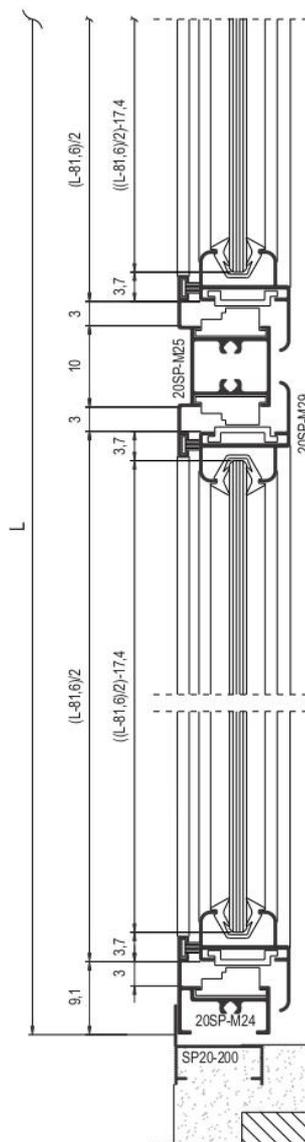
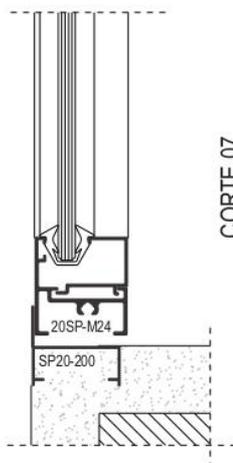


