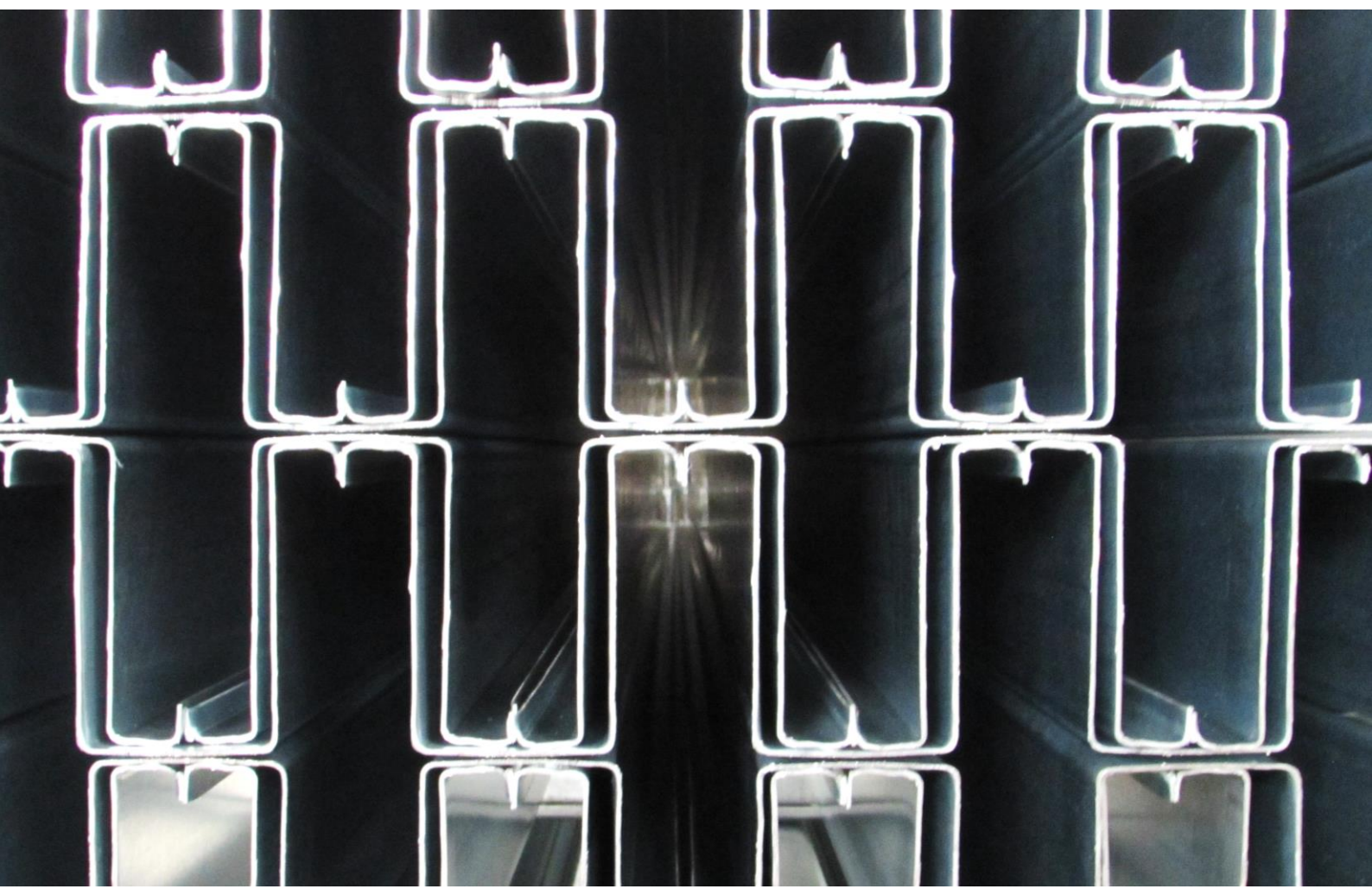




BARRA FERROS



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EMPRESA ESPECIALIZADA NO DESIGN, DESENVOLVIMENTO E FABRICO DE PERFIS EM AÇO ENFORMADO A FRIO



Os perfis em aço enformados a frio apresentam muitas vantagens quando comparados com outras soluções, nomeadamente a boa relação entre a resistência e o peso, fabrico industrial rápido e limpo, facilidade de elevação e montagem em obra.

A Barraferros com o design, desenvolvimento e fabrico de perfis em aço enformado a frio, por perfilagem e quinagem, para os setores da construção, reabilitação, energia e agricultura, contribui para projetos mais económicos, sustentáveis e inteligentes.



perfis
em aço
steel
sections



mm de
espessura
mm of
thickness



aço estrutural
EN 10346
structural steel
EN 10346



aço inoxidável
EN 10088
stainless steel
EN 10088

COMPANY SPECIALIZED IN THE DESIGN, DEVELOPMENT AND PRODUCTION OF COLD FORMED STEEL SECTIONS



Cold-formed steel sections have many advantages when compared to other solutions, namely the good ratio between strength and weight, fast and clean industrial production, ease of lifting and assembly on site.

Barraferros, with the design, development and manufacture of cold-formed steel sections, by profiling and press bending, for the construction, retrofitting, energy, and agriculture sectors, contributes to more economical, sustainable, and intelligent projects.



INDÚSTRIA

perfis para
estrutura de
suporte de
cobertura e fachada

INDUSTRY

sections for roof
and facade
cladding structure



HABITAÇÃO

perfis para pilares,
vigas, paredes,
pisos e cobertura

RESIDENCE

sections for
columns, beams,
walls, floors and
roof



ENERGIA

perfis para
estrutura de
suporte de painéis
fotovoltaicos

ENERGY

sections for
photovoltaic panels
support structure





AGRICULTURA

perfis para culturas agrícolas e estufas

AGRICULTURE

sections for agriculture culture and greenhouses



PORTÕES

portão de fole em chapa de aço

GATES

steel sheet folding gate

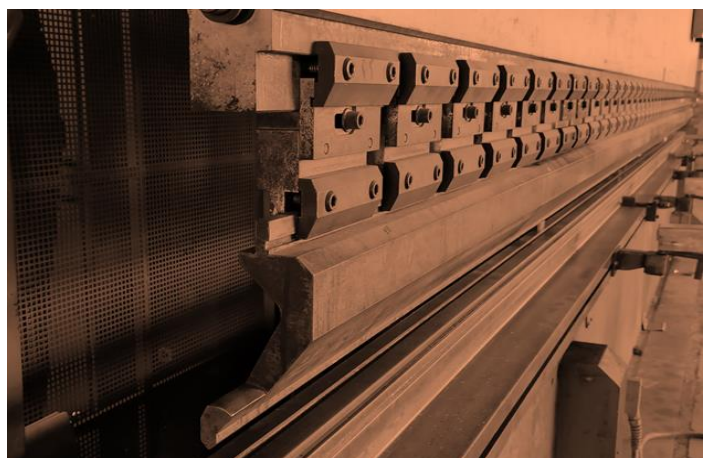


CORTE E QUINAGEM

perfis personalizados até 12 m de comprimento

CUTTING AND PRESS BRAKING

custom-made sections until 12 m of length



CERTIFICAÇÃO · CERTIFICATION

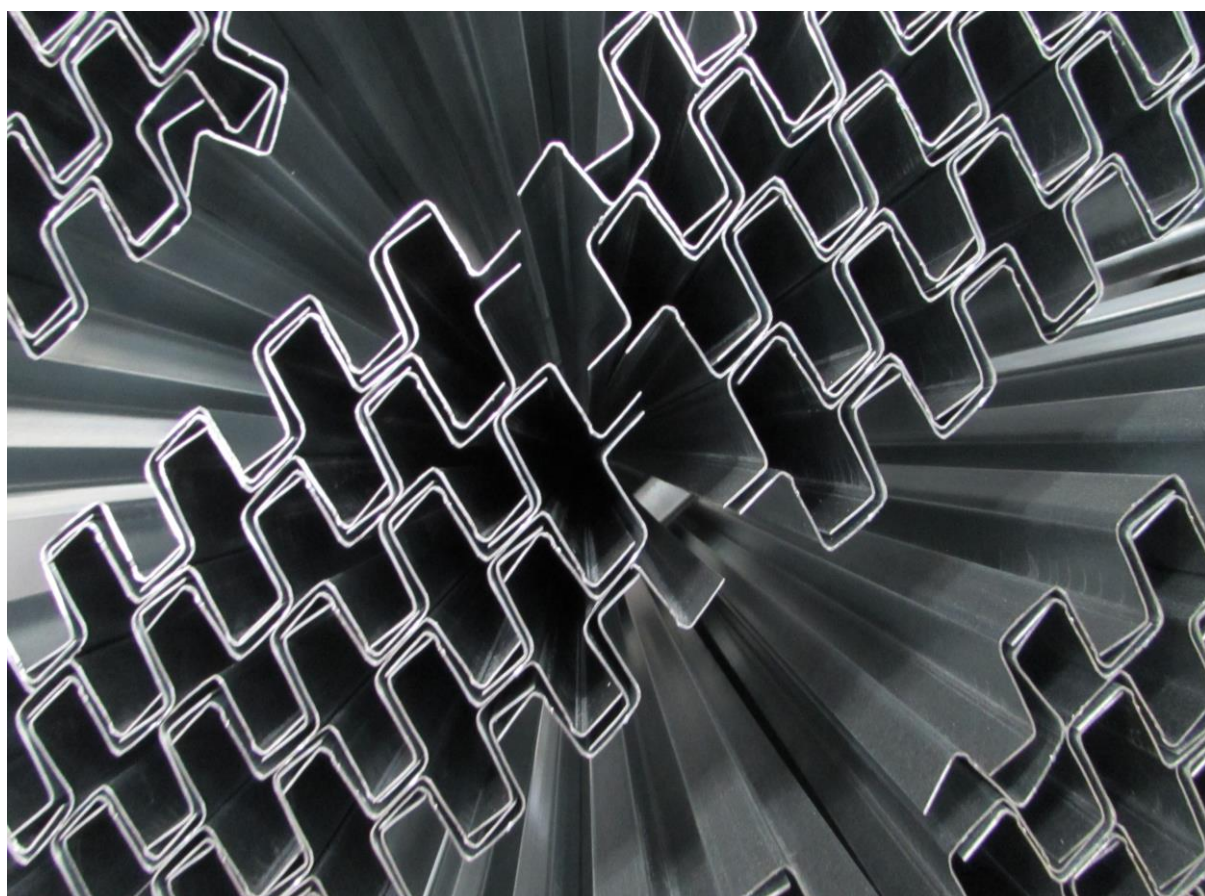
	Certificado de Conformidade do Controlo de Produção em Fábrica Certificate of Conformity of Factory Production Control
Produto Product	Aço Galvanizado Galvanized Steel
Norma Standard	EN 1090-1:2009 + A1:2011
Método de Declaração Declaration Method	2, 3a
Classe de Execução Execution Class	EXC2 (EN 1090-4)
Material de Base Base Material	S220GD, S280GD, S320GD, S350GD
	Sistema de Gestão da Qualidade Organizational Quality Management System
Norma Standard	ISO 9001:2015
	Sistema de Gestão da Segurança e Saúde no Trabalho Occupational Health and Safety Management System
Norma Standard	ISO 45001:2018



