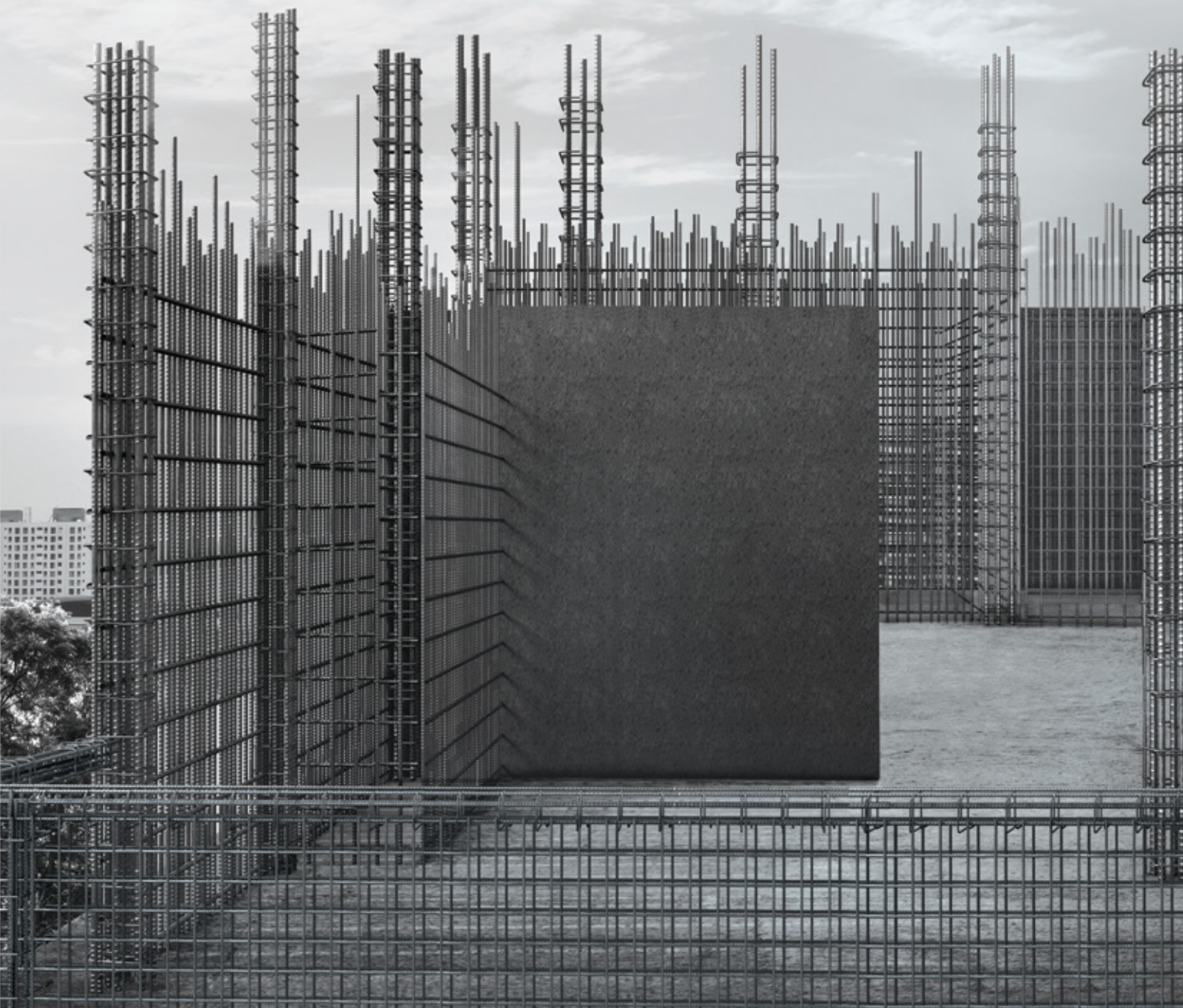




BUILD IT RIGHT

ET Electro TMT Plus | ET Electro CRS Gold 500

ET Electro CRS Gold 500 D | ET Cut & Bend

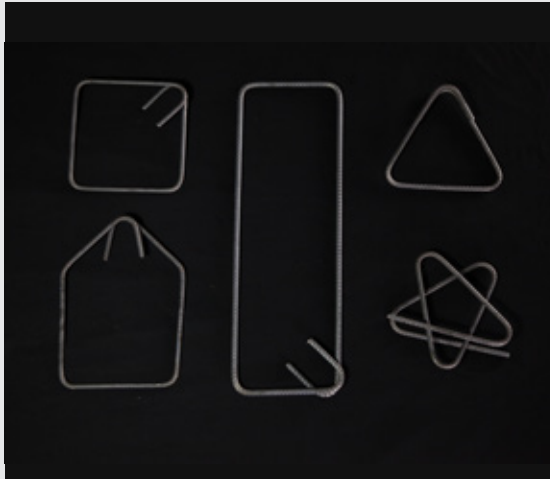


Why is ET Cut & Bend the right choice to 'build it right'?

ET Cut & Bend is the right choice for long-lasting structures as it is ready-to-use and made in an automated plant assuring efficiency, accuracy and uniformity which leads to a quicker construction process.



CUSTOMISED TMT BARS



Perfect Joints (Rings)

Perfect Joints are closed loop of reinforcement ET TMT bars that are used to hold the main reinforcement bars together in a structure. In a column, the Perfect Joints provide the lateral support to the main bars against buckling. When used in beams, the Perfect Joints (stirrups) are termed as transverse reinforcement since they withstand the shear force. Stirrups can be of various shapes depending on the design and shape of the load bearing member e.g. circular. Perfect Joints are manufactured through automatic and sophisticated machines, with stringent quality control to ensure consistency and accurate dimensions.

Research. Result. Revolution.

What do you need to deliver solutions that reduce costs, make work faster & easier and yet offer superior quality product?

Yes, the new introduction from ET, the revolutionary ET C&B TMT bars, Cut and Bend technology is the result of our constant research to offer the best option to our customers; the builders, architects and engineers as they work towards constructing superior and safer buildings. Let us know a little more about how the stirrup technology takes the TMT bars and their ingenuity to a new level.

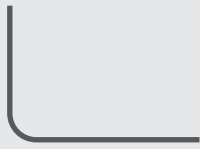


Cut & Bend

For critical bonding, ensuring safety.

ET C&B TMT bars meet the specified standards, provide safety and longevity to the concrete structures, but to ensure complete safety of a structure, it is essential that the main bars are supported by stirrups of good quality.

