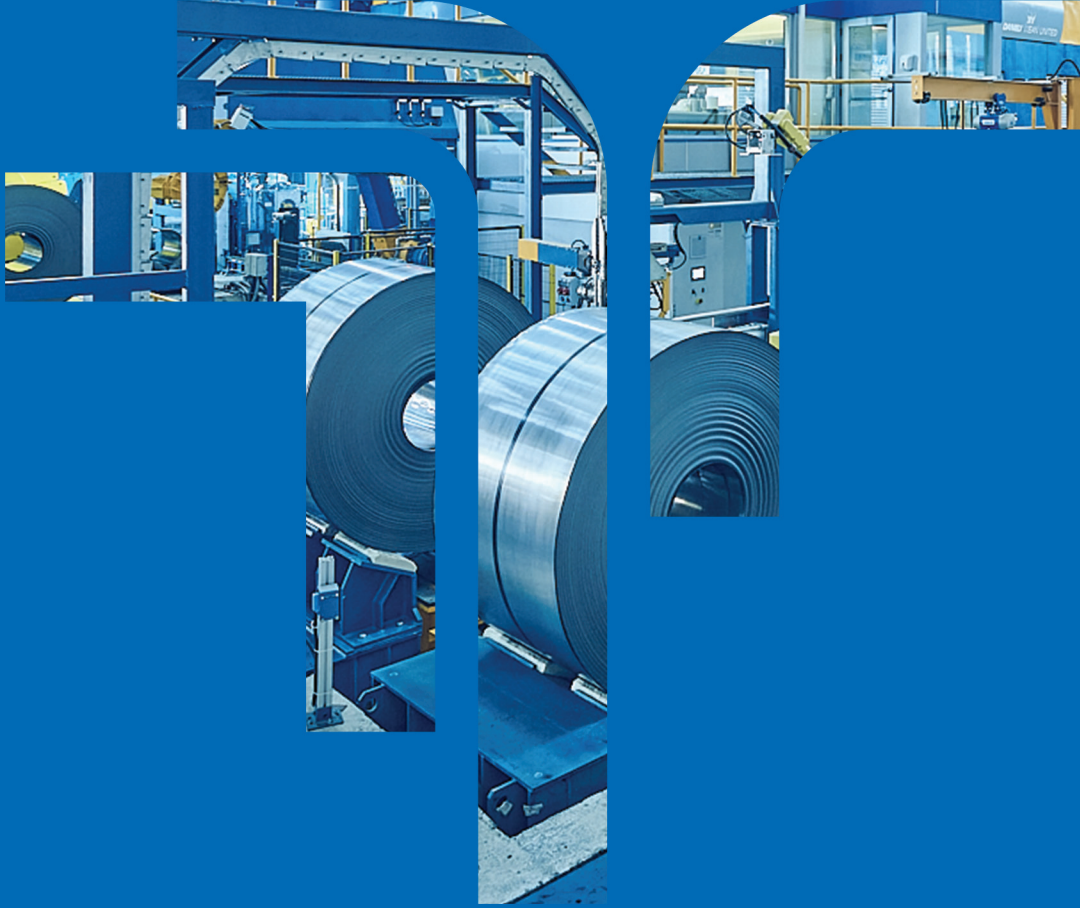




COLD ROLLED STEEL

 TATÇELİK

 TATMETAL



As your closest manufacturer,
we manufacture flat steel fully in line
with your needs, and shape the future
together with you.

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2	1. Tatmetal
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TATMETAL, TURKEY'S LEADING MANUFACTURER OF FLAT STEEL

Export to More than 60 Countries in 6 Continents

Tatmetal produces hot rolled pickled, cold rolled, galvanized and painted flat steel under Tatçelik brand as one of Turkey's leading flat steel producer. Automotive, Durable Goods, Construction, Energy and Machinery-Equipment are the leading industries it serves.

