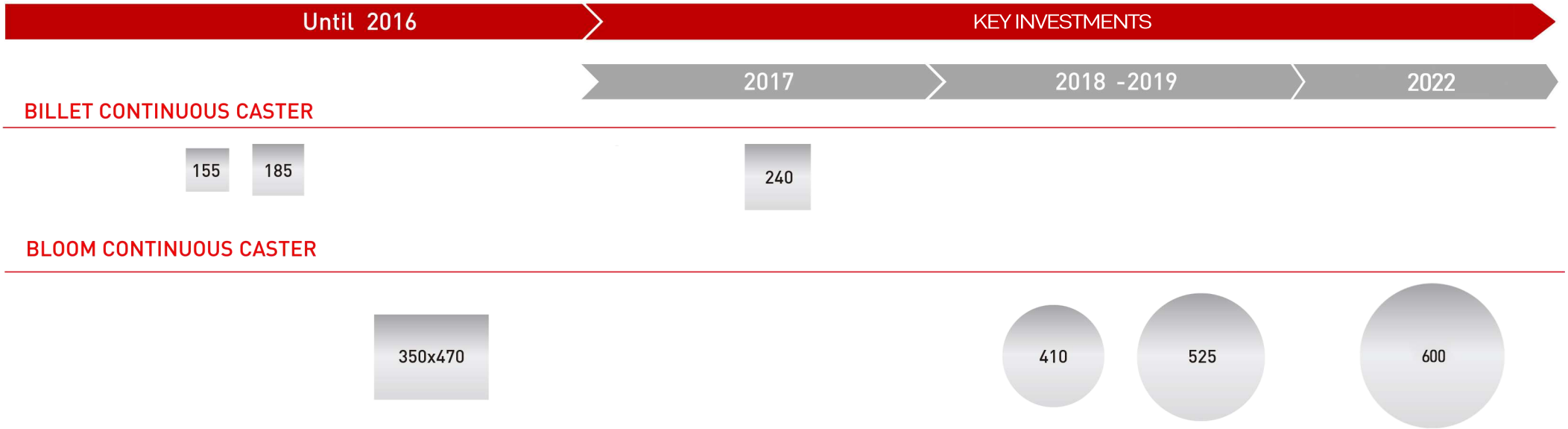
Semi Finished Products

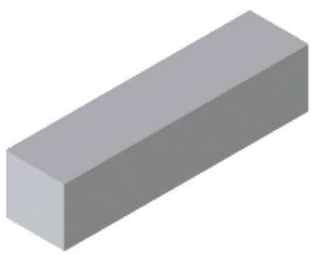
sidenor

Investments in the Continuous Casters

"In the spirit of continuous improvement of its processes, facilities and product portfolio, Sidenor decided to invest in the Continuous Casters. The new formats will allow the company to reach new market shares and offer new products and specific solutions for individual customers"

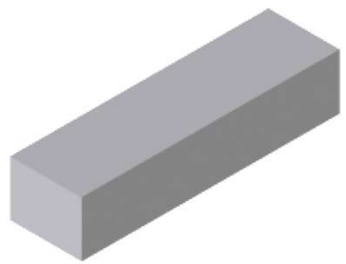


CC Square Section



Dimensional Size (mm)	Weight (Kg/m)	Length (m)
240 x 240	451	4-11,4
185 x 185	267	4-11,4
155 x 155	187	5-11,4

CC Rectangular Section



Dimensional Size (mm)	Weight (Kg/m)	Length (m)
350 x 470	1.290	2-9,5

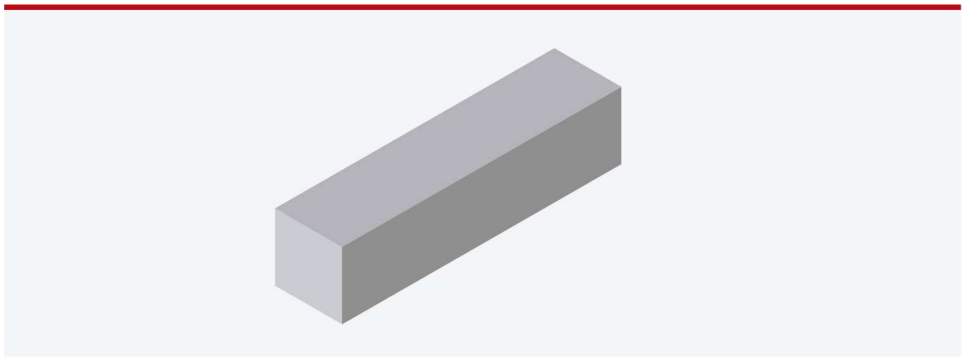
CC Round Section

Dimensional Size (mm)	Weight (Kg/m)	Max. Length (m)
Φ 410	1.036	9,7
Φ 525	1.699	7,7
Φ 600	2.218	6