AVAILABLE SHAPES



AVAILABLE SIZES

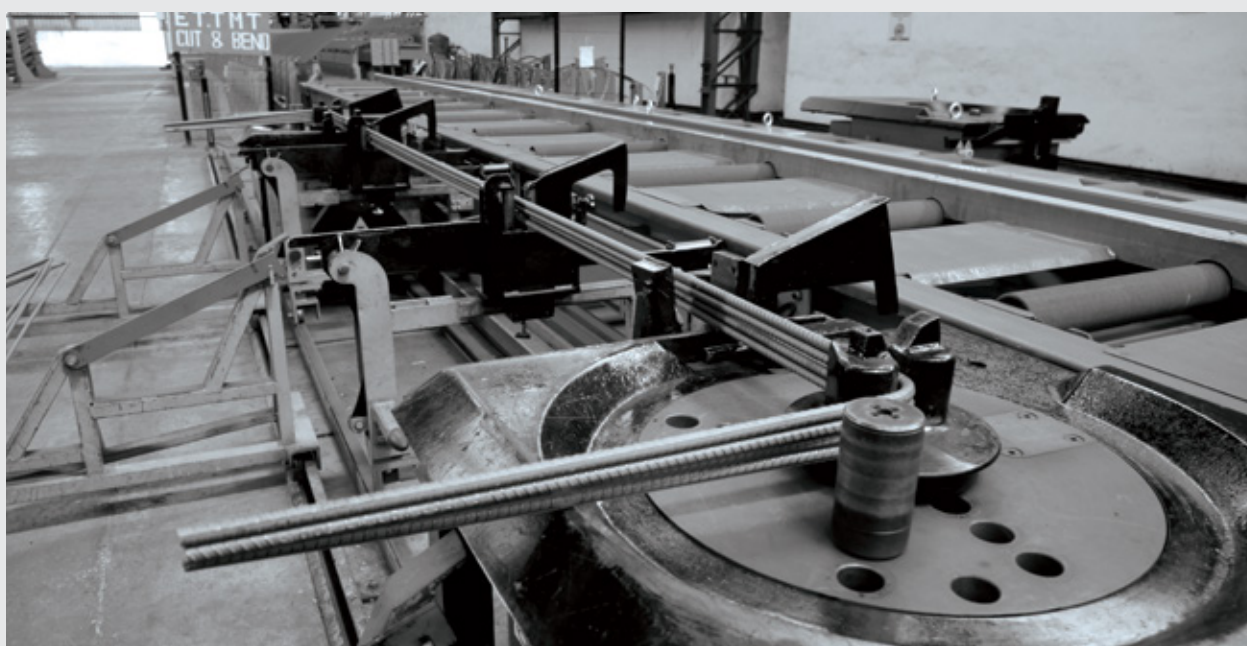


8 mm to 36 mm



AVAILABLE GRADES

**Fe 415 / Fe 500 / Fe 500 D / Fe 500 D LPS
CRS Fe 500 / CRS Fe 500 D**





ADVANTAGES OF ET CUT & BEND



Made from world's finest machines

Electrotherm (India) Ltd. has the best 100% automatic machines procured from Italian manufacturer Schnell to manufacture all kinds of designs from 8 mm to 36 mm.

Reduce dependency on manpower

The technology inspires working that requires minimal manpower as well as ensures faster turnaround time. This increases overall efficiency and improves the quality of Cut & Bend bars required in construction process saving on both manpower and man-hours.

Cost-effective

The cost of processing decreases considerably due to lesser inventories, reduced wastage and saving on labour cost.

Simple and Safe

Handling of 12 metre bars is eliminated and neatness is improved, thus decreasing the risk of accidents, making it safer for manpower at the site.

Timely delivery

ET C&B TMT bars are made in 100% automated plant of Electrotherm (India) Ltd. assuring greater efficiency in production and shortest turnaround time.

No wastage: Material and Money

A) Customer pays for the theoretical blueprint weight only and saves on waste, processing and freight.

B) Lead time is considerably shorter as the time required for delivery of material at construction site is lesser, thus the need of storing steel and blocking capital in inventory is reduced.

Superior finishing / Absolute accuracy

The finishing quality of ET C&B is unmatched in every manner. Ability to cut and bend bars in all desired angles without much hassle gives our product an upper hand over other C&B bars that undergo the process manually or mechanically.

Instant usability

Another important benefit that can be drawn from ET C&B is that it promotes instant usability. The Cut & Bend bars can be put to use instantly as it proves to be profiting on-ground solution for all your construction requirements.

Eliminates the storage / Stock problems

Material is ordered and supplied as per the need and is made available to the construction site for assembling thereby eliminating the storage problems.

Why is ET CRS Gold the right choice to 'build it right'?

ELECTRO CRS Gold is an example of 'Innovation meets product excellence'. Striking a fine balance between the life of the structure and its cost, these corrosion resistant bars help in reducing the rate of corrosion from the time of construction and thus enhance the life span of the structure.

ET **ELECTRO TMT PLUS**

PREMIUM QUALITY TMT BARS

ET **ELECTRO CRS GOLD 500**

CORROSION RESISTANT TMT BARS

ET **ELECTRO CRS GOLD 500 D**

CORROSION RESISTANT TMT BARS

The background of the page is a dark, reddish-brown image showing industrial machinery. In the upper left, there's a large circular component, possibly a pulley or part of a mill. In the lower left, a bright orange and yellow glow from a furnace or molten metal is visible. Various pipes, valves, and mechanical parts are scattered throughout the scene, creating a complex industrial texture.

