



QUALITY EXPERIENCE TRUST IN
P R O D U C T I O N



**İÇDAŞ IS AMONG THE
TOP EXPORTING
COMPANIES IN OUR
COUNTRY AND HAS
BEEN PRODUCING STEEL
SINCE 1970.**

İÇDAŞ Biga Integrated Facilities include three steel mills with a capacity of four and a half million tons/year, four rolling plants with a capacity of four million tons/year, two shipyards, two ports, and various auxiliary facilities belonging to these units. In addition to steel production, İÇDAŞ companies operate in the fields of shipyard, ship management, port management, energy production, sea, land and rail transport, construction, insurance, mining, agriculture, and animal husbandry.

Our company includes Değirmencik Fluidized Bed Thermal Power Plants with an installed power of 405 MW (3x135MW), Bekirli Supercritical Thermal Power Plants with an installed power of 1200 MW (600MWx2), Biga Wind Power Plants with an installed power of 60 MW (19x3.2MW), Hydroelectric Power Plants with an installed power of 5.30 MW and Solar Energy Production Plants with an installed power of 6.86 MW.

Products such as steel billet, construction steel, plain and ribbed wire rod are produced in our steel facilities at international standards, while electric energy is produced in our power plants. While steel products are used in sectors such as construction, automotive, tire and machinery manufacturing, the electricity produced in thermal power plants is transmitted to legal customers via the interconnected electricity network.



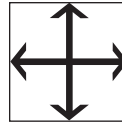
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billet, construction steel,
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produced in our steel
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STEEL BILLET

Steel billet; It is the starting point for rolling products such as structural steel, plain bar, profile and wire rod. They are square shaped, long and continuous casting semi-finished products with a cross section ranges between 130 mm and 200 mm. Production is also carried out by Vacuum and/or Closed Casting method according to customer needs and expectations.



200 mm

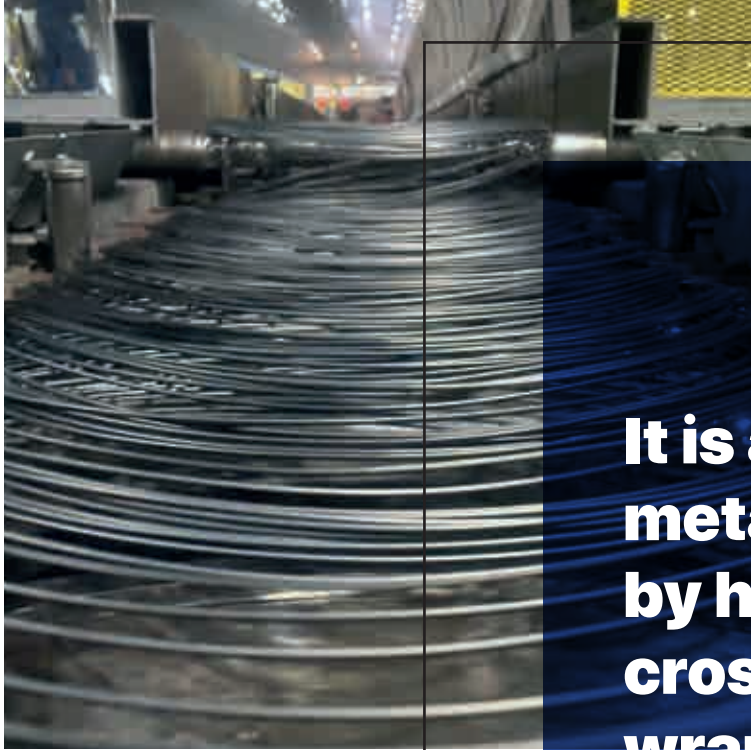


130 mm

CONSTRUCTION STEEL

It is a type of steel with protrusions (ribs) on its surface, used in reinforced concrete structure manufacturing, produced as an alternative to plain-surfaced construction steel and replaced it over time. Reinforcing Bars are produced in diameters of 6 - 50 mm and lengths of 6-18 meters. As a Deformed Bar in Coil (DBIC), it is produced in diameters of 6-25 mm and shipped in 2-3 kg.

- Reinforcing Bars: 6 – 50 mm
- Deformed Bar in Coil (DBIC):
 - Wild Coil: 6-20 mm
 - Compact Coil: 8-25 mm



It is a semi-product metal rod that is made by hot rolling, round cross-section and wrapped as a coil.





QUALIFIED WIRE ROD

It is a semi-product metal rod that is made by hot rolling, round cross-section and wrapped as a coil. In addition, it starts to be used by cold drawing. It is used in the production of welding electrodes, wires, bolts, springs, and similar products. Production diameters start from 4.5 mm and go up to 27 mm.

- Plain Surface Wire Rod: 4.5 - 27 mm

WIRE ROD COIL WEIGHT AND MEASUREMENTS;



Weight
2 - 3 tons



Height
1150 - 2050 mm



Inner Diameter
850 - 950 mm



Outer Diameter
1250 - 1400 mm





**The qualities of the steel
produced in our modern wire
rod facility equipped with the
latest technology;**

LOW-CARBON WIRE RODS

- Low amount of trace elements,
- Proper cold drawing at high speed and very good surface quality.
- Suitable for coating.

