PRIMARY MANUFACTURER

MADE FROM BILLETS & BLOOMS

STEEL

# A-ONE GOLD©

A-ONE GOLD TMT

## TMT BARS, MS TUBES & PIPES

A COMBINATION OF STRENGTH & FLEXIBILITY

## RASHTRA NIRMAN MEIN SAMARPIT!

# At A-ONE STEELS & ALLOYS

We are dedicated to serving the Nation, with a strongly rooted ethos to excel with Reliability and Quality of our products and services.

"RASHTRA NIRMAN MEIN SAMARPIT", is a Vision or an ingrained strength of A-ONE Group. We deliver High-Quality Infrastructure steel across South India. With the reputation of building the first Integrated Steel Plant with Online Charging Technology in Karnataka, we have stood by the years with of commitment, quality, customer responsiveness and integrity.

Our Brand A-ONE GOLD STEELS TMT BARS are one of the Top most leading brands in Karnataka today and we certify all this success to our dynamic Dealers Network, Traders, Partners, Well Wishers and End Users & Consumers.

# OUR VISION

**“Rashtra Nirman Mein Samarpit”**, is a Vision or an ingrained strength of A-ONE Group. “A-ONE Group” as the name suggests is dedicated to serve the Nation, with a strongly rooted ethos to excel with Reliability and A-ONE Quality of all its products and services.

# OUR MISSION

A-ONE Group achieves its Vision, every time it serves its dynamic dealers’ network, traders, partners, well wishers and end consumers. The group has always stood by its achievement of being the “Top Manufacturer of this region” in terms of Quality, Service, Reliability and its Excellent Steel Products. All this has been possible because of the State of the Art Manufacturing Facility, Professional and Talented Team; Excellent Technical and Sales & Marketing support.

**A-ONE Group is committed to a few cardinal core values, which are the guiding principles of the business.**

# A-ONE GOLD TMT BARS


# WE ARE

- Pioneers in TMT BAR Technology.
- South India's most awarded TMT Brand.
- South India's fastest growing TMT Brand.
- One among India's largest TMT Producers.
- A company with the Largest Consumer Base in over 6 states.
- The only Steel company to receive Karnataka Government Safety Award.
- One of the Leading Primary Steel Producers.