Janela Maxim-ar 02 folhas com Peitoril e Bandeira

ELEVAÇÃO VISTA EXTERNA



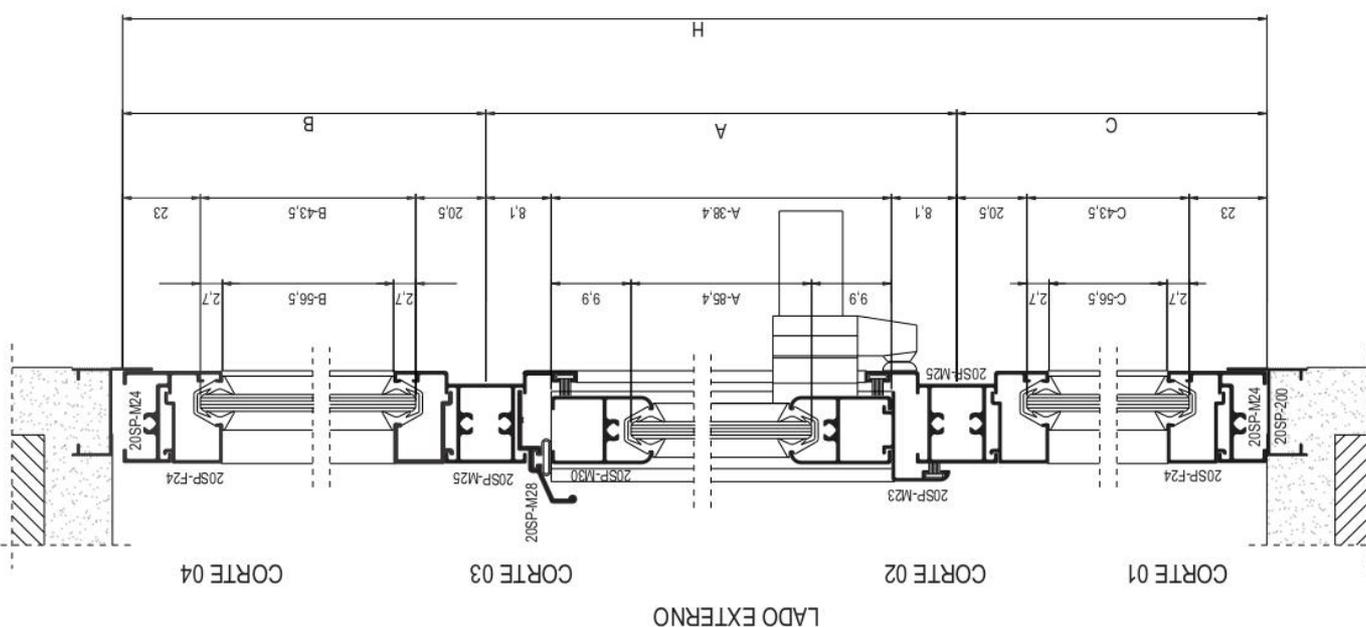