THE PROCESS:

Captively produced billets ensure that high quality input is available for production of CRS Gold bars. Even these captive billets are produced using high quality sponge iron produced in-house. The steel is made with an accurate chemical composition. Spectrometer testing ensures that the chemistry is precisely controlled in every billet. Corrosion resistant elements like copper, phosphorus and chromium are added in the correct proportion to make the steel resistant to corrosion from inside i.e. at grain boundary. The quenching technology used after rolling ensures there is a presence of self-tempered layer over martensitic layer. This ensures high strength and high ductility. The distribution of corrosion resistant elements is homogeneous from the core to the surface. The high strength enables the steel to resist applied forces. The high ductility ensures the steel can undergo permanent changes in shape without rupturing.

STATE-OF-THE-ART MANUFACTURING FACILITY

The state-of-the-art plant located at Kutch, Gujarat is a fully integrated steel plant comprising of Sponge Iron Kilns, Induction Melting Furnaces, Ladle Refining Furnaces, 6/11 Continuous Casters Billets, Fully Automatic 3.0 LTPA Continuous Rolling Mill with variable AC drives and advanced 3-stage thermo-mechanical treatment facility. As our steel plant is located in Gujarat, timely delivery is assured.

ASSURANCE OF QUALITY

At Electrotherm (India) Ltd., quality is a result of state-of-the-art manufacturing facilities and uncompromising attitude to ensure stringent quality control measures at all the stages of manufacturing. All the inputs are tested before they are used in the process. Direct typed out reading spectrometer is used which can measure twenty seven elements in steel with great accuracy. Metallographic microscope with photomicrographic attachment ensures that the microstructure of the steel is as desired. Electronically controlled Universal Testing Machine ensures that each batch has the correct tensile properties. Weldability and bendability tests ensure that the bars can be butt welded and bent without difficulty. Salt Spray Test and Atmospheric Exposure Tests ensure that the corrosion resistant properties are within the desired range.

DEMONSTRATED PERFORMANCE

Electro CRS Gold bars have been subjected for corrosion evaluation as per ASTM standards, comprising Alternate Immersion Test, Atmospheric Exposure Test, Sulphur Dioxide Test, Potentio Dynamic Test and have demonstrated resistance to corrosion.

The background of the entire page is a photograph of numerous TMT (Thermo-Mechanically Treated) reinforcement bars. These bars are arranged in a grid-like pattern, laid out on a construction site. They have a characteristic twisted, ribbed surface designed for better adhesion to concrete. The bars are a dark, metallic grey color, and the background shows some reddish-brown earth or concrete formwork.

PRODUCT ADVANTAGES

Made from high quality BIS certified billets produced in-house

Longer life due to superior pitting corrosion resistance

Can be bent and re-bent around very small mandrels

High yield strength coupled with ductility and bendability

Stringent quality control through NABL accredited in-house physical and chemical laboratories

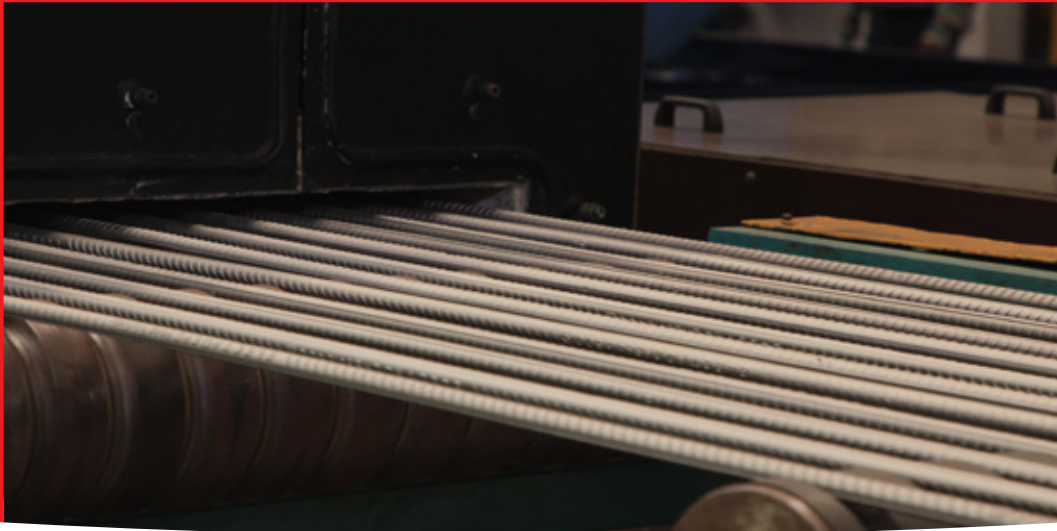
Suitable for application in seismic zones