Ingots

Ingot Type	Length (Kg)
Square	2.500 - 3.000
Poligonal	4.000 - 65.000

CC Square Section



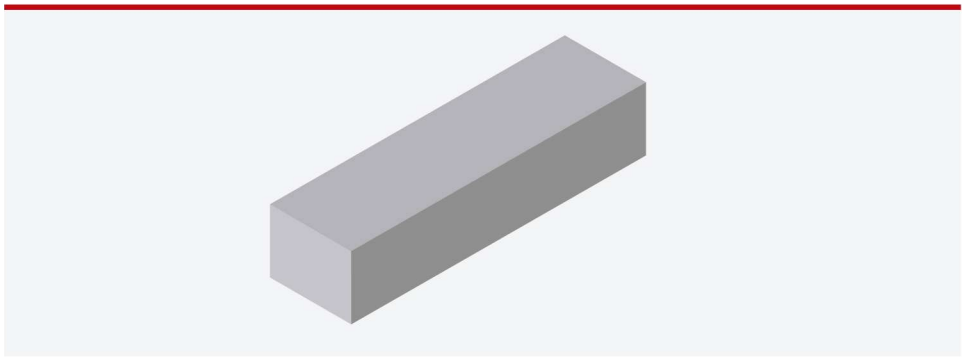
Dimensional Size (mm)	Weight (Kg/m)	Length (m)
240 x 240	451	4-11,4
185 x 185	267	4-11,4
155 x 155	187	5-11,4

CC Square Section 240 mm

Size and Shape tolerances

Dimensional Size (mm)	± 2 mm.
Out of Squareness/Romboidicity	< 4%
Corner Radius	6 mm. approximately
Concavity or Convexity	<1,5 % from the side
Maximum Twist	4º/m. 12º in the whole Length
Straightness	5 mm./m
Length Tolerance	± 50 mm.

CC Rectangular Section



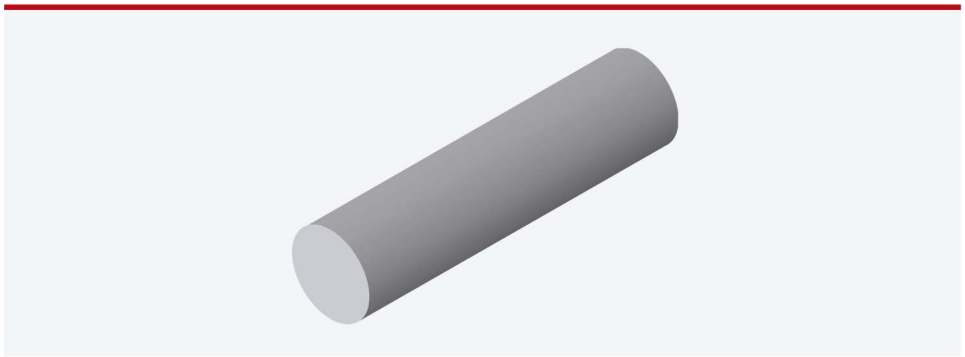
Dimensional Size (mm)	Weight (Kg/m)	Length (m)
350 x 470	1.290	2 - 9,5

Bloom 350 x 470 mm

Size and Shape tolerances

Dimensional Size (mm)	± 1 mm.
Out of Squareness/Romboidicity	< =1,5%
Corner Radius	8 mm approximately
Concavity or Convexity	<1,0 % from the side
Maximum Twist	4º/metro. 12º in the whole Length
Straightness	<=4 mm/m
Length Tolerance	± 50 mm.