LOW-CARBON WIRE RODS FOR STICK ELECTRODES

- Low amount of trace elements,
- Low tensile strength and high reduction of area,
- Suitable for coating,
- Superior welding property,
- Superior drawability even at high speeds



WIRE RODS FOR CONTINUOUS ELECTRODE

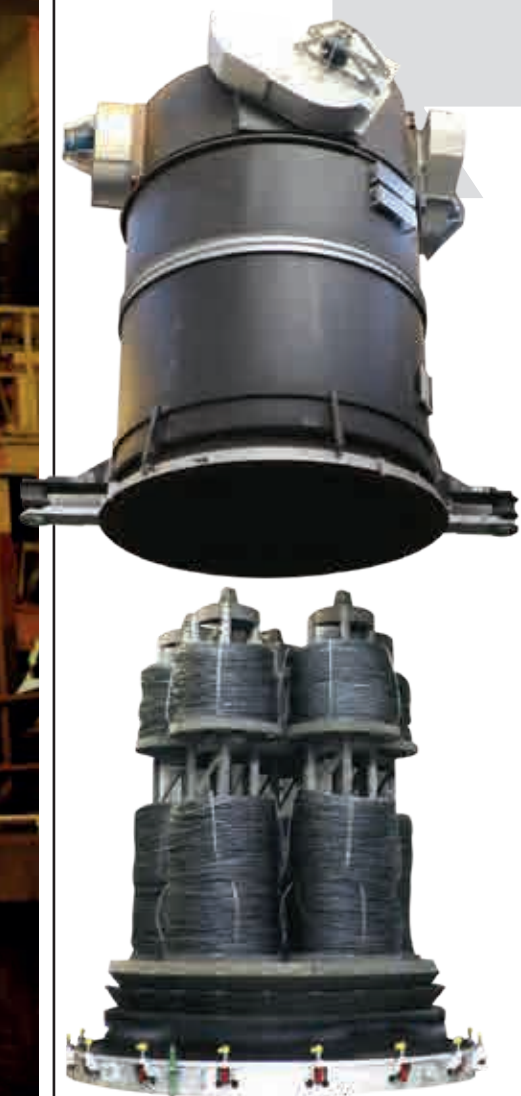
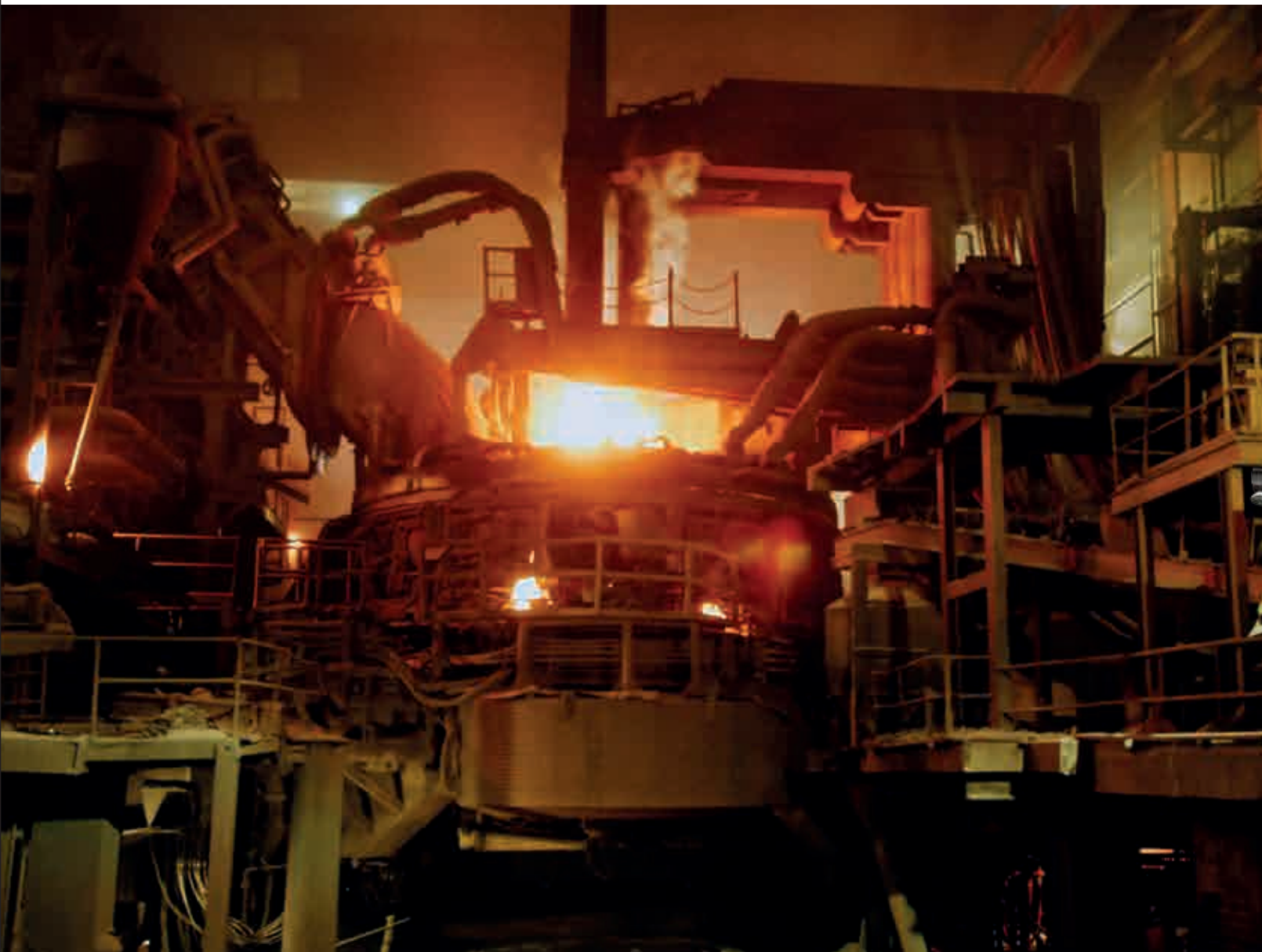
- Low amount of trace elements,
- Very good surface quality,
- Low amount of phosphorus and sulphur,
- High level of micro cleanliness,
- Very narrow range of chemical composition,
- Tensile Strength and Reduction of Area at proportionate level,
- Suitable for coating.