Single largest production capacity of TMT bars in Gujarat 3.0 LTPA

ELECTRO TMT PLUS

	Unit	Required as per IS 1786:2008	Electro TMT Plus*	Required as per IS 1786:2008	Electro TMT Plus*
Grade		Fe 415	Fe 415	Fe 500	Fe 500
MECHANICAL PROPERTIES					
Yield Stress	N/mm ²	415 min.	450 min.	500 min.	520 min.
Tensile Strength	N/mm ²	485 min.	510 min.	545 min.	570 min.
Elongation	%	14.5 min.	18 min.	12 min.	18 min.
CHEMICAL COMPOSITION					
Carbon	%	0.30 max.	0.25 max.	0.30 max.	0.25 max.
Sulphur	%	0.06 max.	0.05 max.	0.055 max.	0.050 max.
Phosphorous	%	0.06 max.	0.06 max.	0.055 max.	0.055 max.
Sulphur & Phosphorous	%	0.11 max.	0.11 max.	0.105 max.	0.105 max.
Carbon Equivalent (C+mn/6)	%	—	0.38 max.	0.42 max.	0.40 max.

*Typical value for 90% of materials



PRODUCT RANGE AND NOMINAL WEIGHT

Diameter	Unit	Required as per IS 1786:2008, Fe 415	Electro TMT Plus
8 mm	kg/m	0.367 to 0.423	0.367 to 0.410
10 mm	kg/m	0.574 to 0.660	0.574 to 0.650
12 mm	kg/m	0.844 to 0.932	0.844 to 0.920
16 mm	kg/m	1.500 to 1.657	1.500 to 1.650
20 mm	kg/m	2.390 to 2.550	2.390 to 2.500
25 mm	kg/m	3.739 to 3.965	3.739 to 3.950
28 mm	kg/m	4.685 to 4.975	4.685 to 4.900
32 mm	kg/m	6.121 to 6.500	6.121 to 6.400

ELECTRO CRS GOLD

Grade	Unit	Fe 415	Fe 415
MECHANICAL PROPERTIES			
Yield Stress	N/mm ²	415 min.	450 min.
Tensile Strength	N/mm ²	500 min.	570 min.
Elongation	%	20 min.	18 min.
CHEMICAL COMPOSITION			
Carbon	%	0.15 max.	0.15 max.
Sulphur	%	0.040 max.	0.040 max.
Phosphorous	%	0.10 max.	0.106 max.
Manganese	%	0.90 max.	0.90 max.
Silicon	%	0.40 max.	0.40 max.
CRE*	%	0.50 max.	0.50 max.
Carbon Equivalent (C+mn/6)	%	0.40 max.	0.40 max.

*CRE : Corrosion Resistant Elements (Cu + P + Cr)



PRODUCT RANGE AND NOMINAL WEIGHT

Size in (mm)	Weight per metre (kg)
8	0.395
10	0.617
12	0.888
16	1.580
20	2.470
25	3.850
28	4.830
32	6.310
36	7.990

AREAS OF APPLICATIONS - ELECTRO CRS GOLD



Marine environment



Brackish ground water



Seismic zones



Industrial pollution



Saline sub-oil



High rainfall and humidity



BUILD IT RIGHT

Electrotherm (India) Limited, H0: 72, Palodia via Thaltej, Ahmedabad – 382115, Gujarat, India.

Email: steel@electrotherm.com | Ph.: +91 2717 660550 / 649

www.electrothermsteel.com