PRÉMIOS · AWARDS

O estatuto PME Líder é um selo de reputação criado pelo IAPMEI para distinguir o mérito das Pequenas e Médias Empresas Portuguesas com desempenho superior, com base nas melhores notações de rating e indicadores económico-financeiros.

The PME Líder status is a seal of reputation created by IAPMEI to distinguish the merit of Small and Medium Sized Portuguese Companies with superior performance, based on the best ratings and economic-financial indicators.





INDÚSTRIA
INDUSTRY

APLICAÇÃO

Estrutura para revestimento de cobertura e fachada (madres)
Estrutura para piso
Estrutura para painéis fotovoltaicos

ESPECIFICIDADES

A configuração das secções permite a sobreposição vertical com as seguintes vantagens:

- Aumento da resistência na zona de sobreposição
- Redução do volume do lote de perfis no transporte
- Facilidade de montagem e ligação dos perfis

Esquema de sobreposição sugerido:

- Vãos internos – comprimento de sobreposição nos apoios igual a 20% do vão, sendo 10% para cada lado do apoio
- Vãos de extremidade – comprimento de sobreposição nos apoios igual a 25% do vão, sendo 10% no vão extremidade e 15% no vão interno adjacente

Furações:

- Furos ovais nas abas e almas
- De acordo com os requisitos de projeto

APPLICATION

Structure for roof and facade cladding (purlins and side rails)
Structure for floor
Structure for photovoltaic panels

SPECIFICITIES

The configuration of the sections allows vertical overlap with the following advantages:

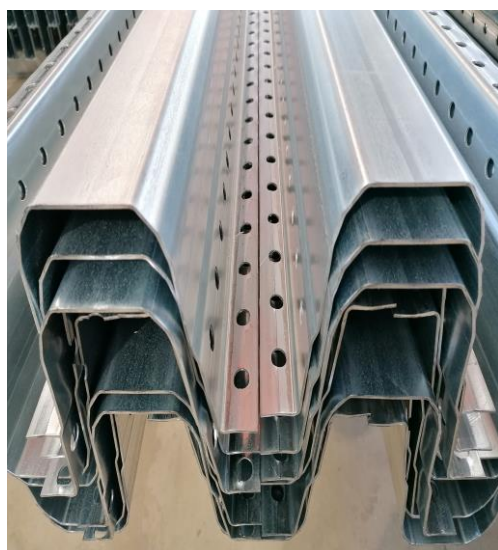
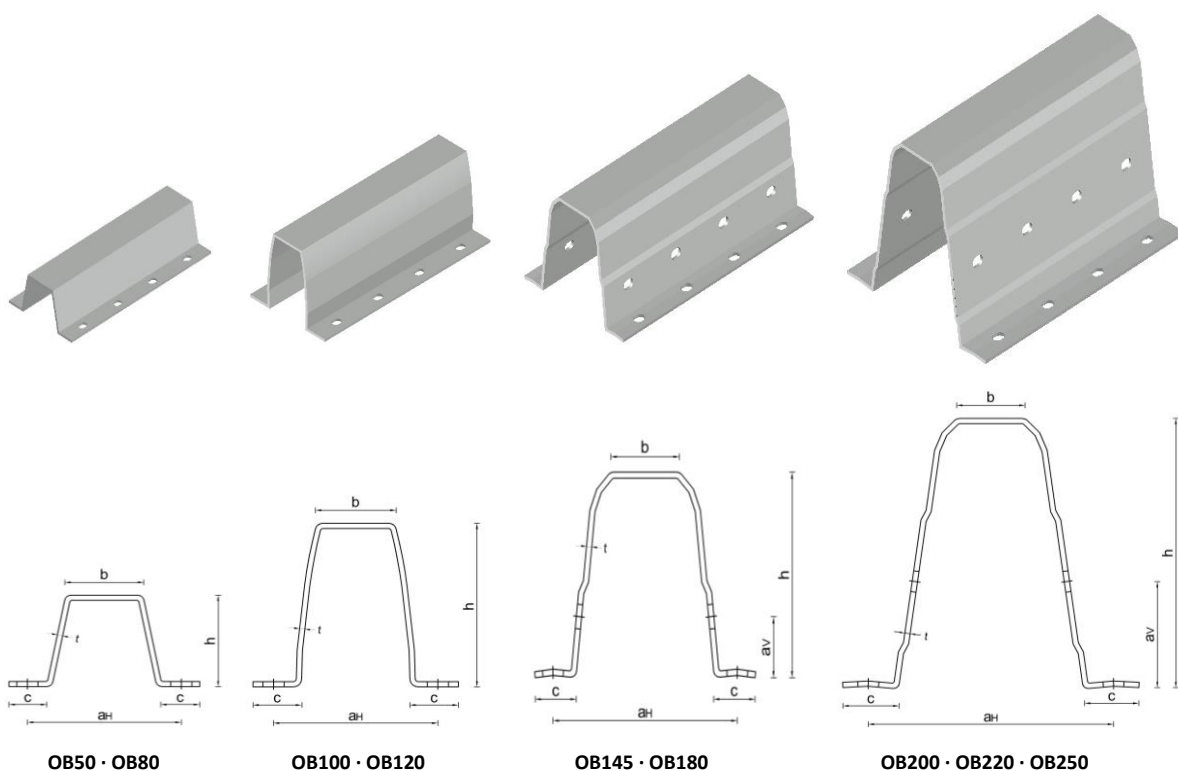
- Increase of the resistance in the overlap area
- Reduction of the profile set volume for transport
- Easy installation and connection of profiles on site

Suggested overlap scheme:

- Internal spans – overlap length at the supports equal to 20% of the span, 10% for each side of the support
- End spans – overlap length at the supports equal to 25% of the span, being 10% at the end span and 15% at the adjacent internal span

Holes:

- Oval holes in the lower flanges and webs
- According to design specifications



Seção Section	h (mm)	b (mm)	c (mm)	t _{nom}	Ø (mm)	a _H	a _V	P (kg/m)
OB50x1.2	50	42	22	1.2	9.0x13.0 //50	82	--	1.70
OB50x1.5				1.5				2.12
OB80x1.5	80		26	1.5		3.00		
OB100x1.5	100		30	1.5		3.52		
OB100x2.0				2.0		4.69		
OB120x1.5				1.5		3.96		
OB120x2.0	120			2.0		5.28		
OB145x1.5	143	56	32	1.5	12.5x14.5 //50	150	37	4.86
OB145x2.0				2.0				6.48
OB145x2.5				2.5				8.10
OB180x1.5	183		38	1.5			34	5.94
OB180x2.0				2.0				7.92
OB180x2.5				2.5				9.90
OB200x1.5	195		44	1.5		200	80	6.30
OB200x2.0				2.0				8.40
OB200x2.5				2.5				10.50
OB220x1.5	220			1.5				7.08
OB220x2.0				2.0				9.44
OB220x2.5				2.5				11.80
OB250x1.5	250		48	1.5				7.86
OB250x2.0				2.0				10.48
OB250x2.5				2.5				13.10

OMEGA

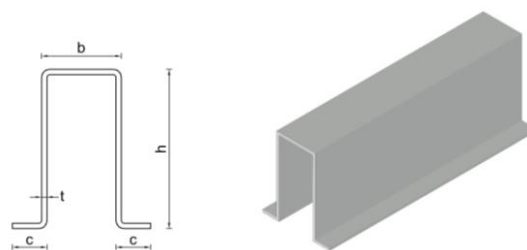
APLICAÇÃO

Estrutura para revestimento de cobertura e fachada (madres)