WIRE RODS FOR FASTENERS

- Very low amount of trace elements,
- Low amount of oxygen, phosphorus and sulphur,
- Very good surface quality,
- Very narrow range of chemical composition,
- Low decarb level,
- Homogenous austenite grain size,
- Very good cold upsetting ability,
- Proper mechanical properties and heat treatment for good processing,
- Suitable for coating.

HIGH CARBON WIRE RODS FOR SPRINGS, ROPE AND PC STEELS

- Very low amount of trace elements,
- Low amount of phosphorus and sulphur,
- Very good surface quality,
- Homogeneous chemical composition,
- Low decarb level
- High strength even in big diameters,
- Homogeneous mechanical properties,
- Superior drawability even at high speeds





WIRE RODS FOR FASTENERS

Our high quality products are used in the production of fasteners such as bolts, nuts, screws and rivets, in the construction of machinery and mechanical systems, as well as in the automotive industry and wind power plants.

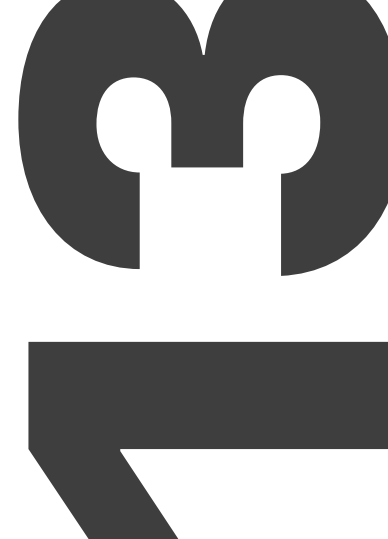
- UNALLOYED STEEL (C6C, C8C, 1018, 1022, etc.)
- BORON ALLOYED SPECIAL STEEL (20MnB4, 23MnB4, 27MnB4, 30MnB4, etc.)
- ALLOYED SPECIAL STEEL (37Cr4, 41Cr4, 32CrB4 etc.)





HIGH-QUALITY PRODUCTS WITH OUR HEAT TREATMENT FURNACE

Wire rods are also shipped with heat treatment depending on quality requirements and customer expectations. Heat treatments performed with an atmosphere-controlled bell-type furnace are generally softening annealing, spheroidization, normalization and specific structure annealing.







PRESTRESSED CONCRETE STRAND AND WIRE; IT IS A LOW RELAXATION, HIGH STRENGTH CONSTRUCTION STEEL.

PRESTRESSED CONCRETE STRAND AND WIRE (PC STRAND&WIRE)

PC Strand consists of a group of six wires helically twisted around a central wire in a single layer and uniformly. It is used in areas such as bridge/viaduct beams, reinforced concrete prefabricated building elements, concrete silo manufacturing and ground anchorage applications.

Strand Diameters: 3/8" (9,53 mm) – 0,7" (17,8 mm)

PC Wire is produced plain or indented and is packaged and delivered in bundles of bars cut to the same length or in coils. It is generally used in railway sleeper manufacturing (90%), ground stabilization piles and beams, and pipe systems.