CORTE 07



CORTE 06

LADO EXTERNO

CORTE 05



CORTE 04

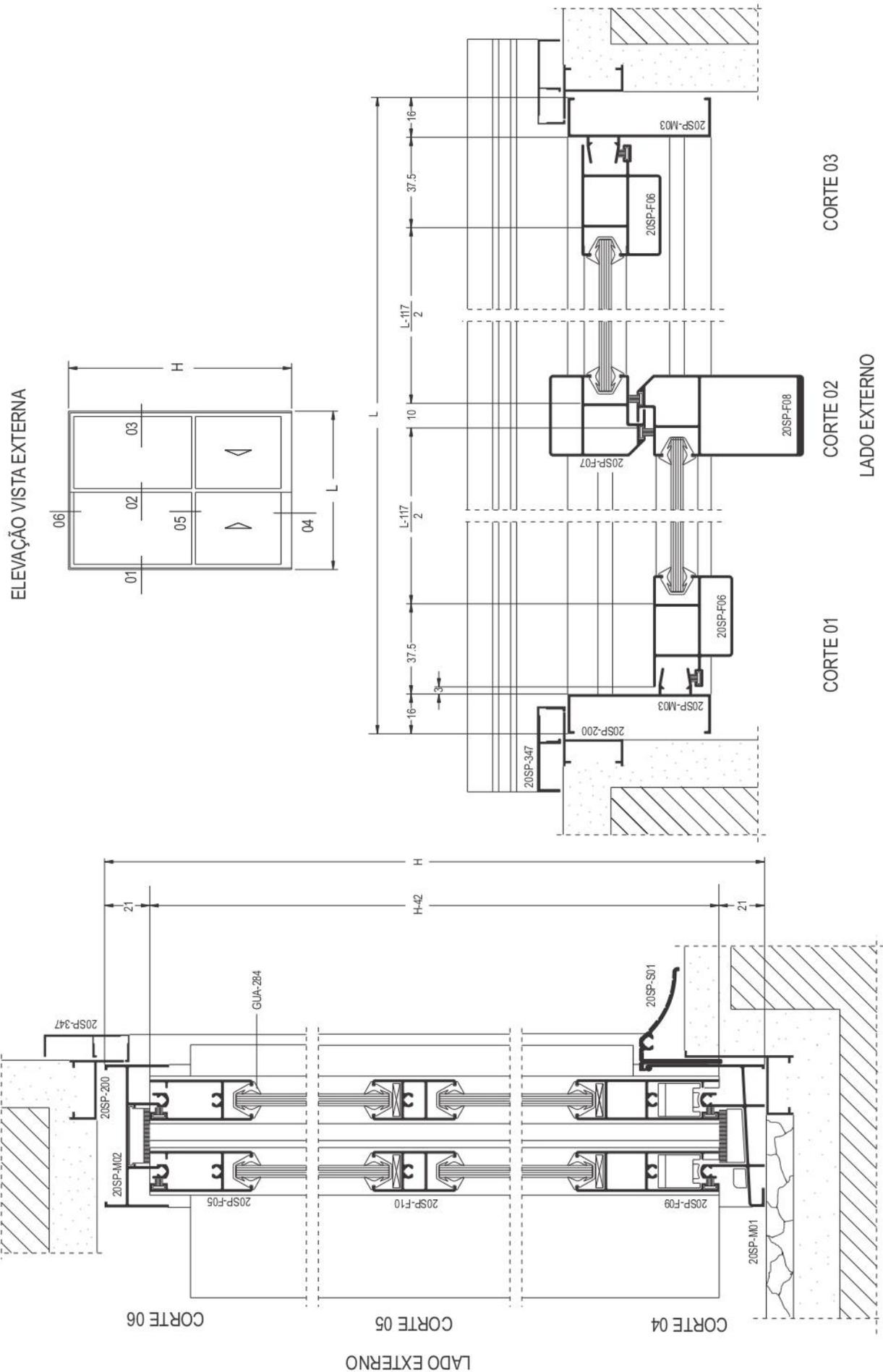
CORTE 03

CORTE 02

CORTE 01