Comprimento e furação de acordo com os requisitos

APPLICATION

Structure for roof and facade cladding (purlins and side rails)
Length and holes according to specifications



OMEGA R

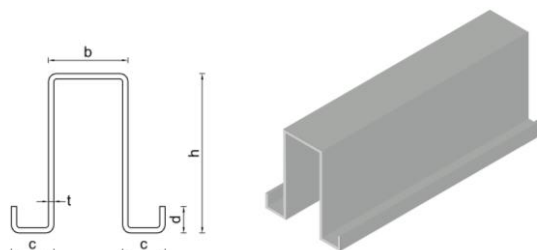
APLICAÇÃO

Madres para cobertura e fachada de pavilhões industriais

Comprimento e furação de acordo com os requisitos

APPLICATION

Purlins and side rails for industrial buildings
Length and holes according to specifications



Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	P (kg/m)
O40/40/15x1.5	40	40	15	1.5	1.66
O50/40/16x1.5	50		16	1.5	1.92
O50/40/18x2.0			18	2.0	2.56
O80/60/21x1.5	80	60	21	1.5	3.00
O80/60/23x2.0			23	2.0	4.00
O100/65/20x1.5	100	65	20	1.5	3.52
O100/65/22x2.0			22	2.0	4.69
O100/65/24x2.5			24	2.5	5.86
O110/65/19x1.5	110	65	19	1.5	3.72
O110/65/21x2.0			21	2.0	4.96
O110/65/23x2.5			23	2.5	6.20
O120/65/19x1.5	120	65	19	1.5	3.96
O120/65/21x2.0			21	2.0	5.28
O120/65/23x2.5			23	2.5	6.60
O140/65/19x1.5	140	65	19	1.5	4.44
O140/65/21x2.0			21	2.0	5.92
O140/65/23x2.5			23	2.5	7.40
O160/65/16x1.5	160	65	16	1.5	4.86
O160/65/18x2.0			18	2.0	6.48
O160/65/20x2.5			20	2.5	8.10

Seção Section	h (mm)	b (mm)	c (mm)	d (mm)	t _{nom} (mm)	P (kg/m)
OR100/60/16/7x1.5	98	60	16	7	1.5	3.32
OR100/60/16/9x2.0				9	2.0	4.43
OR100/65/20/12x1.5	100	65	20	12	1.5	3.72
OR100/65/20/15x2.0				15	2.0	4.96
OR100/65/20/18x2.5				18	2.5	6.20
OR120/65/20/9x1.5	120	65	20	9	1.5	4.14
OR120/65/20/12x2.0				12	2.0	5.52
OR120/65/20/15x2.5				15	2.5	6.90
OR130/60/16/7x1.5	125	60	16	7	1.5	4.14
OR130/60/16/9x2.0				9	2.0	5.52
OR130/65/20/10x2.0	135	65	20	10	2.0	5.92
OR130/65/20/13x2.5				13	2.5	7.40
OR150/65/20/9x1.5	150	65	20	9	1.5	4.86
OR150/65/20/12x2.0				12	2.0	6.48
OR150/65/20/15x2.5				15	2.5	8.10
OR160/65/20/9x1.5	160	65	20	9	1.5	5.10
OR160/65/20/12x2.0				12	2.0	6.80
OR160/65/20/15x2.5				15	2.5	8.50

Omega R b = 60 mm econômica - economic

Outras dimensões sob consulta - Other dimensions on demand

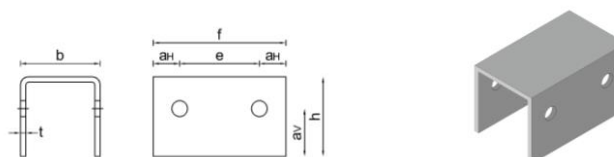
SUPORTE · SUPPORT

APLICAÇÃO

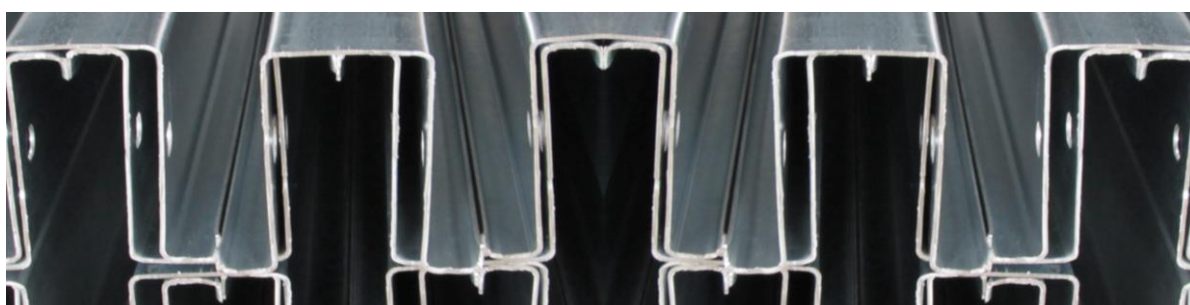
Ligação para perfil OMEGA e OMEGA R

APPLICATION

Connection for section OMEGA and OMEGA R



Seção Section	h (mm)	b (mm)	Ø (mm)	aH (mm)	e (mm)	f (mm)	aV (mm)	t _{nom} (mm)	P (kg/m)
SUP 2.0	70	60	14	28	70	125	40	2.0	3.07
SUP 2.5								2.5	3.84



APLICAÇÃO

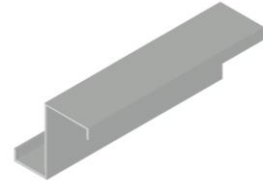
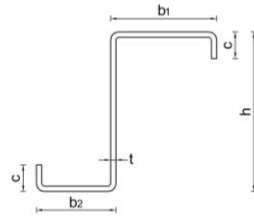
Estrutura para revestimento de cobertura e fachada (madres)

Comprimento e furação de acordo com os requisitos

APPLICATION

Structure for roof and facade cladding (purlins and side rails)

Length and holes according to specifications



Seção Section	h (mm)	b ₁ (mm)	b ₂ (mm)	c (mm)	t _{nom} (mm)	P (kg/m)
Z160/50-50/15x1.5	160	50	50	15	1.5	3.32
Z160/50-50/17x2.0				17	2.0	4.43
Z160/60-60/21x1.5				21	1.5	3.72
Z160/60-60/23x2.0		60	60	23	2.0	4.96
Z160/60-60/25x2.5				25	2.5	6.20
Z160/70-60/16x1.5				16	1.5	3.72
Z160/70-60/18x2.0		70	60	18	2.0	4.96
Z160/70-60/20x2.5				20	2.5	6.20
Z160/70-70/11x1.5				11	1.5	3.72
Z160/70-70/13x2.0			70	13	2.0	4.96
Z160/70-70/15x2.5				15	2.5	6.20
Z170/60-60/16x1.5				16	1.5	3.72
Z170/60-60/18x2.0	170	60	60	18	2.0	4.96
Z170/60-60/20x2.5				20	2.5	6.20
Z180/60-60/21x1.5				21	1.5	3.96
Z180/60-60/23x2.0	180	60	60	23	2.0	5.28
Z180/60-60/25x2.5				25	2.5	6.60
Z180/70-60/16x1.5				16	1.5	3.96
Z180/70-60/18x2.0		70	60	18	2.0	5.28
Z180/70-60/20x2.5				20	2.5	6.60
Z180/70-70/19x1.5				19	1.5	4.14
Z180/70-70/21x2.0			70	21	2.0	5.52
Z180/70-70/23x2.5				23	2.5	6.90
Z200/60-60/19x1.5		200	60	19	1.5	4.14
Z200/60-60/21x2.0				21	2.0	5.52
Z200/60-60/23x2.5				23	2.5	6.90
Z200/70-60/14x1.5			60	14	1.5	4.14
Z200/70-60/16x2.0				16	2.0	5.52
Z200/70-60/18x2.5				18	2.5	6.90
Z200/70-70/21x1.5			70	21	1.5	4.44
Z200/70-70/23x2.0				23	2.0	5.92
Z200/70-70/25x2.5				25	2.5	7.40
Z200/80-70/16x1.5			80	16	1.5	4.44
Z200/80-70/18x2.0				18	2.0	5.92
Z200/80-70/20x2.5				20	2.5	7.40
Z220/60-60/21x1.5	220	60	60	21	1.5	4.44
Z220/60-60/23x2.0				23	2.0	5.92
Z220/60-60/25x2.5				25	2.5	7.40
Z220/70-60/16x1.5		70	60	16	1.5	4.44
Z220/70-60/18x2.0				18	2.0	5.92
Z220/70-60/20x2.5				20	2.5	7.40
Z225/80-70/25x2.5		80	70	25	2.5	8.10
Z225/80-70/27x3.0				27	3.0	9.72