CC Round Section

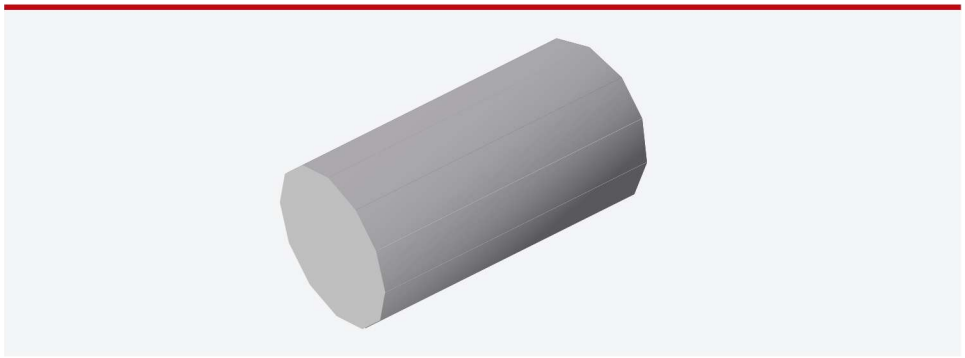


CC Round Section 410 mm

Dimensional Size (mm)	Weight (Kg/m)	Max. Length (m).
Φ 410	1.036	9,7
Φ 525	1.699	7,7
Φ 600	2 .218	6

Size and dimensional tolerances

$T_D = Φ - Φ_{Nominal}$	0- / + 10mm
Roundness/Ovality	⩽ 2%
Straightness	3,5 mm/m
Planicity	Φ 410mm ⩽ 70mm
	Φ 525mm ⩽ 90mm
	Φ 600 mm ⩽ 100mm
Length Tolerance	-0/+50 mm

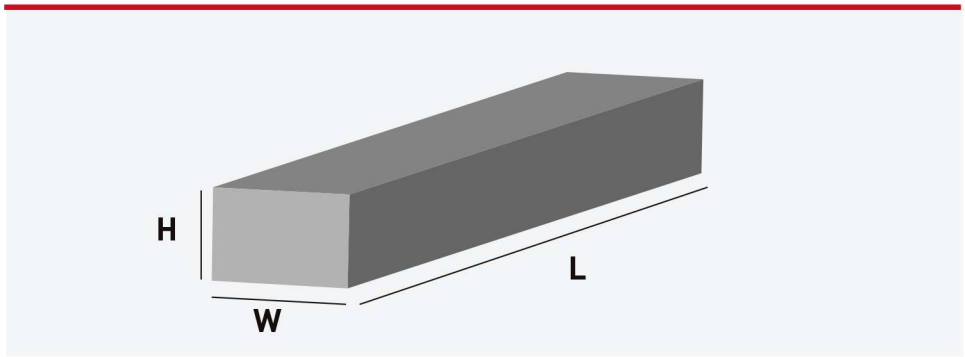


Poligonal Ingots

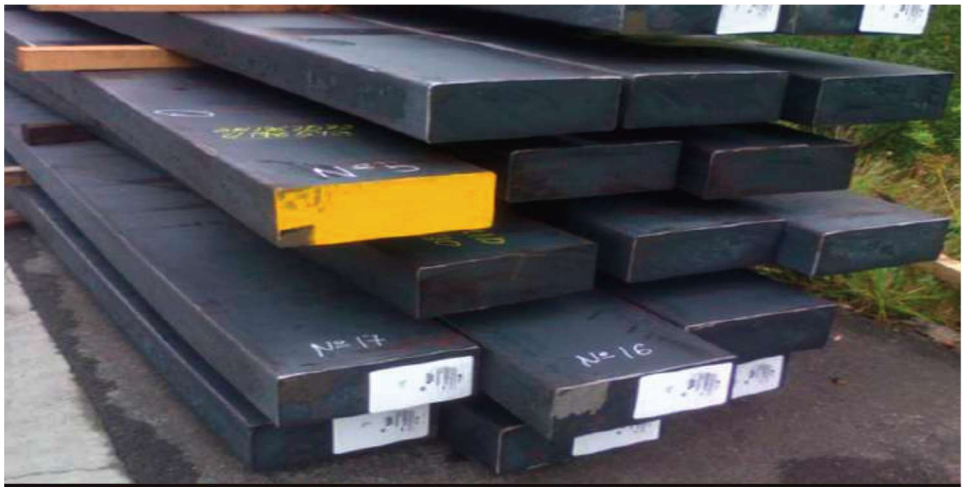
Ingot (Weight and Shape)