With a capacity exceeding 1.5 million tons, Tatmetal produces in many different steel grades such as commercial, deep drawing, extra deep drawing steels, low alloy high strength HSLA steels, medium and high strength structural steels and enameling steel.

In addition to its production, it performs cut to length, slitting, roll forming processes in the Steel Service Centers in line with the demands and needs of the user.

As a global player in the sector, it exports to more than 60 countries in 6 continents and it is ranked at 74st among the first 500 largest industrial companies in Turkey.

1.1 CAPACITY



Steel Production Complex
with **177.000 m²** area

Production capacity
exceeding **1.5 million** tons

1.2 SECTORS



Automotive

- Automobile
- Commercial Vehicle
- Agricultural Vehicle
- Rail Transport



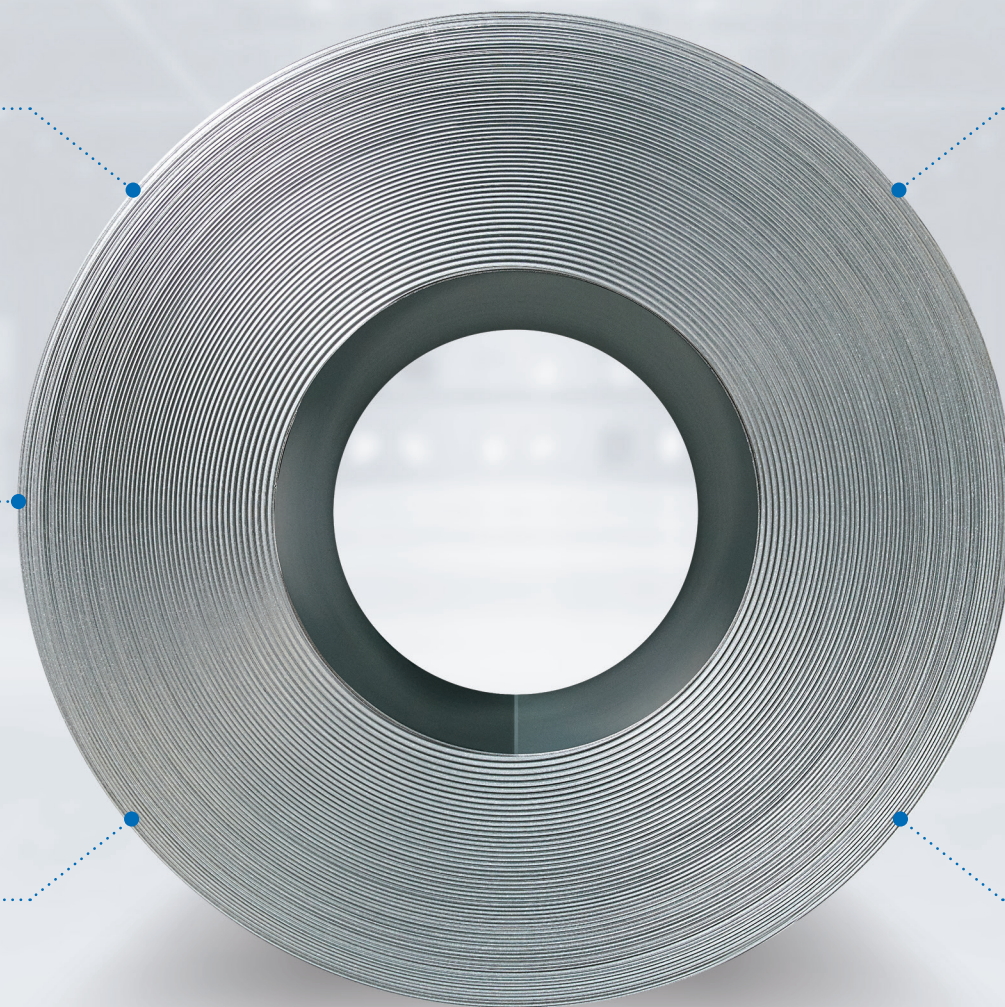
Durable Consumption

- White Goods
- Small Appliances
- Brown Goods



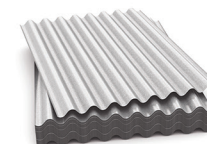
Machine Equipment

- Sheet Metal Processing Machinery
- Miscellaneous Agricultural, Forestry, Mining and Food Industry Machinery
- Heavy Equipment
- Crane and Work Tools