Seção Section	h (mm)	b ₁ (mm)	b ₂ (mm)	c (mm)	t _{nom} (mm)	P (kg/m)
Z240/60-60/13x2.0	240	60	60	13	2.0	5.92
Z240/60-60/15x2.5				15	2.5	7.40
Z240/70-60/24x1.5		70	60	24	1.5	4.86
Z240/70-60/26x2.0				26	2.0	6.48
Z240/70-60/28x2.5				28	2.5	8.10
Z240/70-70/19x1.5				70	19	1.5
Z240/70-70/21x2.0		21	2.0		6.48	
Z240/70-70/23x2.5		23	2.5		8.10	
Z240/80-70/14x1.5		80	14		1.5	4.86
Z240/80-70/16x2.0			16	2.0	6.48	
Z240/80-70/18x2.5			18	2.5	8.10	
Z250/60-60/24x1.5			250	60	60	24
Z250/60-60/26x2.0	26	2.0				6.48
Z250/60-60/28x2.5	28	2.5				8.10
Z250/70-60/19x1.5	70	60		19	1.5	4.86
Z250/70-60/21x2.0				21	2.0	6.48
Z250/70-60/23x2.5				23	2.5	8.10
Z250/70-70/14x1.5		70		14	1.5	4.86
Z250/70-70/16x2.0				16	2.0	6.48
Z250/70-70/18x2.5				18	2.5	8.10
Z250/80-70/19x1.5	80	70		19	1.5	5.10
Z250/80-70/21x2.0				21	2.0	6.80
Z250/80-70/23x2.5				23	2.5	8.50
Z260/60-60/19x1.5	260	60	60	19	1.5	4.86
Z260/60-60/21x2.0				21	2.0	6.48
Z260/60-60/23x2.5				23	2.5	8.10
Z260/70-60/14x1.5		70	60	14	1.5	4.86
Z260/70-60/16x2.0				16	2.0	6.48
Z260/70-60/18x2.5				18	2.5	8.10
Z300/70-60/26x1.5	300	70	60	26	1.5	5.64
Z300/70-60/28x2.0				28	2.0	7.52
Z300/70-60/28x2.5				28	2.5	9.30
Z300/70-60/27x3.0				27	3.0	11.04
Z300/70-70/21x1.5			70	21	1.5	5.64
Z300/70-70/23x2.0				23	2.0	7.52
Z300/70-70/23x2.5				23	2.5	9.30
Z300/70-70/22x3.0				22	3.0	11.04
Z300/80-70/16x1.5		80	70	16	1.5	5.64
Z300/80-70/18x2.0				18	2.0	7.52
Z300/80-70/18x2.5				18	2.5	9.30
Z300/80-70/17x3.0			17	3.0	11.04	
Z300/80-80/25x3.0	80		25	3.0	11.64	
Z375/96-85/30x4.0			30	4.0	18.40	

Outras dimensões sob consulta · Other dimensions on demand



APLICAÇÃO

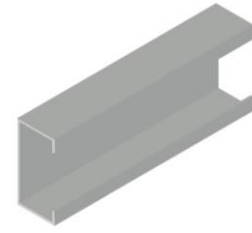
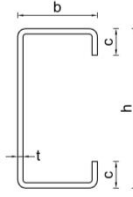
Estrutura para revestimento de cobertura e fachada (madres)

Comprimento e furação de acordo com os requisitos

APPLICATION

Structure for roof and facade cladding (purlins and side rails)

Length and holes according to specifications



Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	P (kg/m)
C100/50/13x1.5	100	50	13	1.5	2.57
C100/50/15x2.0			15	2.0	3.42
C100/55/15x2.0		55	15	2.0	3.58
C100/55/17x2.5			17	2.5	4.48
C120/55/16x1.5	120	55	16	1.5	3.00
C120/55/18x2.0			18	2.0	4.00
C120/55/20x2.5		60	20	2.5	5.00
C120/60/11x1.5			11	1.5	3.00
C120/60/13x2.0	140	60	13	2.0	4.00
C120/60/15x2.5			15	2.5	5.00
C140/50/11x1.5		50	11	1.5	3.00
C140/50/13x2.0			13	2.0	4.00
C140/50/15x2.5			15	2.5	5.00
C140/55/20x1.5		55	20	1.5	3.32
C140/55/22x2.0			22	2.0	4.43
C140/60/15x1.5		60	15	1.5	3.32
C140/60/17x2.0			17	2.0	4.43
C140/65/18x1.5		65	18	1.5	3.52
C140/65/20x2.0			20	2.0	4.69
C140/70/21x1.5		70	21	1.5	3.72
C140/70/23x2.0			23	2.0	4.96
C140/70/25x2.5			25	2.5	6.20
C150/50/20x1.5	150	50	20	1.5	3.32
C150/50/22x2.0			22	2.0	4.43
C150/55/15x1.5		55	15	1.5	3.32
C150/55/17x2.0			17	2.0	4.43
C150/60/18x1.5		60	18	1.5	3.52
C150/60/20x2.0			20	2.0	4.69
C150/65/13x1.5		65	13	1.5	3.52
C150/65/15x2.0			15	2.0	4.69
C150/70/16x1.5		70	16	1.5	3.72
C150/70/18x2.0			18	2.0	4.96
C150/70/20x2.5			20	2.5	6.20
C160/50/15x1.5	160	50	15	1.5	3.32
C160/50/17x2.0			17	2.0	4.43
C160/55/18x1.5		55	18	1.5	3.52
C160/55/20x2.0			20	2.0	4.69
C160/60/21x1.5		60	21	1.5	3.72
C160/60/23x2.0			23	2.0	4.96
C160/60/25x2.5			25	2.5	6.20
C160/65/16x1.5		65	16	1.5	3.72
C160/65/18x2.0			18	2.0	4.96
C160/65/20x2.5			20	2.5	6.20
C160/70/11x1.5		70	11	1.5	3.72
C160/70/21x1.5			21	1.5	3.96
C160/70/13x2.0			13	2.0	4.96
C160/70/23x2.0			23	2.0	5.28
C160/70/15x2.5			15	2.5	6.20
C160/70/25x2.5			25	2.5	6.60
C170/60/16x1.5	170	60	16	1.5	3.72
C170/60/18x2.0			18	2.0	4.96
C170/60/20x2.5		60	20	2.5	6.20
C180/60/21x1.5	180	60	21	1.5	3.96
C180/60/23x2.0			23	2.0	5.28
C180/60/25x2.5			25	2.5	6.60
C180/65/16x1.5		65	16	1.5	3.96
C180/65/18x2.0			18	2.0	5.28
C180/65/20x2.5			20	2.5	6.60
C180/70/19x1.5		70	19	1.5	4.14
C180/70/21x2.0			21	2.0	5.52
C180/70/23x2.5			23	2.5	6.90
C200/50/11x1.5	200	50	11	1.5	3.72
C200/50/13x2.0			13	2.0	4.96
C200/50/15x2.5			15	2.5	6.20
C200/55/16x1.5		55	16	1.5	3.96
C200/55/18x2.0			18	2.0	5.28
C200/55/20x2.5			20	2.5	6.60
C200/60/19x1.5		60	19	1.5	4.14
C200/60/21x2.0			21	2.0	5.52
C200/60/23x2.5			23	2.5	6.90

Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	P (kg/m)	
C200/65/14x1.5	200	65	14	1.5	4.14	
C200/65/16x2.0			16	2.0	5.52	
C200/65/18x2.5		70	18	2.5	6.90	
C200/70/21x1.5			21	1.5	4.44	
C200/70/23x2.0			23	2.0	5.92	
C200/70/25x2.5		25	2.5	7.40		
C220/55/14x1.5		220	55	14	1.5	4.14
C220/55/16x2.0				16	2.0	5.52
C220/55/18x2.5				18	2.5	6.90
C220/60/21x1.5			60	21	1.5	4.44
C220/60/23x2.0	23			2.0	5.92	
C220/60/25x2.5	25			2.5	7.40	
C220/65/16x1.5	65		16	1.5	4.44	
C220/65/18x2.0			18	2.0	5.92	
C220/65/20x2.5			20	2.5	7.40	
C220/70/11x1.5	225		70	11	1.5	4.44
C220/70/13x2.0		13		2.0	5.92	
C220/70/15x2.5		15		2.5	7.40	
C225/80/16x1.5		80	16	1.5	4.86	
C225/80/18x2.0			18	2.0	6.48	
C225/80/20x2.5			20	2.5	8.10	
C225/80/22x3.0			22	3.0	9.72	
C225/80/26x4.0			26	4.0	12.96	
C240/55/16x1.5		240	55	16	1.5	4.44
C240/55/18x2.0				18	2.0	5.92
C240/55/20x2.5	20			2.5	7.40	
C240/60/13x2.0	60		13	2.0	5.92	
C240/60/15x2.5			15	2.5	7.40	
C240/70/19x1.5	70		19	1.5	4.86	
C240/70/21x2.0			21	2.0	6.48	
C240/70/23x2.5			23	2.5	8.10	
C250/60/24x1.5	250		60	24	1.5	4.86
C250/60/26x2.0				26	2.0	6.48
C250/60/28x2.5		28		2.5	8.10	
C250/65/19x1.5		65	19	1.5	4.86	
C250/65/21x2.0			21	2.0	6.48	
C250/65/23x2.5			23	2.5	8.10	
C250/70/14x1.5		70	14	1.5	4.86	
C250/70/16x2.0			16	2.0	6.48	
C250/70/18x2.5			18	2.5	8.10	
C260/60/19x1.5		260	60	19	1.5	4.86
C260/60/21x2.0	21			2.0	6.48	
C260/60/23x2.5	23			2.5	8.10	
C260/65/14x1.5	65		14	1.5	4.86	
C260/65/16x2.0			16	2.0	6.48	
C260/65/18x2.5			18	2.5	8.10	
C260/70/19x1.5	70		19	1.5	5.10	
C260/70/21x2.0			21	2.0	6.80	
C260/70/23x2.5			23	2.5	8.50	
C275/80/25x2.5	275		80	25	2.5	9.30
C275/80/25x3.0		25		3.0	11.04	
C280/60/19x1.5		60	19	1.5	5.10	
C280/60/21x2.0			21	2.0	6.80	
C280/60/23x2.5	23		2.5	8.50		
C280/65/14x1.5	280	65	14	1.5	5.10	
C280/65/16x2.0			16	2.0	6.80	
C280/65/18x2.5		70	18	2.5	8.50	
C300/70/21x1.5			21	1.5	5.64	
C300/70/23x2.0	300	70	23	2.0	7.52	
C300/70/23x2.5			23	2.5	9.30	
C300/70/27x3.0			27	3.0	11.28	
C300/75/18x2.5		75	18	2.5	9.30	
C300/75/22x3.0			22	3.0	11.28	
C300/80/25x3.0			25	3.0	11.64	
C325/65/14x1.5	325	65	14	1.5	5.64	
C325/65/16x2.0			16	2.0	7.52	
C325/65/15x2.5			15	2.5	9.30	
C325/65/20x3.0			20	3.0	11.28	

