

Carbon Electrodes





Created in 2009, Trasteel Group has become one of the leading players in the steel industry

Trasteel Group was founded in 2009 as the result of the vision of a group of entrepreneurs and professionals with 40 years of international experience in the steel industry.

Today, Trasteel is a trading and industrial Group active in the steel, energy and metallurgical sectors. Headquartered in Lugano, it has over 900 employees operating in four trading desks and various industrial plants in Europe, Middle East and Asia-Pacific.

Leveraging on the combined experience, the mission of the Group is to provide better, deeper and more flexible services to the whole supply chain.

Since the high quality of the supplied materials is not enough to meet the evermore sophisticated needs of the market, Trasteel Group keeps expanding its horizons by maintaining high dynamism and diversification.

Sustainability and innovation are priorities and key aspects for the Group to focus on. Long-term targets are not an easy challenge to face, but Trasteel is committed to broaden its ESG policies.

+150

products supplied

+1.000

specialists worldwide
and growing



DISCOVER MORE
ABOUT OUR ESG VISION

Trasteel network



+50

markets covered

+4.000

customers



DISCOVER MORE ABOUT
THE STEEL MARKET

● **Headquarters**

Switzerland, Luxembourg

● **Trading Offices**

Lugano, Düsseldorf, Dubai, Shanghai, Bayuquan, Buenos Aires, Istanbul, Goma, Singapore, New York, France, Spain, Finland

● **Industrial Premises**

San Giorgio di Nogaro, Massa, Racconigi, Sesto Al Reghena, Cavallerleone, Lombardore (Italy), Nova Pazova (Serbia), Bayuquan (China), Izmir (Turkey)

● **Markets Covered**

EU, United Kingdom, Turkey, Israel, Serbia, Ukraine, Kazakhstan, Uzbekistan, Azerbaijan, U.A.E., Saudi Arabia, Oman, Brazil, Chile, Colombia, Argentina, Perù, Bolivia, Mexico, USA, Canada, Japan, South Korea, China, Malaysia, Indonesia, Philippines, Vietnam, Thailand, Taiwan, Australia, South Africa, Congo (DRC), Egypt, India, Algeria, Morocco, Tunisia, Pakistan, Norway

Carbon Electrodes productions

Trasteel has a partnership with an ISO9001:2015 certified Chinese Carbon Electrodes producer. The plant facilities use modern technology and equipment to manufacture over 200'000 tons of finished products per year.

Trasteel Carbon Electrodes are produced with top quality raw materials and continuously improved with the help of our technical assistance team who operate on the customer's premises in order to collect consumption data and optimize the performance with each consecutive order, which helped establish Trasteel as one of the key players in the market.

A dedicated quality control team follows the production process on-site in order to ensure stable product quality and avoid any deviations from the required production tolerances.

Thanks to extensive know-how, Trasteel is capable of providing any type of packaging to ensure safe in-land, sea and air transportation.

A global sales and services network with offices located on every continent enables Trasteel to provide a high level service in the industry, both in terms of timely deliveries and technical support, with the goal of increasing our customers' performance and reducing transformation costs.

Typical properties

		GRADE	
ELECTRODES	UNIT	Carbon Electrodes AMF	Graphitized Electrodes GMF
Specific resistance, max	$\mu\Omega\text{m}$	30	14
Compressive strength, min	MPa	2,0	3,5
Flexural Strength, min	MPa	8,0	7,0
Porosity, max	%	18	27
Coefficient of thermal conductivity, 100°C, min	W/(m·K)	10,9	80
Coefficient of thermal expansion, 600°C, max	* 10 ⁻⁶ K ⁻¹ at 20°C	3,6	3,4
Carbon content, min	%	97,0	99,6
Ash content, max	%	1,8	1,2
Bulk density, min	g/cm ³	1,60	1,62

Typical dimensions

Trasteel International currently produces electrodes with diameters from 610 to 1400 mm (24"- 55") and lenghts up to 3000 mm (118"); they weigh up to 6.0 tons (13,300 lbs).