Construction

- Roof and Facade Systems
- Pipe & Profile
- Busbar
- Heating and Cooling, Air Conditioning Systems



- Ceiling and Floor Systems
- Greenhouse Cultivation
- Storage and Shelving Systems

Energy

- Transformer - Power Systems
- Solar Energy



Packaging

- Steel Drum
- Packaging (Steel Strap and seals)
- Storage Tank



1.3 ADVANTAGES OF STEEL



Low Cost & Easy Supply



High Strength



Formability



Recycling Opportunity



Weldability



High Corrosion Resistance



Paintability

COLD ROLLED STEEL

Cold Rolled Non Annealed Flat Steel (CRFH)

Cold Rolled Non annealed Flat Steel is produced by cold rolling of hot rolled pickled steel. Because the strength values are very high, they are not suitable for shaping.

Cold Rolled Annealed Flat Steel (CR)

Cold rolled non annealed steel (CRFH) products are obtained by undergoing surface cleaning, annealing (recrystallization annealing), tempering and oiling processes. In this way, the values defined in the standards for surface smoothness, width and thickness tolerances are met.



1.3 million tons / year
production capacity

Advantages of Cold Rolled Steel



Cost Advantage



High Strength



Formability



Weldability



Corrosion Resistance



Paintability



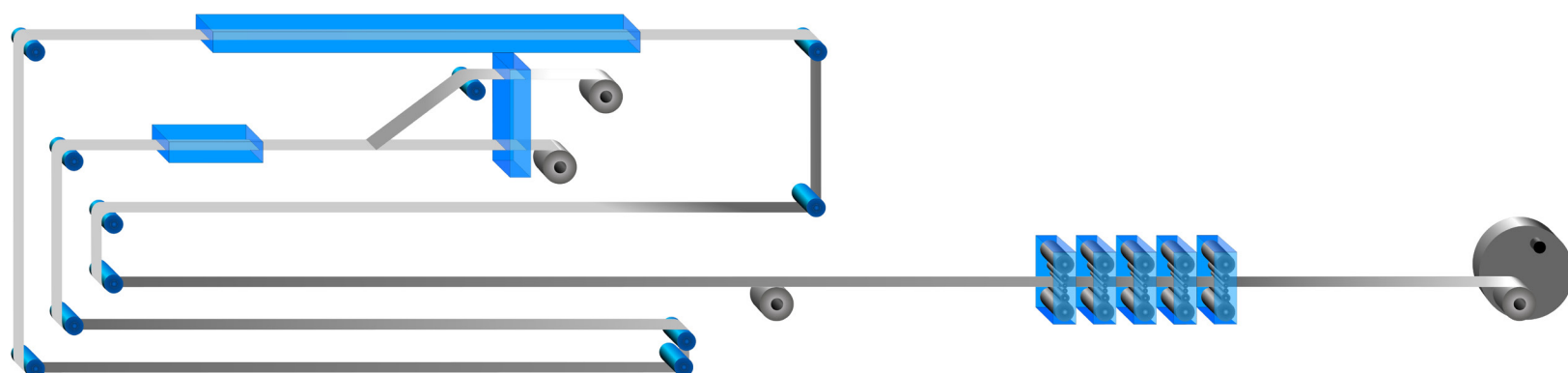
Easy Supply



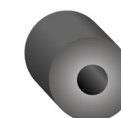
Recycling Opportunity

2.1 PRODUCTION PROCESS

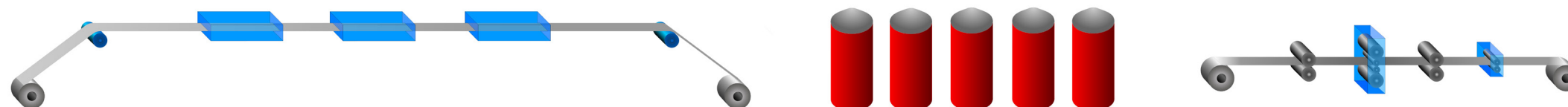
PLTCM (Pickling Line Tandem Cold Mill)