Ingot tipe (Weight /Tn)	Shape
L-2,5	Square
L-2,7	Square
L-3	Square
BKT 4/5,5	Poligonal
BKT 7/10	Poligonal
BKT 11/15	Poligonal
BKT 17/23	Poligonal
CKT 24/30	Poligonal
CKT 31/40	Poligonal
CKT 41/53	Poligonal
CKT 54/65	Poligonal

Roughed Billet / Flat Bars



Height (H)	Widht (W)	Length (m)
80 – 320 mm	115 – 500 mm	up to 14.000 mm


Flat Bars

Size and dimensional tolerances

Size Tolerance	+ 3 (H) /+ 4 (W) mm
US Manual Control	Class 4 / 3 / 2 (Depending on the Reduction Ratio)
Round Corner **(According to height ±1mm)**	Approx 20 mm (Depending on the final size)
Straightness	<=4 mm/m
Length Tolerance	+100 mm.

Chemical Analysis

Steel	Werkstoff-Nr.	C	Mn	Si	P	S	Cr	Ni	Mo	V	Al
18CrNiMo7-6	6587	0,14 0,19	0,4 0,6	0,15 0,4	- 0,035	- 0,035	1,5 1,8	1,4 1,7	0,25 0,35		
42CrMo4	7225	0,38 0,45	0,5 0,8	0,4	0,035	0,035	0,9 1,2	0,6	0,15 0,3		
A350 LF2/S355	565	0,2	0,9 1,65	0,1 0,5	0,035	0,03	0,45	0,85	0,45	0,1	0,02
C50	540	0,47 0,55	0,6 0,9	0,4	0,045	0,045	0,4	0,4	0,1		
25CrMo4	7218	0,22 0,29	0,6 0,9	0,4	0,035	0,03	0,9 1,2		0,15 0,3		
34CrNiMo6	6582	0,3 0,38	0,5 0,8	0,4	0,035	0,035	1,3 1,7	1,3 1,7	0,15 0,3		
ASTM A-182 F5	7362	0,06 0,15	0,3 0,6	0,3 0,5	0,03	0,03	4 6		0,45 0,65		
ASTM A-182 F9	7386	0,07 0,15	0,3 0,6	0,25 1	0,025	0,02	8 10		0,9 1,1		
ASTM A-182 F91	4903	0,08 0,12	0,3 0,6	0,2 0,5	0,02	0,01	8 9,5	0,4	0,85 1,05	0,18 0,25	0,04
ASTM A-182 F11	7380	0,08 0,15	0,4 0,7	0,4	0,035	0,03	2 2,5	0,5	0,9 1,1		
ASTM A-182 F22	7335	0,1 0,18	0,4 0,7	0,4	0,035	0,03	0,8 1,15		0,4 0,8		

Applications

Renewable Energy

Railway Systems

Oil&Gas

The success resulting from implementing and maintaining quality management system designed to continually improve the effectiveness and efficiency of organizational performance, is supported by the official certifications and approvals ISO TS 16949, ISO 9001,PECAL AQAP/2120...

AENOR

IATF 16949 Certificate

RA02-0071/2003-01
IATF: 0314787

AENOR certifies that the organization

SIDENOR ACEROS ESPECIALES S.L.U
BASAURI

has a quality management system according to the IATF 16949:2016 standard

at the following site of production: Planta de Basauri BO UGARTE S/N 48970 - BASAURI (BIZKAIA)

for the following activities: Production of special steels in rolled and peeled bars

Exclusion: Product design

Last issued: 2018-07-09
Validity date: 2021-07-08

Rafael GARCÍA MEIRO
Chief Executive Officer

IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and
AENOR
hereby certify that the organization

SIDENOR ACEROS ESPECIALES S.L.U
(BASAURI)

BO UGARTE S/N
48970 - BASAURI
(BIZKAIA)

for the following field of activities

Production of special steels in rolled and peeled bars.

has implemented and maintains a

Quality Management System

which fulfils the requirements of the following standard

ISO 9001:2015

First issued on: 1999-08-01 Last issued: 2018-07-09 Validity date: 2021-07-09

Registration Number: ES-0039/1994

IQNet

AENOR

Michael Drechsel
President of IQNet

Rafael GARCÍA MEIRO
Chief Executive Officer

IQNet Partners*:

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

Thank you very much

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