Wire Diameters: 3 mm – 9,4 mm

TABLES



Ø 6 - 50 mm REINFORCING STEEL BARS

Ø 6 - 25 mm DEBAR IN COILS

COUNTRY	STANDARD	QUALITY
 TÜRKİYE	TS 708:2016	S220, S420, B420B, B420C, B500B, B500C
	TSE K 591:2019 ICDAS NTS 1	B600W
 ABD	ASTM A 615/A 615M:20 ASTM A706A/A706M:16	GR 40, GR 60, GR 75, GR 80 GR 60, GR 80
 GERMANY	DIN 488:2009	B500B
 AUSTRIA	AS/NZS 4671:2019	B500N, B500E
 BELGIUM	NBN A 24-301/302	B500B
 BRAZIL	ABNT NBR 7480:2008	CA-50
 BULGARIA	BDS 9252:2007 EN 10080:2005	B500B, B500C
 DENMARK	DS/INF 165:2011 EN 10080:2005	B500B, B500C, B550B
 FINLAND	SFS 1300:2020	B500B, B500C
 FRANCE	NF A35-080-1:2020	B500B
 HOLLAND	BRL 0501:2010 NEN 6008:2008+A1:2020	B500B
 HONG KONG	CS2:2012	B500B
 ENGLAND	BS 4482:2005 BS 4449:2005+A3:2016	GR 250 B500B, B500C
 SPAIN	UNE 36068:2011 UNE 36065:2011	B500S B500SD
 ISRAEL	SI 4466 Part-3:2013 Amendment-2:2015	S400W, S500W-C

 SWEDEN	SS212540:2014 EN 10080:2005	K500B-T, K500B-TR K500C-T, K500C-TR
 ITALY	D.M. 17.01.2018	B450C
 JAPAN	JIS G 3112:2020	SD295, SD390, SD490
 CANADA	CSA G30.18	GR 400W, GR 500W
 COLOMBIA	NTC 2289: 2015	GR 60
 COSTA RICA	ASTM A 615/A 615M:20 ASTM A706A/A706M:16	GR 40, GR 60 GR 60
 LATVIA	LVS 191-1:2012	B500B, B500C
 HUNGARY	DIN 488-1:2009 MSZ/T 339:2012.03	B500B
 MALAYSIA	MS 146:2014	B500B
 NORWAY	NS3576-2:2012 NS3576-3:2012	B500NB B500NC
 PERU	NTP 341.031:2018	GR 60
 ROMANIA	SR-438-1:2012 ST 009-2011	PC 52, OB 37 B500C
 RUSSIA	GOST R 52544:2006	A500C
 SINGAPORE	SS 560:2016	B500B, B600B
 CHILE	Nch 204:2020	A440-280H, A630-420H
 SWITZERLAND	SIA 262 2013 (SN 505 262) EN 10080:2005	B500B
 SERBIA	SRPS EN 10080	B500B, B500C

WIRE ROD DRAWING STEELS Diameter: 4,5 - 27 mm

ISO 16120-2	ISO 16120-4	SAE J403		C	Si	Mn	P	S	Cu	Cr	Ni	Mo	Al
C4D (1.0300)	C3D2 (1.1110)	SAE 1005	min max	0,06	0,30	0,30 0,60	0,020	0,020	0,30	0,20	0,25	0,05	0,010
C7D (1.0313)	C5D2 (1.1111)	SAE 1006	min max	0,05 0,08	0,30	0,30 0,60	0,030	0,020	0,30	0,20	0,25	0,05	0,010
C9D (1.0304)	C8D2 (1.1113)	SAE 1008	min max	0,10	0,30	0,30 0,60	0,025	0,025	0,30	0,20	0,25	0,05	0,010
C10D (1.0310)	C10D2 (1.1114)	SAE 1010	min max	0,08 0,13	0,30	0,30 0,60	0,025	0,025	0,30	0,20	0,25	0,05	0,010
C12D (1.0311)	C12D2 (1.1124)	SAE 1012	min max	0,10 0,15	0,30	0,30 0,60	0,025	0,025	0,30	0,20	0,25	0,05	0,010
C15D (1.0413)	C15D2 (1.1126)	SAE 1015	min max	0,12 0,17	0,30	0,30 0,60	0,025	0,025	0,30	0,20	0,25	0,05	0,010
C18D (1.0416)	C18D2 (1.1129)	SAE 1017	min max	0,15 0,20	0,30	0,30 0,60	0,025	0,025	0,30	0,20	0,25	0,05	0,010
C20D (1.0414)	C20D2 (1.1137)	SAE 1020	min max	0,15 0,23	0,30	0,30 0,60	0,025	0,025	0,30	0,20	0,25	0,05	0,010