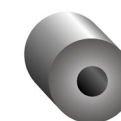
CRFH



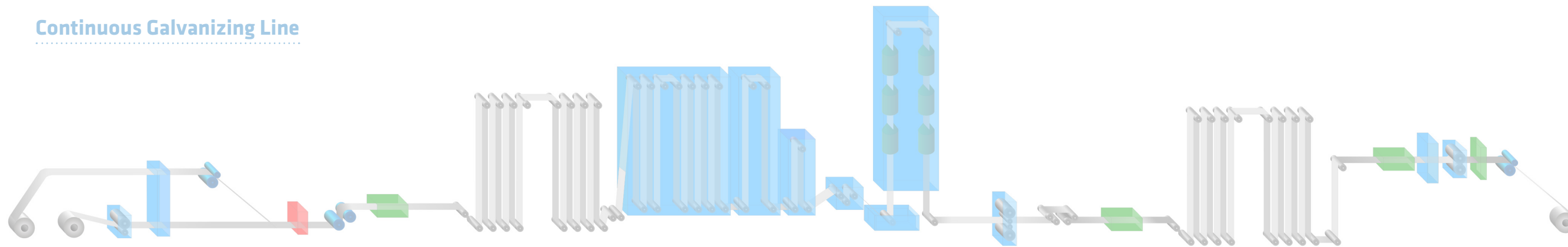
Alcaline Cleaning Line - Annealing Line - Temper Mill



CR



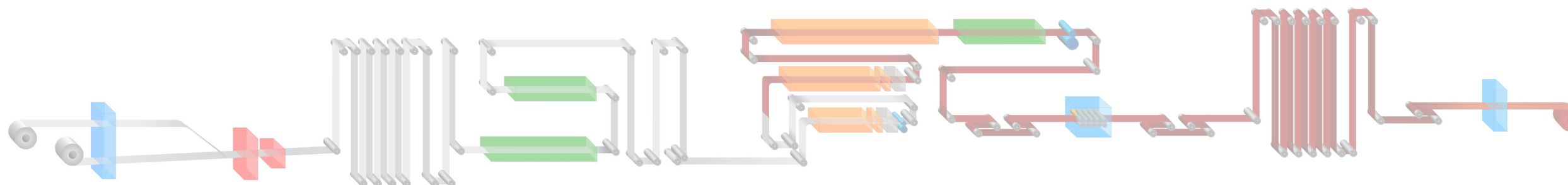
Continuous Galvanizing Line



GI



Color Coating Line



PPGI



2.2 AREAS OF USAGE



Areas of Usage

Cold Rolled Non Annealed Flat Steel (CRFH):

Packing steel (steel straps and seals), Gas and Hydraulic Pipe Clamps

Cold Rolled Annealed Flat Steel (CR):

Panel radiators, White goods / Brown goods, Automotive, Automotive supply industry, Filter productions and Ventilation equipment.