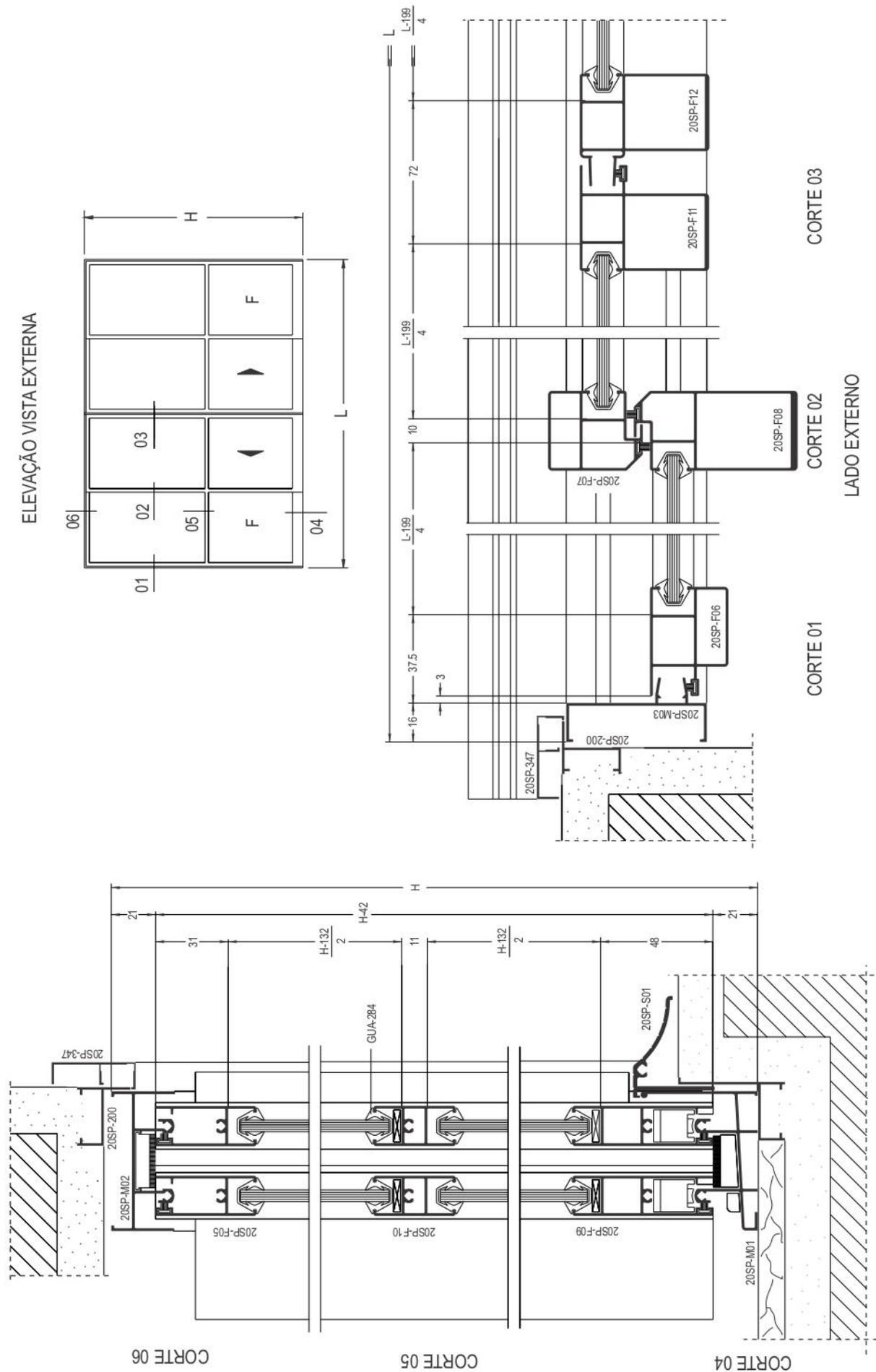
LADO EXTERNO

Porta de Correr 02 Folhas com Travessa



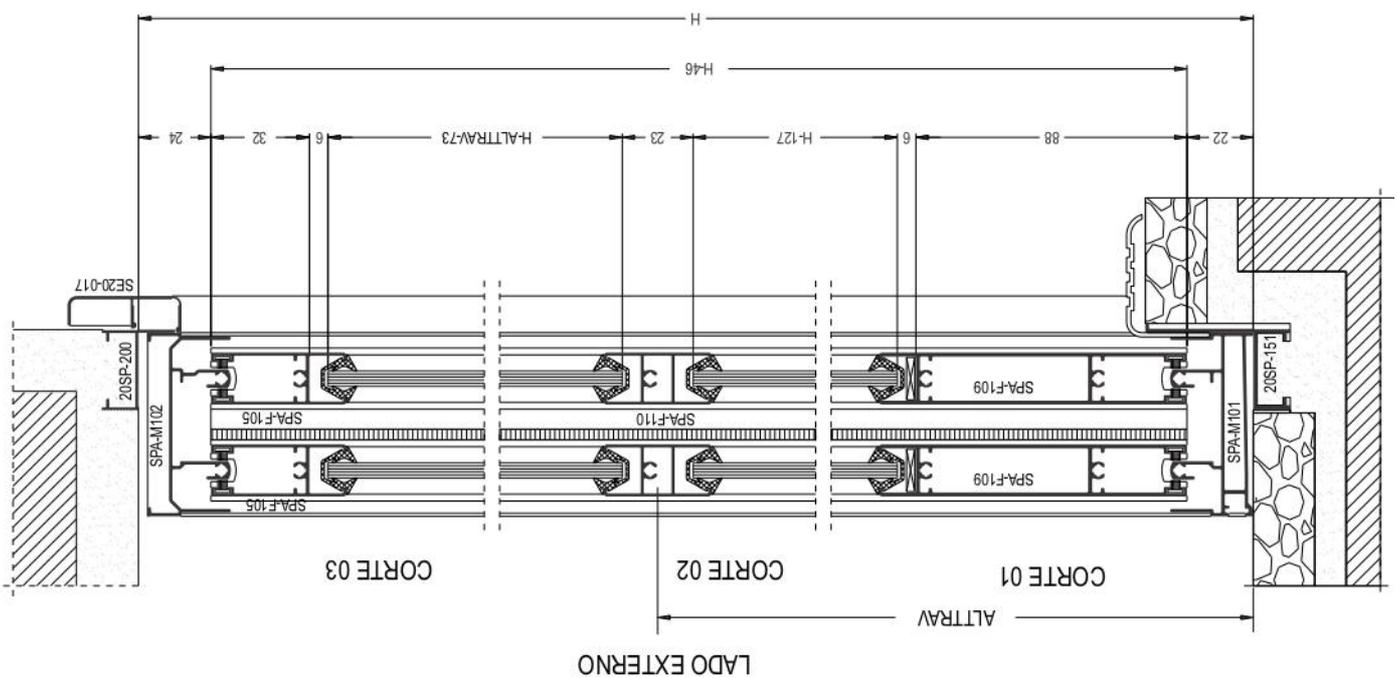