Outras dimensões sob consulta · Other dimensions on demand

APLICAÇÃO

Perfil de separação entre o revestimento de cobertura existente e novo

FIG A – a reentrância no banzo inferior permite acomodar os parafusos do revestimento existente

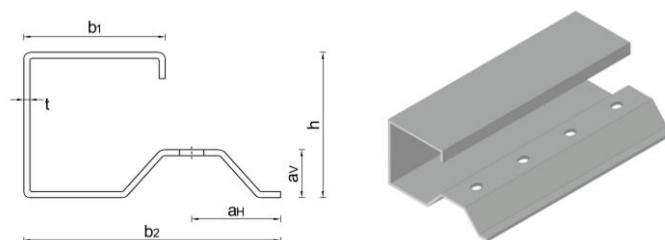
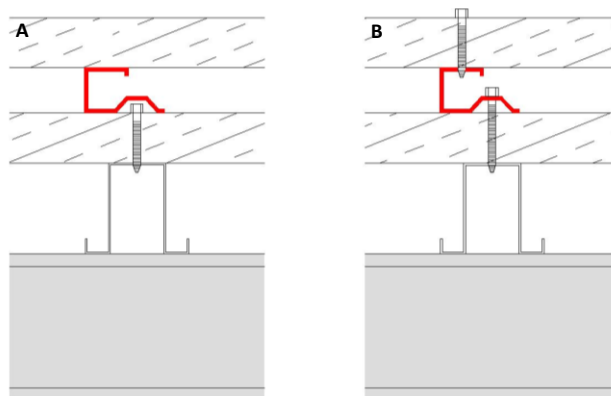
FIG B – banzo superior para fixar o revestimento novo e furação no banzo inferior para fixar o perfil G40 à estrutura existente

APPLICATION

Separation section between existing and new roof cladding

FIG A – the recess in the lower flange allows to accommodate the bolts from the existing cladding

FIG B – upper flange to fix the new cladding and holes in the lower flange to fix section G40 to the existing structure



Seção Section	h (mm)	b ₁ (mm)	b ₂ (mm)	t _{nom} (mm)	Ø (mm)	av (mm)	a _H (mm)	P (kg/m)
G40	38	35	64	1.5	9.0x15.0 // 50	15	22	1.66



TUBULAR

APLICAÇÃO

Viga e pilar para a execução de pisos, escadas e coberturas

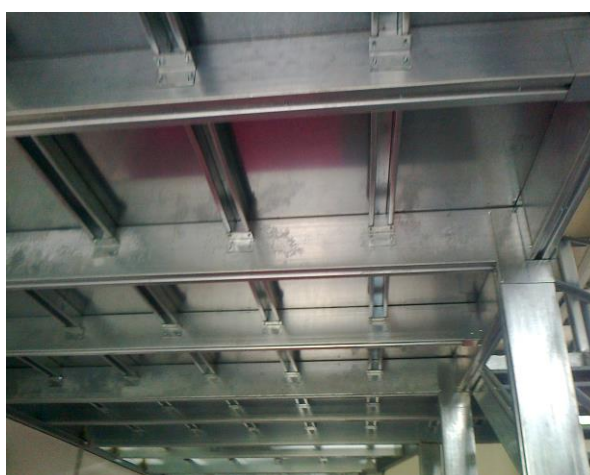
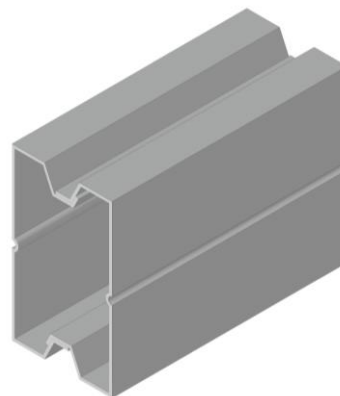
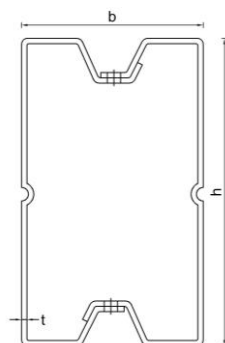
O perfil TUBULAR é composto por 2 secções ligadas por parafusos M8

APPLICATION

Beam and column for the execution of floors, mezzanine, stairs and roofs

Section TUBULAR is the result of 2 sections connected by M8 bolts

Seção Section	h (mm)	b (mm)	t _{nom} (mm)	P (kg/m)
Tubular 170	170	100	2.5	12.40
Tubular 230	230			14.80
Tubular 265	265			16.20



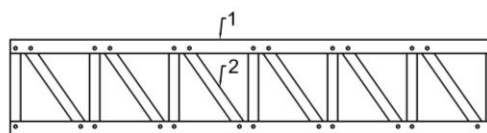


HABITAÇÃO
RESIDENCE

APLICAÇÃO

Pisos, coberturas e platibandas

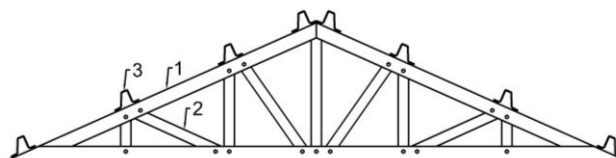
- (1) cordas definidas por perfil RBF ou CP
- (2) diagonais definidas por perfil UB40 ou UB60
- (3) a calha no banzo superior do perfil RBF permite a ligação a outros perfis através de parafuso rômico



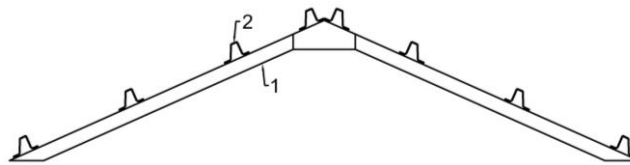
APPLICATION

Floors, roof and parapets

- (1) chords in section RBF or section CP
- (2) diagonals in section UB40 or UB60
- (3) the upper flange of RBF has a channel that allows the connection to other sections through rhombic bolts



COBERTURA VÃO APROVEITADO · ATTIC ROOF



APLICAÇÃO

Estrutura de cobertura com vão aproveitado

(1) viga definida pelas seguintes alternativas: TUBULAR, VIGA TRELIÇADA, RBF, RBF & OB35/40 ou RBF & UB120

(2) ripa definida pelas seguintes alternativas: OB40/20 ou OB60/20 para telha cerâmica, OB100, ÔMEGA ou ÔMEGA R para painel de cobertura

APPLICATION

Structure for attic roof

(1) beam defined by the following alternatives: TUBULAR, TRUSS BEAM, RBF, RBF & OB35/40 or RBF & UB120

(2) purlin defined by the following alternatives: OB40/20 or OB60/20 for ceramic roof tiles, OB100, OMEGA or OMEGA R for roof panel



RBF

APLICAÇÃO

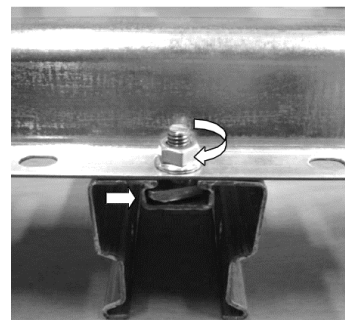
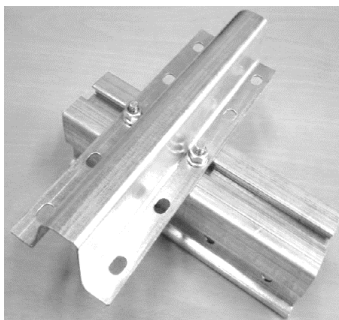
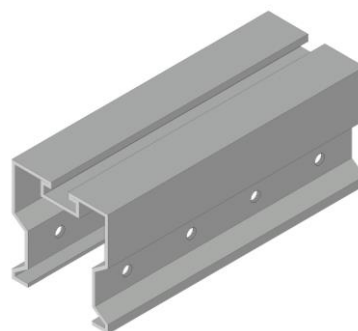
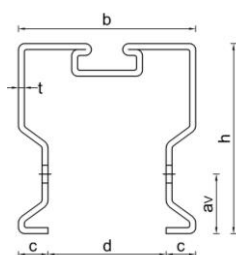
Viga treliçada, estrutura de cobertura, estrutura de suporte de painéis fotovoltaicos

Calha no banzo superior do perfil RBF permite a ligação a outros perfis através de parafuso rômbo