STANDARD AND QUALITIES 2.3

Fullhard Products

	Product Group	TATCELİK Grades	Standard Grades	Standard	Similar Standards		
					ASTM Standard	JIS Standard	AS/NZS Standard
Fullhard Products	Low Carbon Steels For Drawing and Deep Drawing	Fullhard FHDC01	DC01	EN 10130:2007	CS Type B / CS Type C	SPCC	CA1
		Fullhard FHDC03	DC03	EN 10130:2007	CS Type B	SPCD	CA2-CA3
		Fullhard FHDC04	DC04	EN 10130:2007	ASTM A620 CD DDQAK	SPCEN	CA4
		Fullhard FHDC05	DC05	EN 10130:2007	DDS	-	CA55N
		Fullhard FHDC06	DC06	EN 10130:2007	EDDS	-	-
		Fullhard SAE 1006	SAE 1006	SAE J403:2014	CS Type A	-	-
	Carbon Steels	Fullhard SAE 1008	SAE 1008	SAE J403:2014	CS Type B	-	-
		Fullhard SAE 1010	SAE 1010	SAE J403:2014	CS Type B	-	CA1010
		Fullhard SAE 1012	SAE 1012	SAE J403:2014	-	-	-
		Fullhard SAE 1015	SAE 1015	SAE J403:2014	-	-	-
		Fullhard SAE 1016	SAE 1016	SAE J403:2014	-	-	-

Cold Products

	Product Group	TATCELİK Grades	Standard Grades	Standard	Similar Standards			
					ASTM Standard	EN Standard	JIS Standard	AS/NZS Standard
Cold Rolled Products	Cold Rolled Low Carbon Steels For Drawing and Deep Drawing	Cold DC01	DC01	EN 10130:2007	CS Type B	-	SPCC	CA1
		Cold DC03	DC03	EN 10130:2007	CS Type B	-	SPCD	CA2-CA3
		Cold DC04	DC04	EN 10130:2007	ASTM A620 CD DDQAK	-	SPCEN	CA4
		Cold DC05 (1) (2) (3)	DC05	EN 10130:2007	DDS	-	-	CA55N
		Cold SAE 1006	SAE 1006	SAE J403:2014	CS Type A	-	-	-
		Cold SAE 1008	SAE 1008	SAE J403:2014	CS Type B	-	-	-
	Cold Rolled Carbon Steels	Cold SAE 1010	SAE 1010	SAE J403:2014	CS Type B	-	-	CA1010
		Cold SAE 1012	SAE 1012	SAE J403:2014	-	-	-	-
		Cold SAE 1015	SAE 1015	SAE J403:2014	-	-	-	-
		Cold SAE 1016	SAE 1016	SAE J403:2014	-	-	-	-
	Cold Rolled Steels For Enamelling	Cold DC01EK (1)	DC01EK	EN 10209:2013	-	-	-	-
		Cold DC04EK (1) (2) (3)	DC04EK	EN 10209:2013	ASTM A424 Tip 2	-	-	-
	Cold Rolled Low Carbon Steels For Drawing	Cold CS TB 1006 (1)	CS Type B	ASTM A1008M:16	-	DC01	SPCC	CA1
	Cold Rolled High Yield Strength Steels For Cold Forming	Cold HC260LA (1)	HC260LA	EN 10268:2006+A1:2013	SS Gr.33	-	-	CA260
		Cold HC300LA (1)	HC300LA	EN 10268:2006+A1:2013	SS Gr.40	-	-	-
		Cold HC340LA (1)	HC340LA	EN 10268:2006+A1:2013	HSLAS Gr.45	-	-	CA350
		Cold HC380LA (1) (3)	HC380LA	EN 10268:2006+A1:2013	HSLAS Gr.50	-	-	CA400
		Cold HC420LA (1) (3)	HC420LA	EN 10268:2006+A1:2013	HSLAS Gr.55	-	-	CA400
		Cold HC460LA (1) (3)	HC460LA	EN 10268:2006+A1:2013	-	-	-	CA450
		Cold HC500LA (1) (3)	HC500LA	EN 10268:2006+A1:2013	-	-	-	CA500

1 - All grades which is nearest EN standards shall be subject to negotiation at the time of enquiry and order.

2 - Issues and/or tolerances not mentioned here to be agreed at the time of enquiry and order.

3 - Under development.