WIRE ROD HIGH CARBON STEELS (SPRING, ROPE, PRESTRESSING STEELS) Diameter: 4,5 - 16 mm

ISO 16120-2	DIN 17140-1	ISO 16120-4	SAE J403		C	Si	Mn	P	S	Cu	Cr	Ni	Mo	Al
	D45-2 (1.0517)	C46D2 (1.1162)	SAE 1045	min max	0,44 0,48	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C48D (1.0517)		C48D2 (1.1164)	SAE 1049	min max	0,46 0,50	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C50D (1.0586)	D50-2 (1.0586)	C50D2 (1.1171)	SAE 1050	min max	0,48 0,52	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C52D (1.0588)	D53-2 (1.0588)	C52D2 (1.1202)	SAE 1053	min max	0,50 0,54	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C56D (1.0518)	D55-2 (1.0518)	C56D2 (1.1220)	SAE 1055	min max	0,54 0,58	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C58D (1.0609)	D58-2 (1.0609)	C58D2 (1.1212)	SAE 1059	min max	0,56 0,60	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C60D (1.0610)	D60-2 (1.0610)	C60D2 (1.1228)	SAE 1060	min max	0,58 0,62	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C62D (1.0611)	D63-2 (1.0611)	C62D2 (1.1222)	SAE 1064	min max	0,60 0,64	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C66D (1.0612)	D65-2 (1.0612)	C66D2 (1.1236)	SAE 1065	min max	0,64 0,68	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C70D (1.0615)	D70-2 (1.0615)	C70D2 (1.1251)	SAE 1070	min max	0,68 0,72	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C76D (1.0614)	D75-2 (1.0614)	C76D2 (1.1253)	SAE 1075	min max	0,74 0,78	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C80D (1.0622)	D80-2 (1.0622)	C80D2 (1.1255)	SAE 1080	min max	0,78 0,82	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010
C82D (1.0626)	D83-2	C82D2* (1.1262)	SAE 1084	min max	0,80 0,84	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,30	0,10	0,03	0,010
C92D (1.0618)	D95-2 (1.0618)	C92D2 (1.1282)	SAE 1090	min max	0,90 0,94	0,10 0,30	0,50 0,70	0,020	0,025	0,15	0,10	0,10	0,03	0,010

* Depending of the customer request, Cr and V can be added for PC Wire&Strand.



WIRE ROD COLD HEADING AND COLD EXTRUSION STEELS Diameter: 4,5 - 27 mm

	EN10263-2/3	EN10263-4	SAE J403/404	C	Si	Mn	P	S	Cu	Cr	Mo	Ni	Al	B	Ti
Non Alloy Steels	C4C (1.0303)		SAE 1005	min max	0,02- 0,06	0,25 0,40	0,020	0,025	0,15				0,020 0,050		
	C6C		SAE 1006	min max	0,04 0,08	0,25 0,45	0,020	0,025	0,15				0,020 0,050		
	C8C (1.0213)		SAE 1008	min max	0,06 0,10	0,25 0,45	0,020	0,025	0,15				0,020 0,050		
	C10C (1.0214)		SAE 1010	min max	0,08 0,12	0,30 0,50	0,025	0,025	0,15				0,020 0,050		
	C15C (1.0234)		SAE 1015	min max	0,13 0,17	0,35 0,60	0,025	0,025	0,15				0,020 0,050		
	C17C (1.0434)		SAE 1018	min max	0,15 0,19	0,65 0,85	0,025	0,025	0,15				0,020 0,050		
	C20C (1.0411)		SAE 1021	min max	0,18 0,22	0,70 0,90	0,025	0,025	0,15				0,020 0,050		
Boron Steels	15B2 (1.5501)		SAE 10B16	min max	0,13 0,16	0,60 0,80	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	17B2 (1.5502)		SAE 10B18	min max	0,15 0,20	0,60 0,90	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	17MnB3 (1.5506)		SAE 10B18	min max	0,15 0,20	0,70 1,00	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	20MnB4 (1.5525)		SAE 10B21	min max	0,18 0,23	0,90 1,20	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	23MnB4 (1.5535)		SAE 10B22	min max	0,20 0,25	0,90 1,20	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	27MnB4 (1.5536)		SAE 10B26	min max	0,25 0,30	0,90 1,20	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	30MnB4 (1.5526)		SAE 10B30	min max	0,27 0,32	0,80 1,10	0,025	0,025	0,25	0,30			0,020 0,050	0,0008 0,0050	0,060
	32CrB4 (1.7076)			min max	0,30 0,34	0,60 0,90	0,025	0,025	0,25	0,90 1,20			0,020 0,050	0,0008 0,0050	0,060
	36CrB4 (1.7077)			min max	0,34 0,38	0,70 1,00	0,025	0,025	0,25	0,90 1,20			0,020 0,050	0,0008 0,0050	0,060
	34Cr4 (1.7033)	SAE 5132		min max	0,30 0,37	0,60 0,90	0,025	0,025	0,25	0,90 1,20			0,020 0,050		
	37Cr4 (1.7034)	SAE 5135		min max	0,34 0,41	0,60 0,90	0,025	0,025	0,25	0,90 1,20			0,020 0,050		
	41Cr4 (1.7035)	SAE 5140		min max	0,38 0,45	0,60 0,90	0,025	0,025	0,25	0,90 1,20			0,020 0,050		
Low Alloy Steels	42CrMo4 (1.7225)	SAE 4140		min max	0,38 0,45	0,60 0,90	0,025	0,025	0,25	0,90 1,20	0,15 0,30		0,020 0,050		
	20NiCrMo2-2 (1.6523)	SAE 8620		min max	0,17 0,23	0,65 0,95	0,025	0,025	0,25	0,35 0,70	0,15 0,25	0,40 0,70	0,020 0,050		