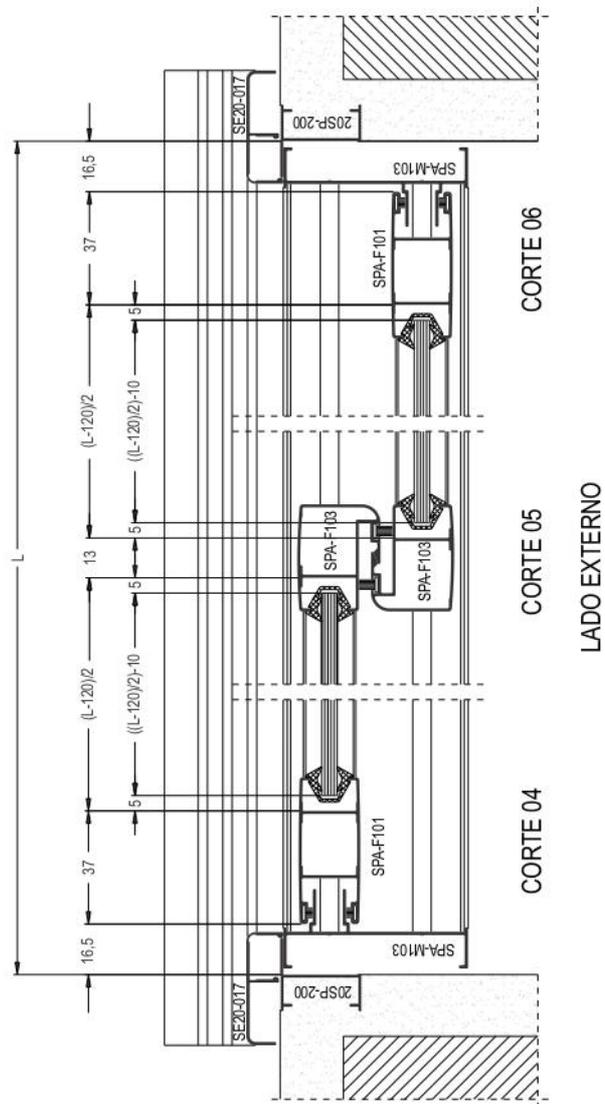
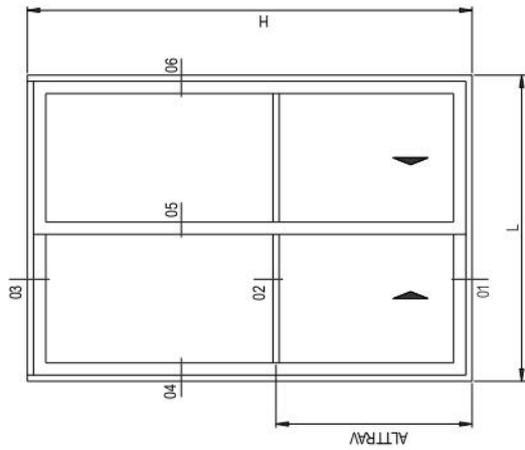
*dimensões em milímetros