2.4 | PRODUCTION LIMITS

Fullhard Products

		Order Width (mm)										
		800	900	1000	1100	1200	1300	1400	1520	1600		
Order Thickness (mm)	3.50										3.50	Order Thickness (mm)
	3.00										3.00	
	2.50		•	•	•	•	•	•	•		2.50	
	2.00		•	•	•	•	•	•	•		2.00	
	1.50		•	•	•	•	•	•	•		1.50	
	1.20		•	•	•	•	•	•	•		1.20	
	1.00		•	•	•	•	•	•	•		1.00	
	0.80		•	•	•	•	•	•	•		0.80	
	0.60		•	•	•	•	•	•	•		0.60	
	0.50		•	•	•	•	•	•			0.50	
	0.40		•	•	•	•	•				0.40	
	0.30		•	•	•	•					0.30	
	0.20		•	•	•						0.20	
0.15										0.15		
		800	900	1000	1100	1200	1300	1400	1520	1600		
Order Width (mm)												

- Products below 0,30 mm thickness and above 1280 mm width are subject to negotiation.

Cold Products

Product Group	Min. Thickness	Max Thickness	Min. Width	Max Width	Surface Quality	Surface Type	Surface Protection	Inner Diameter
Cold	0,30	0,39	900	1200	A	Bright (BR) Semi Bright (SB) Matt (M) Rough (R)	0 - 3,00 gr / m2	610/508
Cold	0,40	2,50	900	1280	A	Bright (BR) Semi Bright (SB) Matt (M) Rough (R)	0 - 3,00 gr / m2	610/508

		Order Width (mm)									
		800	900	1000	1100	1200	1250	1280	1300		
Order Thickness (mm)	3.00									3.50	Order Thickness (mm)
	2.50		•	•	•	•	•	•		3.00	
	2.00		•	•	•	•	•	•		2.50	
	1.50		•	•	•	•	•	•		2.00	
	1.20		•	•	•	•	•	•		1.50	
	1.00		•	•	•	•	•	•		1.00	
	0.80		•	•	•	•	•	•		0.50	
	0.60		•	•	•	•	•	•		0.49	
	0.45		•	•	•	•	•	•		0.40	
	0.40		•	•	•	•	•	•		0.39	
	0.39		•	•	•	•				0.35	
	0.35		•	•	•	•				0.34	
	0.30		•	•	•	•				0.30	
	0.25									0.25	
		800	900	1000	1100	1200	1250	1280	1300		
Order Width (mm)											



MECHANICAL AND CHEMICAL PROPERTIES | 2.5

Low Carbon Steels For Drawing and Deep Drawing

Chemical Composition (%)							
TATCELIK Grade	Grade	Standard	C (max.)	Mn (max.)	P (max.)	S (max.)	Ti (max.)
FHDC01	DC01	EN 10130:2007	0,12	0,60	0,045	0,045	-
FHDC03	DC03	EN 10130:2007	0,10	0,45	0,035	0,035	-
FHDC04	DC04	EN 10130:2007	0,08	0,40	0,030	0,030	-
FHDC05	DC05	EN 10130:2007	0,06	0,35	0,025	0,025	-
FHDC06	DC06	EN 10130:2007	0,02	0,25	0,020	0,020	0,3

Chemical Composition (%)						
TATCELIK Grade	Grade	Standard	C (max.)	Mn (max.)	P (max.)	S (max.)
SAE 1006	SAE 1006	SAE J403:2014	0,08	0,45	0,030	0,035
SAE 1008	SAE 1008	SAE J403:2014	0,10	0,50	0,030	0,035
SAE 1010	SAE 1010	SAE J403:2014	0,08-0,13	0,30-0,60	0,030	0,035
SAE 1012	SAE 1012	SAE J403:2014	0,10-0,15	0,30-0,60	0,030	0,035
SAE 1015	SAE 1015	SAE J403:2014	0,13-0,18	0,30-0,60	0,030	0,035
SAE 1016	SAE 1016	SAE J403:2014	0,13-0,18	0,60-0,90	0,030	0,035

- Mechanical properties not guaranteed.