# A-ONE GOLD STEEL TUBES & PIPES

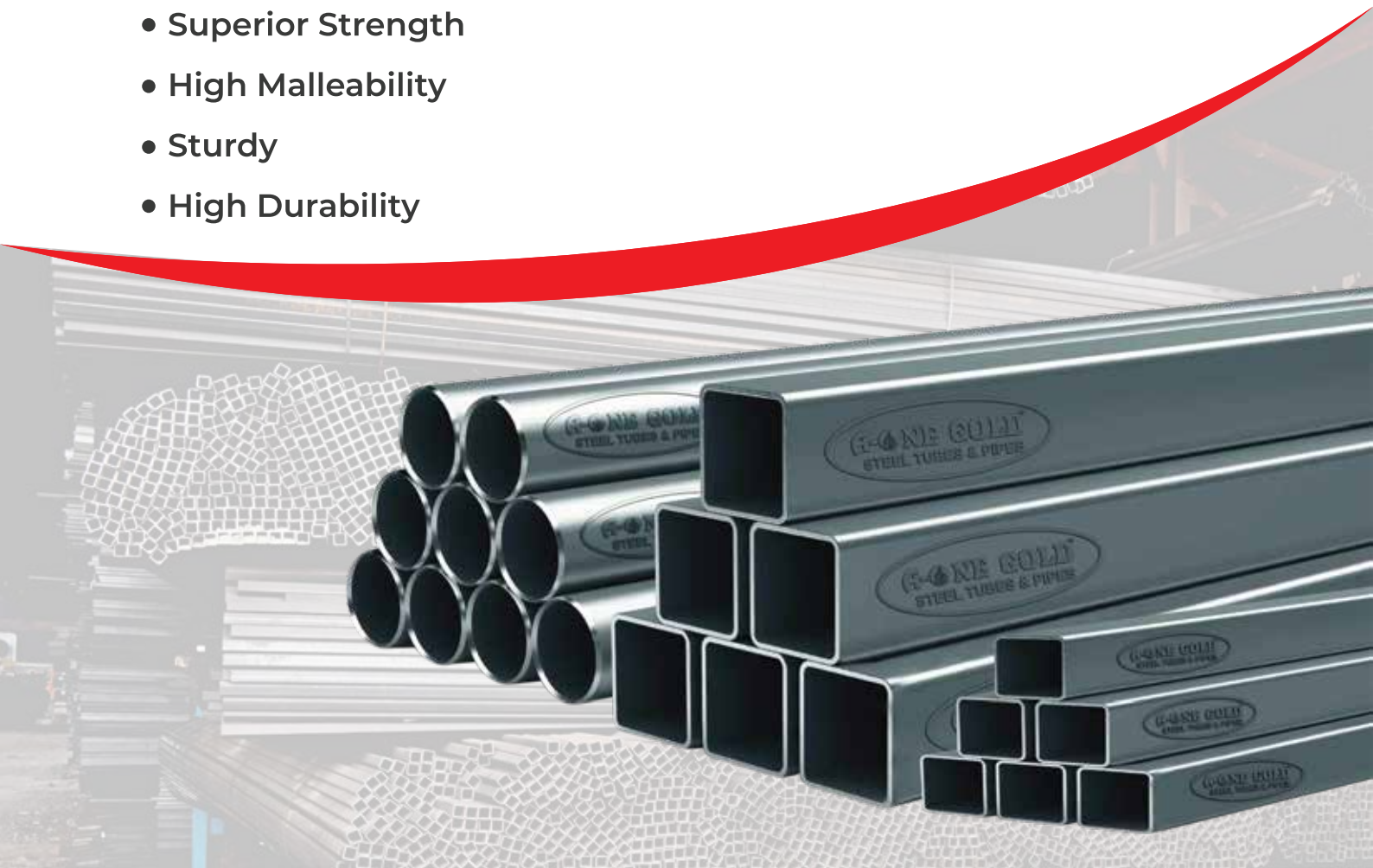
A-ONE Steel acts as a catalyst to take india to newer heights of steel. A-One Steel was conceived and built by Mr.Krishna Kumar Jalan. The plant is situated in the iconic grounds of Bellary, Karnataka and is built with the State of the Art Engineering Technology. Since its inception A-One Steel has been very keen in maintaining a technical base manufacturing unit that is specifically designed by the best engineers of the country.

A-One Steel Research and Development team has been focused entirely on the quality and the chemical composition of the steel manufactured every day. The quality of A-One Steel is tested for its critical parameters demanding perfection every hour.

A-One steel is one of the largest producers of Steel in Karnataka. With the union of more than Five plants, A-One Steel is making a redefining power plant generation and wind mill energy. The Blueprint of the future of steel making is here and A-One Steel has now pioneered LRF (Ladle Refining Furnaces) technology in steel manufacturing. A-One Steel have accomplished, as the Primary Steel producer.

To manufacture ERW Pipes and Tubes, we at A-One Steel Group utilize high-quality steel that is low in carbon, fully fine-grined, control-rolled and continuously casted. A-One Steel Group is proud of its Superior-Quality ERW Steel Pipes and Tubes, which are known for their quality and durability.

- **High-Strength Corrosion Resistance**
- **Superior Strength**
- **High Malleability**
- **Sturdy**
- **High Durability**



## PLANT & PRODUCTION

A-ONE steels is the largest self sustained integrated plant with the largest production quantity in South India. At Hindupur in Andhra Pradesh Structural Steel, Angles and Channels are produced with a 10,000 metric tonnes per month capacity and 1,20,000 metric tonnes per year. At Bellary in Karnataka, with a 22 mega watt power plant its production capacity is 25,000 metric tonnes per month and an annual production capacity of 3,00,000 metric tonnes. At Bellary Tubes, Pipes, Billets & Blooms are produced. At Gauribidanur Karnataka TMT Rods of size Fe500D, Fe550, Fe550D are produced. The Gauribidanur plant has a production capacity of 20,000 metric tonnes per month which comes up to 2,40,000 metric tonnes per year. The Steel plant in Koppal produces TMT bars with a production capacity of 20,000 metric tonnes per month which comes up to 2,40,000 metric tonnes per year.

The production quantity and quality is the largest in South India, which makes A-ONE STEEL the Largest Steel producers in South India.