WELDING STEELS Diameter: 4,5 - 8 mm

Standards						C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Sn	Al
MIG/MAG	DIN 8559-1	ISO 14341	DIN 17145	AWS 5.18												
	SG1	G2Si	10MnSi5 (1.5112)	ER70S-3	min max	0,06 0,09	0,50 0,70	1,00 1,30	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,005
	SG2	G3Si1	11MnSi6 (1.5125)	ER70S-6	min max	0,06 0,09	0,80 0,90	1,40 1,55	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,005
	SG3	G4Si1	10MnSi7 (1.5130)	ER70S-6	min max	0,06 0,09	0,80 1,00	1,60 1,75	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,005
	DIN 8575	ISO 21952	DIN 17145	AWS 5.28												
Submerged Arc Welding	SGMo	MoSi	10MnMo45 (1.5424)	ER80S-G	min max	0,08 0,12	0,55 0,75	0,95 1,25	0,015	0,015	0,10	0,45 0,60	0,10	0,15	0,010	0,005
	DIN 8557-1	ISO 14171	DIN 17145	AWS 5.17/5.23												
	S1	S1	RRSD10 (1.0351)	EL12	min max	0,06 0,09	0,05	0,40 0,60	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,010
	S2	S2	11Mn4 (1.0494)	EM12	min max	0,07 0,10	0,10	0,80 1,20	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,010
	S3	S3	12Mn6 (1.0496)		min max	0,08 0,14	0,08 0,22	1,35 1,65	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,010
	S2Si	S2Si	11Mn4Si (1.0492)	EM12K	min max	0,08 0,14	0,18 0,37	0,83 1,15	0,015	0,015	0,10	0,03	0,10	0,15	0,010	0,010
	S2Mo	S2Mo	11MnMo45 (1.5425)	EA2	min max	0,07 0,15	0,05 0,15	0,80 0,90	0,015	0,015	0,10	0,45 0,60	0,10	0,15	0,010	0,010
Electrode	DIN 8554-1	EN 12536	DIN 17145	AWS 5.17												
	G1	O1	RSD7 (1.0324)	EL12	min max	0,05 0,09	0,05 0,17	0,38 0,62	0,015	0,015	0,10	0,03	0,10	0,15	0,015	0,010

TRANSMISSION STEELS Diameter: 4,5 - 27 mm

Standarts			C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Al
Carbon Steels	ISO 683-1	SAE J403											
	C22 (1.0402)	SAE 1023	min	0,17	0,40								0,020
			max	0,24	0,40	0,025	0,025	0,25	0,10	0,25	0,25		0,050
	C25 (1.0406)	SAE 1025	min	0,22	0,40								0,020
			max	0,29	0,40	0,025	0,025	0,25	0,10	0,25	0,25		0,050
	C30 (1.0528)	SAE 1030	min	0,27	0,50								0,020
			max	0,34	0,40	0,025	0,025	0,25	0,10	0,25	0,25		0,050
	C35 (1.0501)	SAE 1035	min	0,32	0,50								0,020
Case Hardening Steels			max	0,39	0,40	0,025	0,025	0,25	0,10	0,25	0,25		0,050
	C40 (1.0511)	SAE 1040	min	0,37	0,50								0,020
			max	0,44	0,40	0,025	0,025	0,25	0,10	0,25	0,25		0,050
	C45 (1.0503)	SAE 1045	min	0,42	0,50								0,020
			max	0,50	0,40	0,025	0,025	0,25	0,10	0,25	0,25		0,050
	ISO 683-3	SAE J404											
	16MnCr5 (1.7131)	SAE 5115	min	0,14	1,00			0,80					0,020
			max	0,19	1,30	0,025	0,025	1,10	0,05	0,25	0,25		0,050
Quench and Tempered Steels			min	0,17	1,10			1,00					0,020
			max	0,22	1,40	0,025	0,025	1,30	0,05	0,25	0,25		0,050
	ISO 683-1/2	SAE J404											
	41Cr4 (1.7035)	SAE 5140	min	0,38	0,60			0,90					0,020
			max	0,45	0,40	0,025	0,025	1,20	0,05	0,25	0,25		0,050
	34CrMo4 (1.7220)	SAE 4135	min	0,30	0,60			0,90	0,15				0,020
			max	0,37	0,40	0,025	0,025	1,20	0,30	0,25	0,25		0,050
	42CrMo4 (1.7225)	SAE 4140	min	0,38	0,60			0,90	0,15				0,020
Spring Steels			max	0,45	0,40	0,025	0,025	1,20	0,30	0,25	0,25		0,050
	EN 10089												
	51CrV4 (1.8159)	SAE 6150	min	0,47	0,70			0,90				0,10	0,020
			max	0,55	1,10	0,025	0,025	1,20	0,05	0,25	0,25	0,25	0,050
	54SiCr6 (1.7102)	SAE 9254	min	0,51	0,50			0,50					0,020
			max	0,59	0,80	0,025	0,025	0,80	0,05	0,25	0,25		0,050
	54SiCrV6 (1.8152)		min	0,51	0,50			0,50				0,10	0,020
			max	0,59	0,80	0,025	0,025	0,80	0,05	0,25	0,25	0,20	0,050
Bearing Steels	ISO 683-17	SAE J404											
	100Cr6	SAE E52100	min	0,93	0,15	0,25		1,35					0,020
			max	1,05	0,35	0,45	0,025	1,60	0,10	0,25	0,25		0,050
	100CrMnSi6-4		min	0,93	0,45	1,00		1,40					0,020
			max	1,05	0,75	1,20	0,025	1,65	0,10	0,25	0,25		0,050
	ISO 683-4	SAE J403											Pb
	11SMn30 (1.0715)	SAE 1215	min		0,90		0,270						
			max	0,14	1,30	0,110	0,330	0,25	0,05	0,25	0,25		
Free Cutting Steels	11SMn37 (1.0736)		min		1,00		0,340						
			max	0,14	1,50	0,110	0,400	0,25	0,05	0,25	0,25		
	11SMnPb30 (1.0718)	SAE 12L14	min		0,90		0,270						0,20
			max	0,14	1,30	0,110	0,330	0,25	0,05	0,25	0,25		0,35
	11SMnPb37 (1.0737)		min		1,00		0,340						0,20
			max	0,14	1,50	0,110	0,400	0,25	0,05	0,25	0,25		0,35
	44SMn28 (1.0762)	SAE 1144	min	0,40	1,30		0,240						
			max	0,48	1,70	0,060	0,330	0,25	0,05	0,25	0,25		