Cold Rolled Low Carbon Steels For Drawing and Deep Drawing

Chemical Composition (%)						
TATCELIK Grade	Grade	Standard	C (max.)	Mn (max.)	P (max.)	S (max.)
DC01	DC01	EN 10130:2007	0,12	0,60	0,045	0,045
DC03	DC03	EN 10130:2007	0,10	0,45	0,035	0,035
DC04	DC04	EN 10130:2007	0,08	0,40	0,030	0,030
DC05	DC05	EN 10130:2007	0,06	0,35	0,025	0,025



Mechanical Properties							
TATCELİK Grade	Grade	Standard	Re N/mm² (max.)	Rm N/mm²	A (%) A80 (min.)	r90 min.	n90 min.
DC01	DC01	EN 10130:2007	280	270-410	28	-	-
DC03	DC03	EN 10130:2007	240	270-370	34	1,3	-
DC04	DC04	EN 10130:2007	210	270-350	38	1,6	0,18
DC05	DC05	EN 10130:2007	180	270-330	40	1,9	0,20

Cold Rolled Steels For Enamelling

Chemical Composition (%)						
TATCELİK Grade	Grade	Standard	C (max.)	Mn (max.)	P (max.)	S (max.)
DC01EK	DC01EK	EN 10209:2013	0,08	0,60	0,045	0,050
DC04EK	DC04EK	EN 10209:2013	0,08	0,50	0,030	0,050

Mechanical Properties					
TATCELİK Grade	Grade	Standard	Re N/mm² (max.)	Rm N/mm²	A (%) A80 (min.)
DC01EK	DC01EK	EN 10209:2013	270	270-390	30
DC04EK	DC04EK	EN 10209:2013	220	270-350	36

Cold Rolled Low Carbon Steels For Drawing

Chemical Composition (%)													
TATCELİK Grade	Grade	Standard	C	Mn (max.)	P (max.)	S (max.)	Cu (max.)	Ni (max.)	Cr (max.)	Mo (max.)	V (max.)	Nb (max.)	Ti (max.)
CS TB 1006	CS Type B 1006	ASTM 1008M:2016	0,02-0,15	0,60	0,025	0,035	0,20	0,20	0,15	0,06	0,008	0,008	0,025

Mechanical Properties					
TATCELİK Grade	Grade	Standard	Re N/mm² (max.)	Rm N/mm²	A (%) A80 (min.)
CS TB 1006	CS Type B 1006	ASTM 1008M:2016	140-275	-	30

Chemical Composition (%)						
TATCELİK Grade	Grade	Standard	C	Mn	P (max.)	S (max.)
SAE 1006	SAE 1006	SAE J403:2014	0,08	0,45	0,030	0,035
SAE 1008	SAE 1008	SAE J403:2014	0,10	0,50	0,030	0,035
SAE 1010	SAE 1010	SAE J403:2014	0,08-0,13	0,30-0,60	0,030	0,035
SAE 1012	SAE 1012	SAE J403:2014	0,10-0,15	0,30-0,60	0,030	0,035
SAE 1015	SAE 1015	SAE J403:2014	0,13-0,18	0,30-0,60	0,030	0,035
SAE 1016	SAE 1016	SAE J403:2014	0,13-0,18	0,60-0,90	0,030	0,035