APPLICATION

Truss beam, roof structure, support structure for photovoltaic panels

The channel on the upper flange of section RBF allows the connection to other sections through rhombic bolts



Estrutura de cobertura com fixação das ripas em qualquer posição simplificando a montagem em obra
Roof structure with purlin connection in any position simplifying the construction on site

RBF & OB35/40

APLICAÇÃO

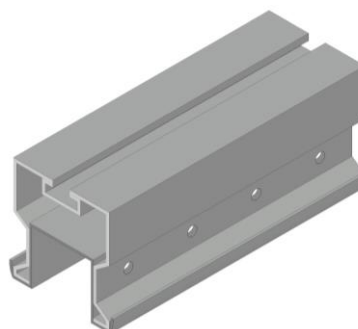
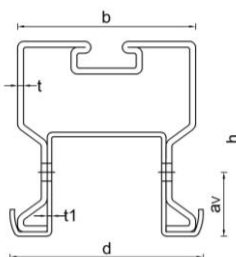
Estrutura de cobertura com aproveitamento do vão

Perfil composto pelas secções RBF e OB35/40 ligadas por parafusos M8

APPLICATION

Attic roof

Section composed by sections RBF and OB35/40 connected by M8 bolts



RBF & UB120

APLICAÇÃO

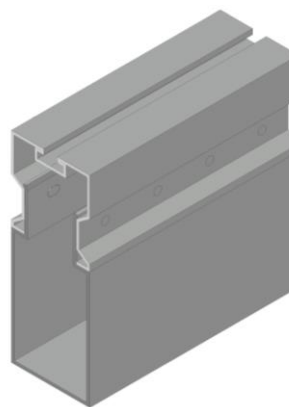
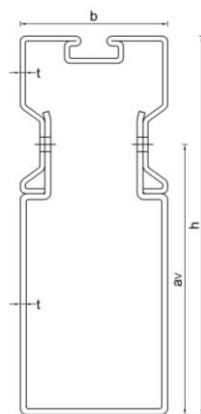
Estrutura de cobertura com aproveitamento do vão

Perfil composto pelas secções RBF e UB120 ligadas por parafusos M8

APPLICATION

Attic roof

Section composed by sections RBF and UB120 connected by M8 bolts



Seção Section	h (mm)	b (mm)	c (mm)	d (mm)	t _{nom} (mm)	Ø (mm)	av (mm)	P (kg/m)
RBF	64	60	10	40	2.0	9.0 // 50	20	3.58
RBF & OB35/40	66	60	--	65	2.0 / 1.5	9.0x13.0 // 50	22	5.24
RBF & UB120	154	60	--	--	2.0	9.0 // 50	110	8.54

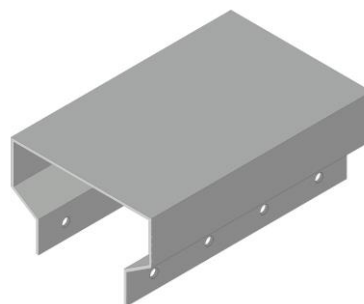
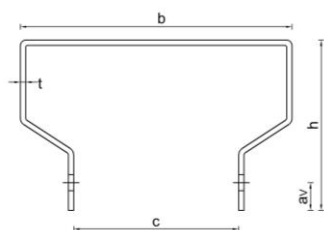
CP

APLICAÇÃO

Viga treliçada, estrutura de cobertura

APPLICATION

Truss beam, roof structure



UB40 · UB60

APLICAÇÃO

Diagonal de viga treliçada

Perfil UB40 com perfil RBF

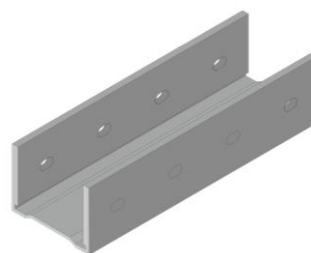
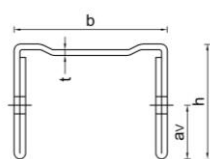
Perfil UB60 com perfil CP

APPLICATION

Diagonal of truss beam

Section UB40 with section RBF

Section UB60 with section CP



Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	Ø (mm)	av (mm)	P (kg/m)
CP	60	96	58	2.0	9.0 // 50	20	3.58
UB40	30	40	--	1.5	9.0x13.0 // 50	20	1.66
UB60	30	58	--	1.5	9.0x13.0 // 50	20	1.92



APLICAÇÃO

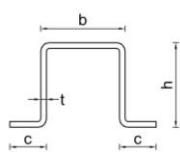
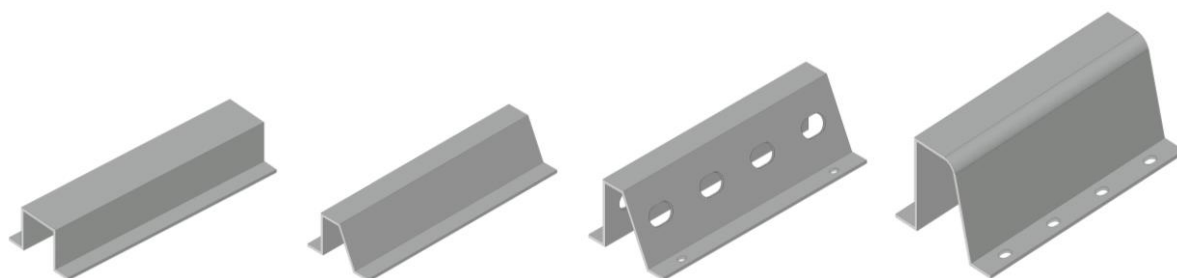
Perfis para suporte de telha cerâmica

- OB20/20, OB20/10 e OB30/10 como sub-ripa
- OB30/10 com furos nas almas para ventilação
- OB40/20 e OB60/20 como ripa

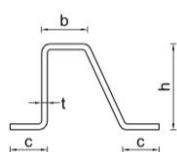
APPLICATION

Sections for the support of roof tile

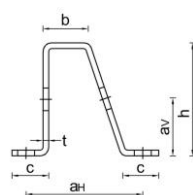
- OB20/20, OB20/10 and OB30/10 as sub-purlin
- OB30/10 with holes in the web for ventilation
- OB40/20 and OB60/20 as purlin



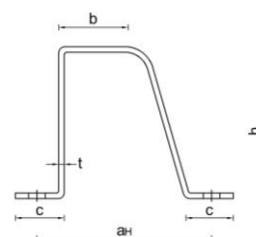
OB20/20



OB20/10



OB30/10



OB40/20 · OB60/20

Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	Ø (mm)	a _H (mm)	a _V (mm)	P (kg/m)
OB20/20x0.6	20	20	16	0.6	--	--	--	0.42
OB20/10x0.6	20	10	15	0.6	--	--	--	0.39
OB20/10x1.0				1.0				0.66
OB30/10x0.8	30	10	16	0.8	H: 6.0x10.0 // 300 V: 14.0x20.0 // 100	46	15	0.67
OB30/10x1.0				1.0				0.84
OB40/20x1.5	40	20	20	1.5	13.0x9.0 // 50	80	--	1.66
OB60/20x1.2	55			1.2				1.70



APLICAÇÃO

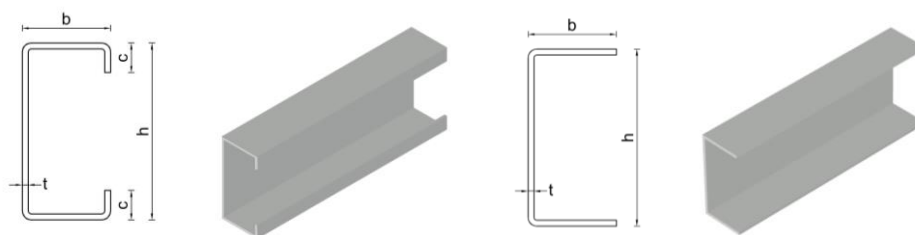
Estrutura de paredes, pisos e cobertura composta por perfis C (montantes) & U (canais)