WIRE ROD PHYSICAL PROPERTIES

Diameter (mm)	Nominal Section Area (mm²)	Nominal Unit Weight (gr)	Normal Conditions		Special Conditions	
			Diameter Tolerance (mm)	Ovality (Max.)	Diameter Tolerance (mm)	Ovality (Max.)
4,5	15,9	0,125	+ / - 0,20	0,32	+ / - 0,15	0,24
5,5	23,76	0,187	+ / - 0,20	0,32	+ / - 0,15	0,24
6	28,27	0,222	+ / - 0,20	0,32	+ / - 0,15	0,24
6,5	33,18	0,260	+ / - 0,20	0,32	+ / - 0,15	0,24
7	38,48	0,302	+ / - 0,20	0,32	+ / - 0,15	0,24
7,5	44,18	0,347	+ / - 0,20	0,32	+ / - 0,15	0,24
8	50,26	0,395	+ / - 0,20	0,32	+ / - 0,15	0,24
8,5	56,74	0,445	+ / - 0,20	0,32	+ / - 0,15	0,24
9	63,62	0,499	+ / - 0,20	0,32	+ / - 0,15	0,24
9,5	70,88	0,556	+ / - 0,20	0,32	+ / - 0,15	0,24
10	78,54	0,617	+ / - 0,20	0,32	+ / - 0,15	0,24
11	95,03	0,746	+ / - 0,25	0,40	+ / - 0,20	0,32
11,5	103,90	0,815	+ / - 0,25	0,40	+ / - 0,20	0,32
12	113,10	0,888	+ / - 0,25	0,40	+ / - 0,20	0,32
13	132,70	1,040	+ / - 0,25	0,40	+ / - 0,20	0,32
14	153,90	1,210	+ / - 0,25	0,40	+ / - 0,20	0,32
16	201,10	1,580	+ / - 0,30	0,48	+ / - 0,25	0,40
18	254,50	2,000	+ / - 0,30	0,48	+ / - 0,25	0,40
20	314,20	2,470	+ / - 0,30	0,48	+ / - 0,25	0,40
21	346,36	2,719	+ / - 0,30	0,48	+ / - 0,25	0,40
22	380,13	2,984	+ / - 0,35	0,56	+ / - 0,30	0,48
23	415,48	3,262	+ / - 0,35	0,56	+ / - 0,30	0,48
24	452,39	3,551	+ / - 0,35	0,56	+ / - 0,30	0,48
25	490,87	3,854	+ / - 0,35	0,56	+ / - 0,30	0,48
26	530,93	4,168	+ / - 0,35	0,56	+ / - 0,30	0,48
27	572,56	4,495	+ / - 0,35	0,56	+ / - 0,30	0,48