Available size

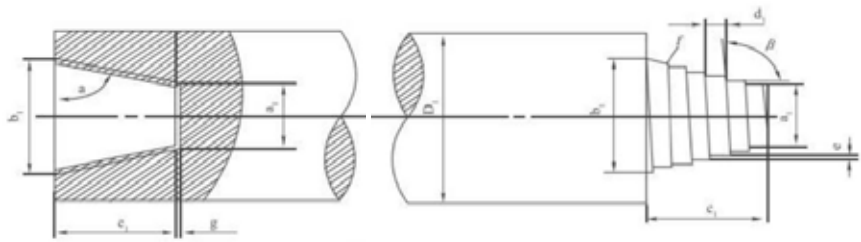
NOMINAL DIAMETER		ACTUAL DIAMETER			NOMINAL LENGTH	ACTUAL LENGTH	
INCH	MM	INCH	MM	ROUGH		TOLERANCE	SHORTER
30.7	780	782	778	774	2000/2200/ 2400	±100	Max -200Min -400
31.5	800	802	798	794			
34.25	870	872	868	862			
35.4	900	902	898	892			
36.2	920	922	918	912			
37.8	960	962	958	952			
40.15	1020	1022	1018	1012	2200/2400/ 2600/2800/ 3000		
41.7	1060	1062	1058	1052			
43.3	1100	1102	1098	1092			
45	1146	1148	1144	1138			
47	1197	1199	1195	1189			
47.5	1205	1206	1204	1202			
49	1250	1252	1248	1242			
50	1272	1274	1270	1264			
51.4	1305	1307	1303	1297			
52	1321	1323	1319	1313			
55	1400	1402	1398	1392			

Current loads & density

NOMINAL DIAMETER	Permissible Max Current Load	Permissible Max Current Density
[MM]	[AMP]	
780	37200	7.8
800	39100	7.8
870	45100	7.6
900	48300	7.6
920	50400	7.6
960	54900	7.6
1020	62000	7.3
1060	64300	7.3
1100	68300	7.2
1146	47200	7.2
1197	80900	7.2
1205	79700	7
1250	84600	6.9
1272	87600	6.9
1305	92200	6.9
1321	91700	6.7
1400	95300	6.2

Conical thread dimensions

- D1** Nominal diameter
- a** Cone angle
- a1** Small end diameter of cone
- b1** Large end diameter of cone
- c1** Cone length
- d1** Thread pitch
- e** Depth of tooth type
- f** Width of tooth top
- g** Width of toll withdrawal groove
- β** Angle of dental profile



D1	a	a1	b1	c1	d1	e	f	g	β
[MM]	[MM]	[MM]	[MM]	[MM]	[MM]	[MM]	[MM]	[MM]	[MM]
780, 800	70°	317	550	320	48	27	4.2	15	75
870, 900	70°	346	600	349	48	25	4.2	15	75
920, 960	70°	381	640	356	48	25	4.2	15	75
1020	70°	421	680	356	48	25	4.2	15	75
1060, 1100	70°	502	764	360	48	25	4.2	15	75
1146, 1197	70°	621	883	360	48	25	4.2	15	75
1250, 1272	70°	676	938	360	48	25	4.2	15	75
1305, 1321	70°	712	974	360	48	25	4.2	15	75
1400	70°	771	1033	360	48	25	4.2	15	75
780, 800	55°18'18"	305.3	651.4	250	40	32	5.9	50	58
870, 900	55°18'18"	350.4	735.4	278	40	32	5.9	50	58
920, 960	55°18'18"	400.4	785.4	278	40	32	5.9	50	58
1020, 1060	55°18'18"	390.0	805.4	300	40	32	5.9	50	58
1100, 1146	55°18'18"	436.1	865.4	310	40	32	5.9	50	58
1197, 1205, 1250, 1272	55°18'18"	489.6	960.4	340	40	32	5.9	50	58
1305, 1321, 1397	55°18'18"	627.0	1097.4	340	40	32	5.9	50	58



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