Comprimento e furação de acordo com os requisitos

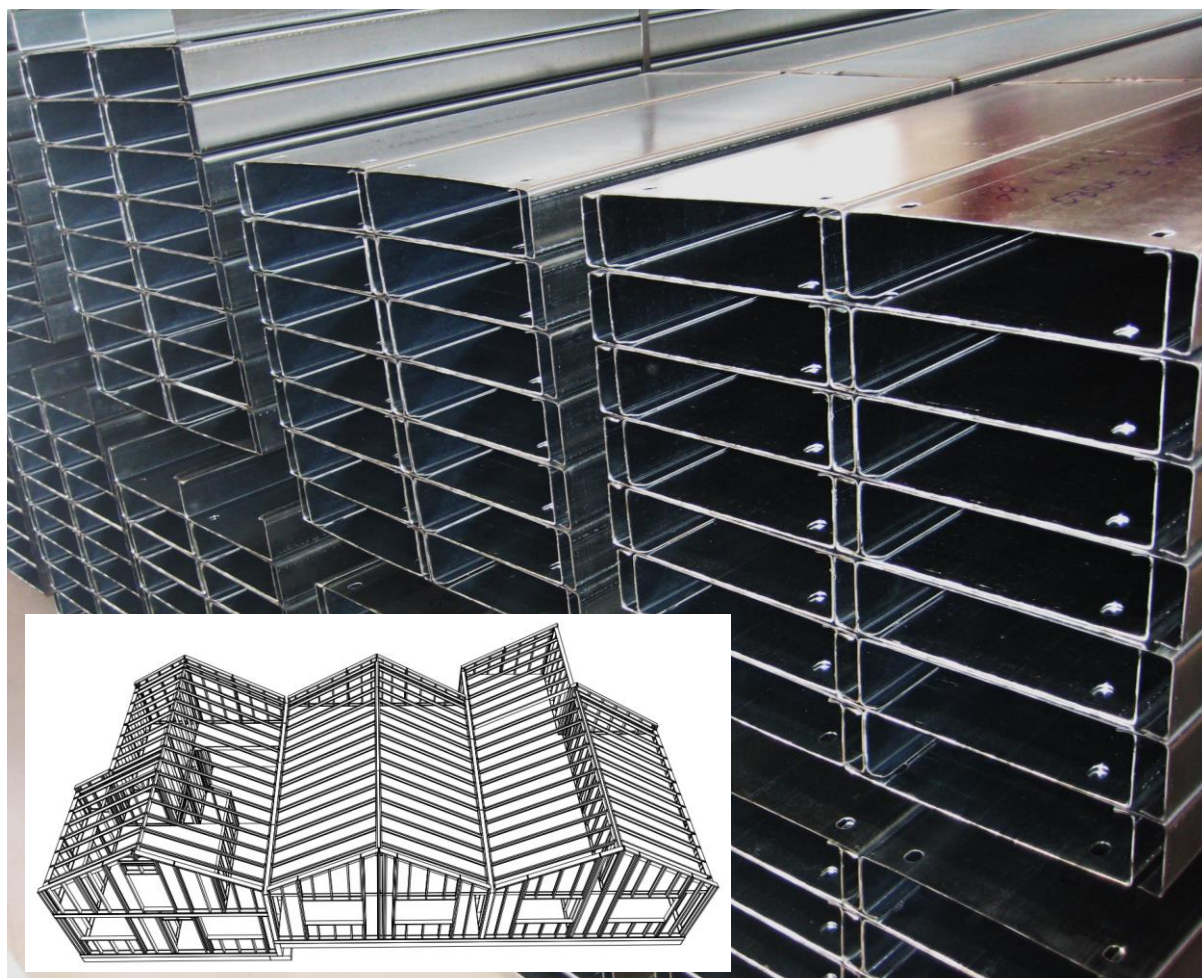
APPLICATION

Walls, floors and roofs structure composed by sections C (vertical) & U (channel)

Length and holes according to specifications



Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	P (kg/m)
C90/43/15x1.5	90	43	15	1.5	2.23
C150/43/15x1.5	150			1.5	3.00
C200/43/15x2.0	200			2.0	4.80
C250/43/15x2.5	250			2.5	6.90
U93/40x1.5	93	40	-	1.5	2.00
U153/40x1.5	153			1.5	2.72
U204/41x2.0	204	41		2.0	4.43
U255/43x2.5	255	43		2.5	6.60





ENERGIA
ENERGY

PERFIS PARA PAINÉIS FOTOVOLTAICOS SECTIONS FOR PHOTOVOLTAIC PANELS

APLICAÇÃO

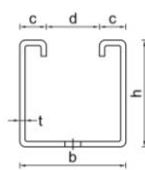
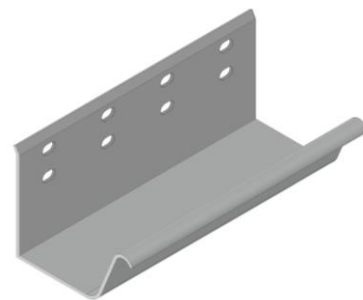
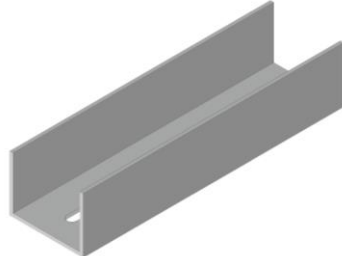
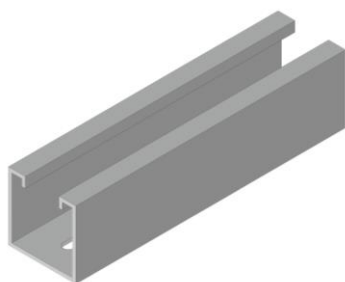
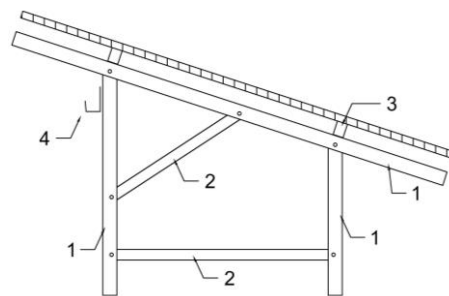
Estrutura de suporte para painéis fotovoltaicos definida pelos perfis: (1) RBF, (2) UB40, (3) UF40/40 e USF35/45 e (4) CF

- UF40/40 – banzo superior preparado para porca M10 com mola para fixar perfil intermédio de ligação aos painéis fotovoltaicos
- USF35/45 – perfil de ligação para garantir continuidade entre UF40/40
- CF – perfil para passagem de cabos

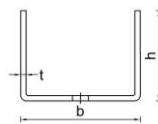
APPLICATION

Support structure for photovoltaic panels defined by sections: (1) RBF, (2) UB40, (3) UF40/40 and USF34/45 and (4) CF

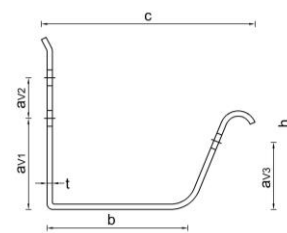
- UF40/40 – upper flange prepared for M10 nut with Spring to fix intermediate section of connection to photovoltaic panels
- USF35/45 – connection section between UF40/40 to guarantee continuity
- CF – section for cable running



UF40/40



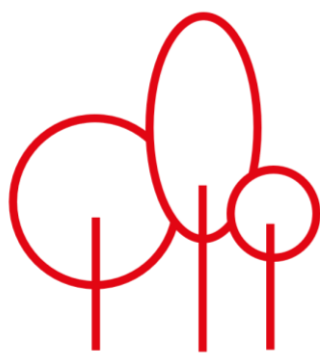
USF34/45



CF

Seção Section	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	Ø (mm)	a _{v1} (mm)	a _{v2} (mm)	a _{v3} (mm)	P (kg/m)
UF40/40	40	40	10	2.0	9.0x24.0 // 50	--	--	--	2.08
USF34/45	34	45	--	2.0	9.0x24.0 // 50	--	--	--	1.68
CF	70	52	86	1.2	9.0x13.0 // 50	35	20	30	1.70





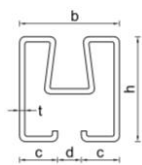
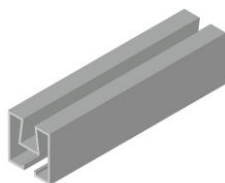
AGRICULTURA
AGRICULTURE

APLICAÇÃO

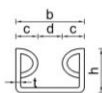
Perfis para clipar plástico: HE40/38, CE18/28, UE40/25
 Caleiro para escoamento de água

APPLICATION

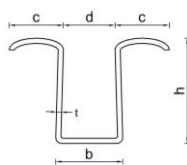
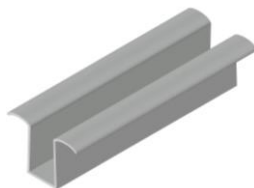
Sections to clip plastic: HE40/38, CE18/28, UE40/25
 Gutter for water drainage



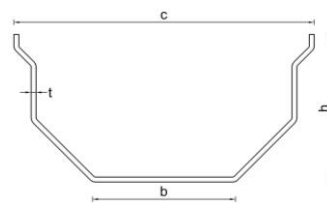
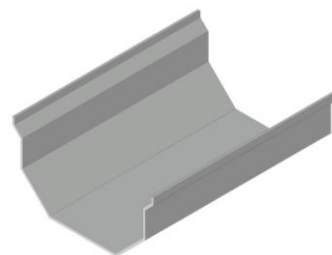
HE40/38



CE18/28



UE40/25



CALEIRO · GUTTER

Seção Section	h (mm)	b (mm)	c (mm)	d (mm)	t _{nom} (mm)	P (kg/m)
HE40/38	147	142	295	--	2.0	7.92
CE18/28	40	38	14	10	1.2	1.70
UE40/25	18	28	9	10	1.2	0.84
CALEIRO · GUTTER	40	25	20	21	1.5	1.56



ESTACA · STAKE

APLICAÇÃO

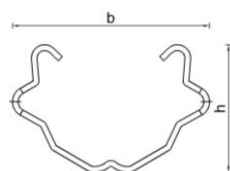
Estaca para diferentes culturas agrícolas

Furos tipo Z nas almas com 100 mm de afastamento, 50 mm da extremidade, para fixação de arame

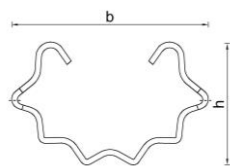
APPLICATION

Stake for different agriculture cultures

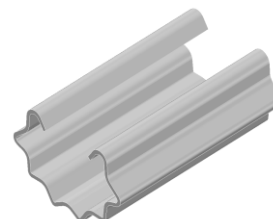
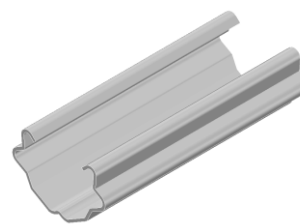
Z type holes in the webs with 100 mm spacing, 50 mm from the edge, for wire support