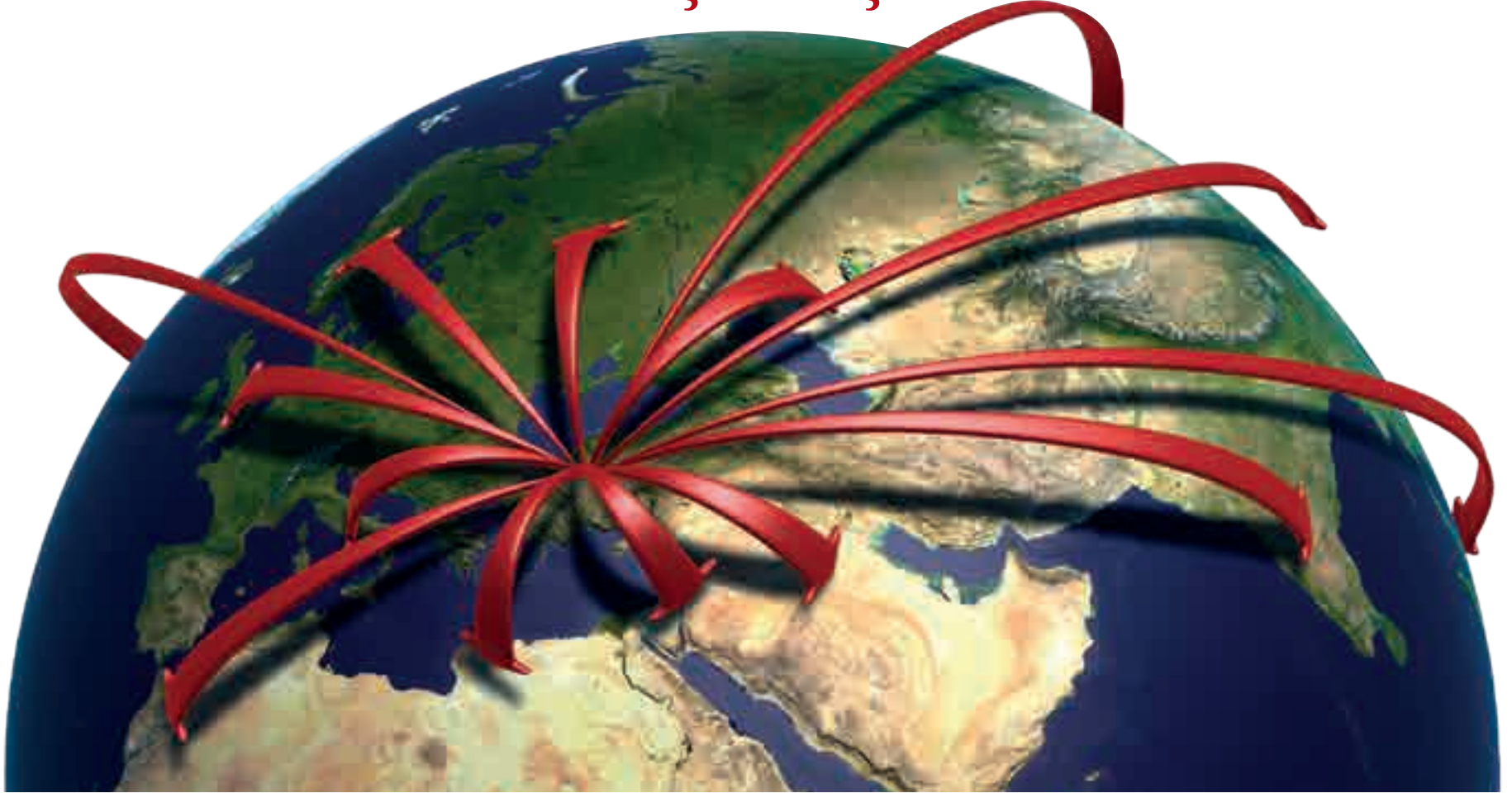
PC STRAND PROPERTIES

Standard and Quality			Diameter		Coil Weight	Coil Outside Diameter	Coil Inside Diameter	Coil Length
ASTM A416	prEN 10138-3	BS 5896	(inch)	(mm)	(kg)	(mm)	(mm)	(mm)
Grade 250	Y1770S7	Y1770S7	3/8 (0,375)	9,53	4000	1700	800	750
			7/16 (0,438)	11,1				
			1/2 (0,5)	12,7				
			6/10 (0,6)	15,2				
			(0,62)	15,7				
			7/10 (0,7)	17,8				
Grade 270	Y1860S7	Y1860S7	3/8 (0,375)	9,53	max	max		
			7/16 (0,438)	11,1				
			1/2 (0,5)	12,7				
			6/10 (0,6)	15,2				
			(0,62)	15,7				
			7/10 (0,7)	17,8				

PC WIRE PROPERTIES

Standard and Quality			Diameter	Ring Weight	Ring Outside Diameter	Ring Inside Diameter	Ring Length	Bar Diameter	Bar Length
ASTM A421	prEN 10138-2	BS 5896	(mm)	(kg)	(mm)	(mm)	(mm)	(mm)	(mm)
	Y1570C	Y1570C	9,4	2500 max	1950 - 2500	1500 - 2100	~ 400	7 - 9,4	1500 - 5000
Type BA, WA	Y1670C	Y1670C	4 - 5 - 6 - 7 - 8						
	Y1770C	Y1770C	3 - 4 - 5 - 6						
	Y1860C	Y1860C	3 - 4 - 5						





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