Cold Rolled High Yield Strength Steels For Cold Forming

Chemical Composition (%)										
TATCELİK Grade	Grade	Standard	C (max.)	Mn (max.)	P (max.)	S (max.)	Si (max.)	Al (min.)	Ti (max.)	Nb (max.)
HC260LA	HC260LA	EN 10268:2006 +A1:2013	0,10	1,0	0,030	0,025	0,50	0,015	0,15	0,09
HC300LA	HC300LA	EN 10268:2006 +A1:2013	0,12	1,40	0,030	0,025	0,50	0,015	0,15	0,09
HC340LA	HC340LA	EN 10268:2006 +A1:2013	0,12	1,50	0,030	0,025	0,50	0,015	0,15	0,09
HC380LA	HC380LA	EN 10268:2006 +A1:2013	0,12	1,60	0,030	0,025	0,50	0,015	0,15	0,09
HC420LA	HC420LA	EN 10268:2006 +A1:2013	0,14	1,60	0,030	0,025	0,50	0,015	0,15	0,09
HC460LA	HC460LA	EN 10268:2006 +A1:2013	0,14	1,80	0,030	0,025	0,60	0,015	0,15	0,09
HC500LA	HC500LA	EN 10268:2006 +A1:2013	0,14	1,80	0,030	0,025	0,60	0,015	0,15	0,09

Mechanical Properties					
TATCELİK Grade	Grade	Standard	Re N/mm² (max.)	Rm N/mm²	A (%) A80 (min.)
HC260LA	HC260LA	EN 10268:2006 +A1:2013	260-330	350-430	26
HC300LA	HC300LA	EN 10268:2006 +A1:2013	300-380	380-480	23
HC340LA	HC340LA	EN 10268:2006 +A1:2013	340-420	410-510	21
HC380LA	HC380LA	EN 10268:2006 +A1:2013	380-480	440-580	19
HC420LA	HC420LA	EN 10268:2006 +A1:2013	420-520	470-600	17
HC460LA	HC460LA	EN 10268:2006 +A1:2013	460-580	510-660	13
HC500LA	HC500LA	EN 10268:2006 +A1:2013	500-620	550-710	12

QUALITY CONTROL | 2.6

Mechanical Tests

- ✓ Tensile Test
- ✓ Surface Roughness Test
- ✓ Hardness Test (optional)

STEEL SERVICE CENTERS



3.1

CUT TO LENGTH SHEET

Cut to Length production range for cold rolled coil, galvanized coil and prepainted coil;

Thickness : 0.30 - 6.00 mm

Width : 350 - 1600 mm

Length : 500 - 6000 mm

Packaging : It is packed on pallets with paper or steel packaging.

3.2

SLITTED STRIPS

Slitted Strips production range for cold rolled coil, galvanized coil, prepainted galvanized steel coil;

Thickness : 0,30 - 4,00 mm

Width : 20 - 1600 mm

Packaging : Slitted steel coils are packed vertically or horizontally, with or without pallets.



In addition to its production, Tatçelik performs cut to length, slitting in the Steel Service Centers.

TATMETAL ÇELİK SANAYİ VE TİCARET A.Ş.

Tax Administration : Büyük Mükellefler Vergi Dairesi
Tax No : 831 044 0672
Billing Address : Hamzafakıhlı Mah. Ebetaşı Sok. No:1 Ereğli / Zonguldak



Headquarters

Adress : Küçükbakkalköy Mah. Merdivenköy Yolu Cad. Rüya Sok. No: 12 Kat: 20
Vogue Business Center PK: 34750 Ataşehir/ İstanbul
Phone : +90 216 574 08 28



Ereğli Office

Adress : Hamzafakıhlı Mah. Ebetaşı Sok. No:1 Ereğli / Zonguldak



Bursa Office

Adress : Konak Mahallesi Barış Sokak Ofis Artı İş Merkezi, No:3 Kat:6 D:31 Nilüfer Bursa
Telefon : +90 224 249 03 63



Steel Service Center - 1

Adress : Bölücek Mah. 2 Numaralı Sanayi Sok. No: 32 Ereğli/ Zonguldak
Phone : +90 372 318 00 27 / 29



Steel Service Center - 2

Adress : Hamza Fakıhlı Köyü Girişi Ereğli/ Zonguldak
Telefon : +90 372 334 35 85



Cold Rolling, Galvanizing and Color Coating Plant

Adress : Hamzafakıhlı Mah. Organize Sanayi Bölgesi 2 NOLU Yol Sok. No:1 Ereğli / Zonguldak
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