ESTACA A STAKE A



ESTACA B STAKE B



CABECEIRA · HEADSTAKE

APLICAÇÃO

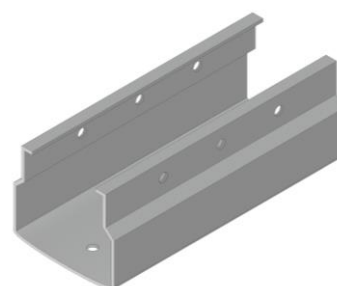
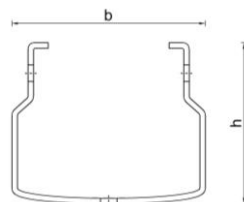
Estaca de cabeceira para diferentes culturas agrícolas

Furos redondo 8 mm na alma com 100 mm de afastamento para fixação de arame

APPLICATION

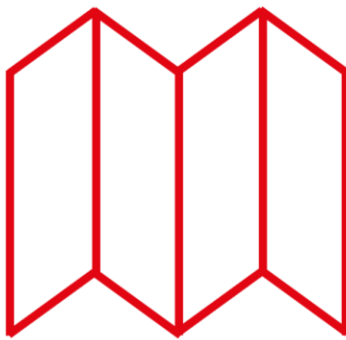
Headstake for different agriculture cultures

Circular hole with 8 mm in the web with 100 mm spacing for wire support



Seção Section	h (mm)	b (mm)	t _{nom} (mm)	P (kg/m)	Esquema de Furação Hole Scheme		L (m)	f (mm)	g (mm)	n (un)	Ø (mm)	a (mm)
ESTACA STAKE	34	52	1.2	1.04		Lateral Side	1.50	50	0.70	8	Z16.0	100
			1.5	1.30			1.80					
			1.8	1.56			2.00					
							2.20		1.10	12		
CABECEIRA HEADSTAKE	50	42	2.0	2.08		Base Bottom	2.20	50	1.32	12	8.0	120
							2.40					
						Lateral Side	2.60	100	1.32	12		120





PORTÕES
GATES

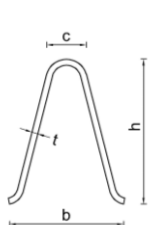
PERFIL PORTÃO DE CORRER · SECTION FOR SLIDING GATE

APLICAÇÃO

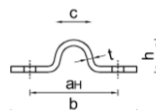
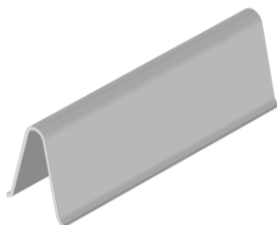
Perfil guia para portão de correr

APPLICATION

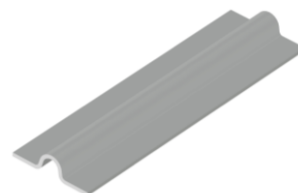
Rail section for sliding gate



GUIA DE CHUMBAR · CEMENT FIXING RAIL



GUIA DE APARAFUSAR · SURFACE FIXING RAIL



Seção Section	Roda Wheel	h (mm)	b (mm)	c (mm)	t _{nom} (mm)	a _H (mm)	Ø (mm)	P (kg/m)
GUIA DE CHUMBAR CEMENT FIXING RAIL	Ø16 mm	60	48	16	2.5	--	--	2.48
	Ø20mm	56	48	20	2.5	--	--	2.48
GUIA DE APARAFUSAR SURFACE FIXING RAIL	Ø16 mm	14	54	16	2.5	38	9.0 // 500	1.24

PORTÕES DE FOLE · FOLDING GATES

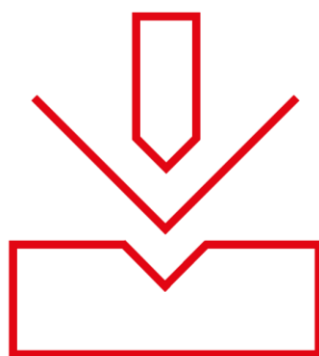
APLICAÇÃO

Portão de segurança para edifícios industriais ou residenciais
Portão em chapa de aço galvanizada ou plastificada com guias superior e inferior e fechadura de linguete com gancho

APPLICATION

Security gate for industrial or residential buildings
Galvanized or plastic-coated steel sheet gate with upper and lower rails and bolt lock hook





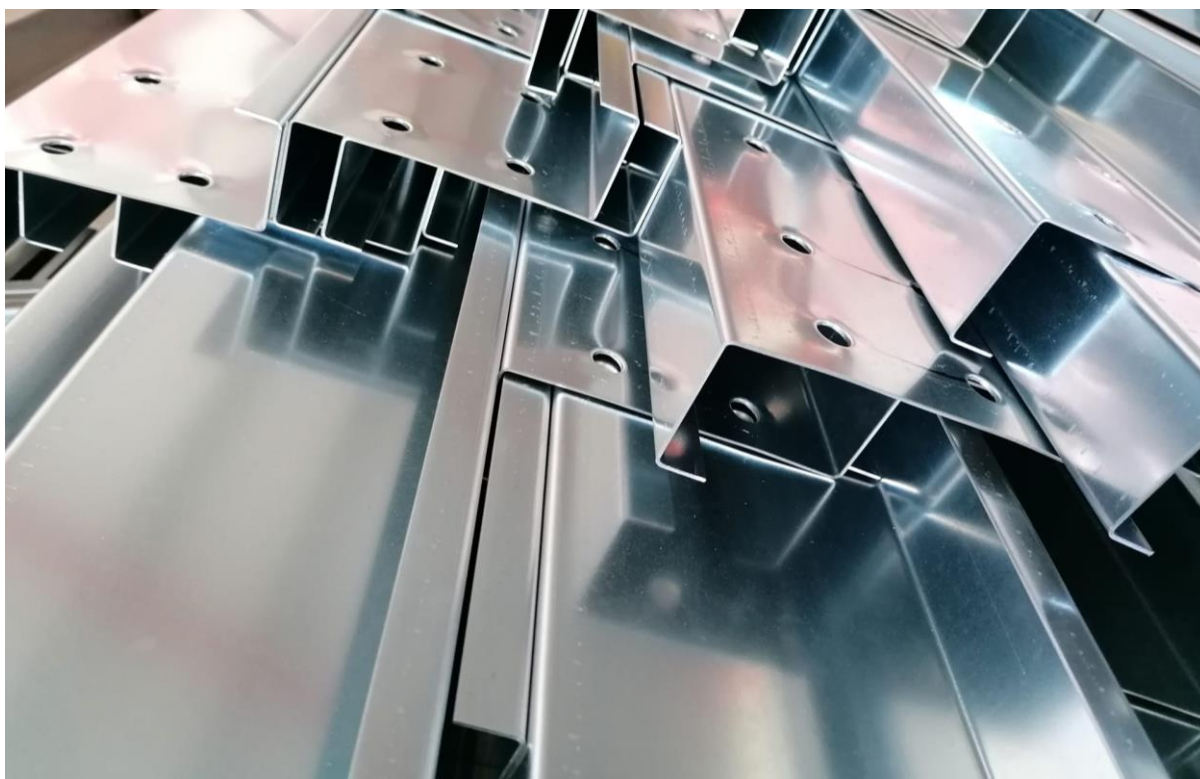
CORTE E QUINAGEM
CUTTING AND PRESS BRAKING

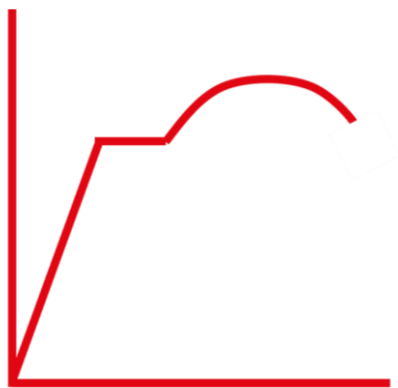
APLICAÇÃO

Perfis personalizados em chapa de aço até 12 m de comprimento
Comprimento e furação de acordo com os requisitos

APPLICATION

Custom-made steel sections until 12 m of length
Length and holes according to specifications





PROPRIEDADES DOS MATERIAIS MATERIAL PROPERTIES

AÇO GALVANIZADO · GALVANIZED STEEL

EN 10346

Aço ao carbono de qualidade estrutural com revestimento de zinco por imersão contínua a quente
Continuous hot dip zinc coated carbon steel sheet of structural quality

Classe de Aço Steel Grade	Tensão de cedência Basic yield strength	Tensão de rotura Tensile strength	Revestimento Coating	Espessura · Thickness (μm)	
	f_{yb} (MPa)	f_u (MPa)		Valor típico Typical Value	Intervalo Range
S220GD+Z	220	300	Z200	14	10 – 20
S280GD+Z	280	360	Z275	20	13 – 27
S320GD+Z	320	390	ZM310	24	18 – 31
S350GD+Z	350	420	Z – Zinco, ZM – Zinco-Magnésio		

AÇO INOXIDÁVEL · STAINLESS STEEL

EN 10088

Aço inoxidável austenítico
Austenitic stainless steel

Classe de Aço Steel Grade	Tensão de cedência Basic yield strength	Tensão de rotura Tensile strength
	f_{yb} (MPa)	f_u (MPa)
304 2B (1.4301)	230	540
316 2B (1.4401)	240	530





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