Porta de Correr 04 Folhas com Travessa



Porta de Correr 02 Folhas com Travessa

ELEVAÇÃO VISTA EXTERNA



Porta de Correr 03 Folhas com Travessa

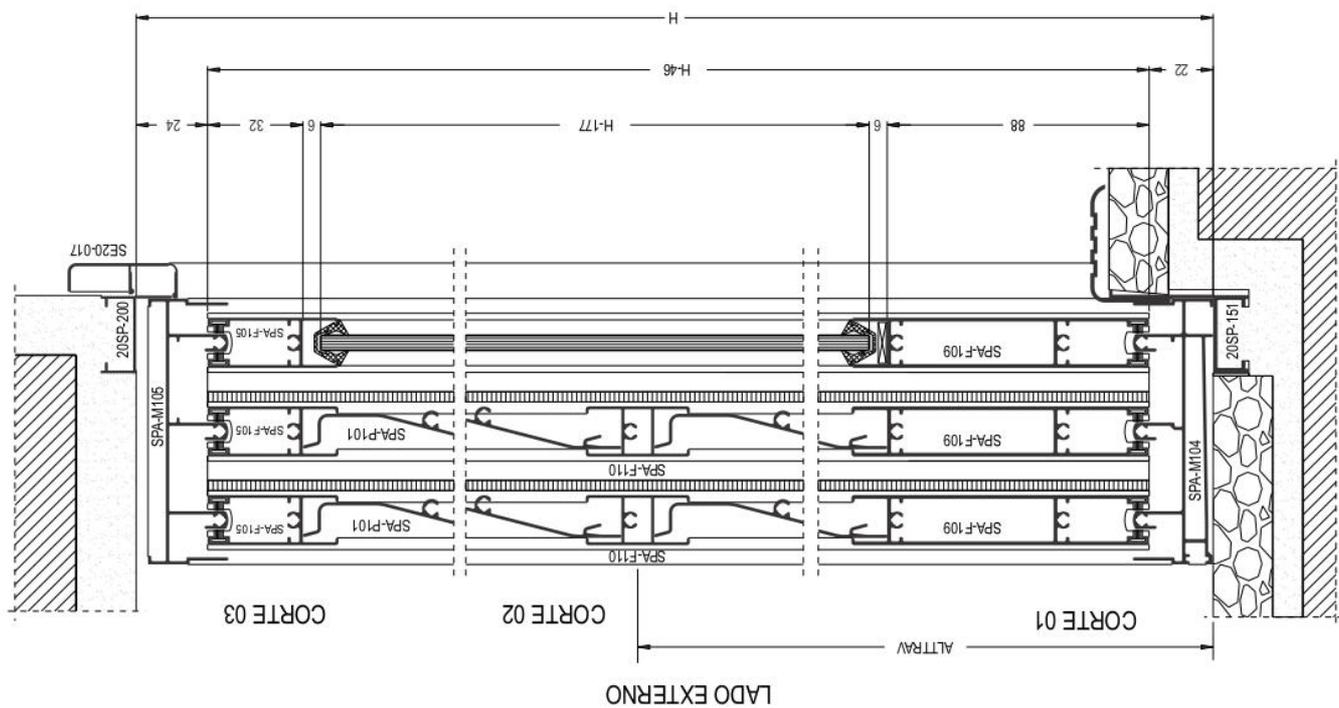
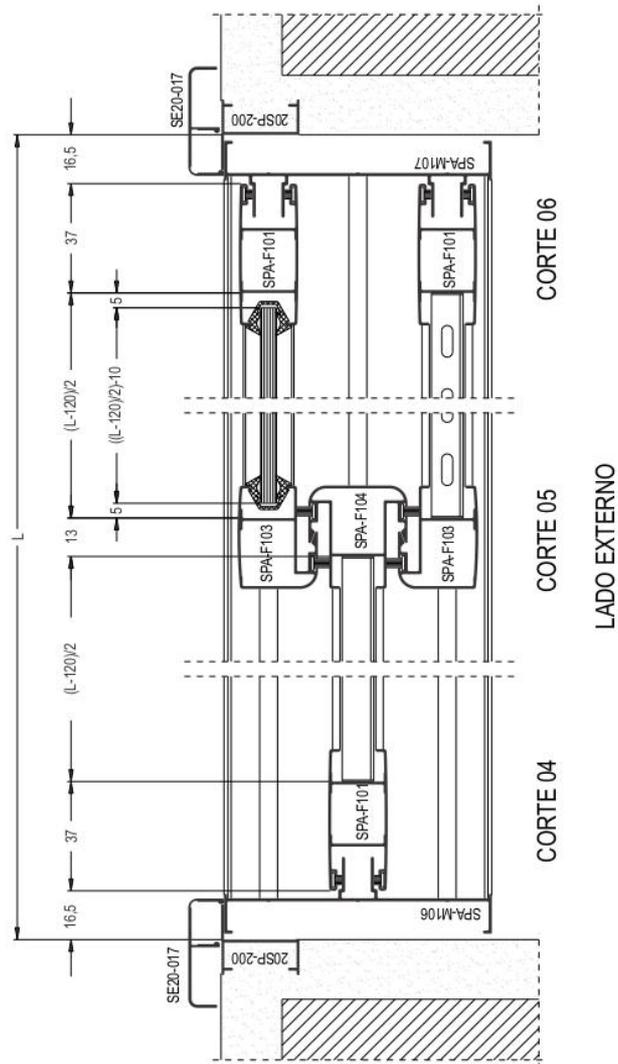
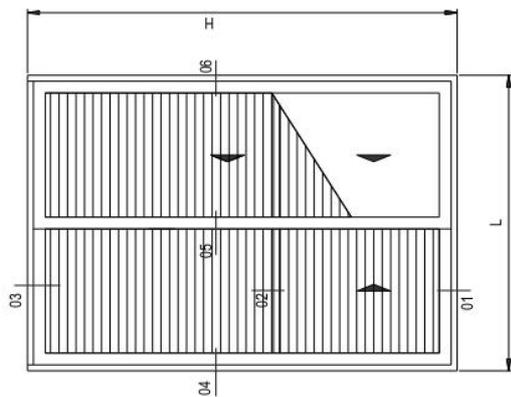
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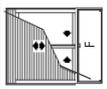
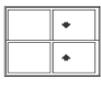
Uma de Palheta cega

Uma de Palheta perfurada

Uma de vidro

ELEVAÇÃO VISTA EXTERNA



TIPOLOGIA	CROQUI	NBR 10.821 / 2017				NBR. 15575 / 2021		
		RESISTÊNCIA	ESTANQUEIDADE	DIMENSÕES	ANO	ACÚSTICA	DIMENSÕES	ANO
Janela de correr 02 folhas		Região III - (30 pav = 90m)	180Pa	1200 x 1200	2019	23dB	1220 x 1200	2022
Janela Integrada 02 folhas		Região III - (20 pav = 60m)	180Pa	1390 x 1140	*2015	34dB	1200 x 1200	2022
Janela com veneziana (2 venezianas e 1 vidro)		Região III - (20 pav = 60m)	250Pa	1145 x 1145	*2011			
Janela de correr 02 folhas com peitoril e persiana integrada								
Janela Maxim-Ar		Região III - (20 pav = 60m)	180Pa	800 x 600	2017	28dB ESTIMATIVA		
Porta de correr 02 folhas com travessa		Região III - (30 pav = 60m)	250Pa	1600 x 2200	2017	28dB ESTIMATIVA		

Obrigado,

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