# RAW MATERIAL PROCESSING

Consistent Raw Material Quality
Largest In State

HIGHEST GRADE
Raw Material

IRON ORE PROCESSING
Largest in State

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## GERMAN TECHNOLOGY

100% Automatic German Rolling Mill
Latest German Thermex QST Technology

# BLOOMS for highest and finest quality of steel bars

The finest raw material is processed to form Blooms, which is the source of high quality TMT Bars. Bloom of size, 12 mtr 160x160 sq.cm., is used only by primary steel manufacturers. This results in better quality steel compared to secondary manufacturers using 6 mtr billet of 100x100 sq.cm

While the average billet size is 16 sq. inches and weight 500 kg. A-One Gold Blooms are of 40 sq. inches size and weighs 2500 kg

### Bloom makes better steel than Billets because :

- **Bloom is 5 times heavier than Billet.**
- **Bloom is 500% more consistent.**
- **Bloom has a better grain structure.**
- **Slower heat loss of Blooms ensures higher uniform quality across the bar.**

BLOOM BILLET

# THERMEX (QST) TECHNOLOGY

The Quenching and Self Tempering process as per A-One Thermex makes use of the heat energy of the rolled bars after the finishing stand of the rolling mill. Normally this energy is totally wasted as the rolled bars at 950-1000°c are allowed to cool at ambient temperature on the cooling bed.

The Bar as it leaves the last stand guided through specially designed proprietary Thermex Pipes, where in the surface temperature of 950-1000°c is brought down drastically in a relatively short period of time, approximately in 1 second on account of the core being largely unaffected.

The drastic and pre-determined cooling of the bars periphery, transforms the peripheral structure to Martensite and would nessessarily need to be annealed to render the bars useful. This annealing is achieved through the heat available at the core. The difference in the peripheral and the core temperature is finally equalized at around 600°c and the resultant bar structure is of tempered martensite at Periphery and of fine-grained Ferrite-Pearlite at the core.

Generally speaking, the resultant soft core forms about 65 - 75% of the area (Depending up on the desired minimum yield strength) and the rest is the hardened periphery. The product exhibits high yield point, surface hardness, toughness, ductility and weldability. The final product cross-section is shown along side in the following figure.


## CHEMICAL COMPOSITION

| CHEMICAL | UNIT | IS 1786:2008 (Gr.-Fe-500) | A-ONE THERMEX TMT (Gr.-Fe-500) | IS 1786:2008 (Gr.-Fe-500 D) | A-ONE THERMEX TMT (Gr.-Fe-500 D) | IS 1786:2008 (Gr.-Fe-550) | A-ONE THERMEX TMT (Gr.-Fe-550) | IS 1786:2008 (Gr.-Fe-550 D) | A-ONE THERMEX TMT (Gr.-Fe-550 D) |
|---|---|---|---|---|---|---|---|---|---|
| Carbon | 0% | 0.3 | 0.25 | 0.25 | 0.18-0.22 | 0.3 | 0.25 | 0.25 | 0.18-0.22 |
| Sulphur | 0% | 0.055 | 0.05 | 0.04 | 0.03 | 0.055 | 0.05 | 0.04 | 0.03 |
| Phosphorus | 0% | 0.055 | 0.05 | 0.04 | 0.03 | 0.05 | 0.045 | 0.04 | 0.03 |
| S&P | 0% | 0.105 | 0.1 | 0.075 | 0.06 | 0.1 | 0.095 | 0.075 | 0.06 |

## MECHANICAL PROPERTIES

| MECHANICAL PROPERTIES | UNIT | IS 1786:2008 (Gr.-Fe-500) | A-ONE THERMEX TMT (Gr.-Fe-500) | IS 1786:2008 (Gr.-Fe-500 D) | A-ONE THERMEX TMT (Gr.-Fe-500 D) | IS 1786:2008 (Gr.-Fe-550) | A-ONE THERMEX TMT (Gr.-Fe-550) | IS 1786:2008 (Gr.-Fe-550 D) | A-ONE THERMEX TMT (Gr.-Fe-550 D) |
|---|---|---|---|---|---|---|---|---|---|
| Yield Stress (Min) | N/mm² | 500 | 530 | 500 | 520 | 550 | 560 | 550 | 570 |
| Yield Stress (Max) | N/mm² | 540 | 590 | 565 | 600 | 610 | 585 | 630 | 660 |
| Safety Factor | Ratio | 1.08 | 1.11 | 1.1 | 1.15 | 1.06 | 1.1 | 1.06 | 1.1 |
| Elongation | % | 12.0 | 16.0 | 16.0 | 18.0 | 10.0 | 16.0 | 14.5 | 16.0 |

## CAPTIVE POWER PLANT

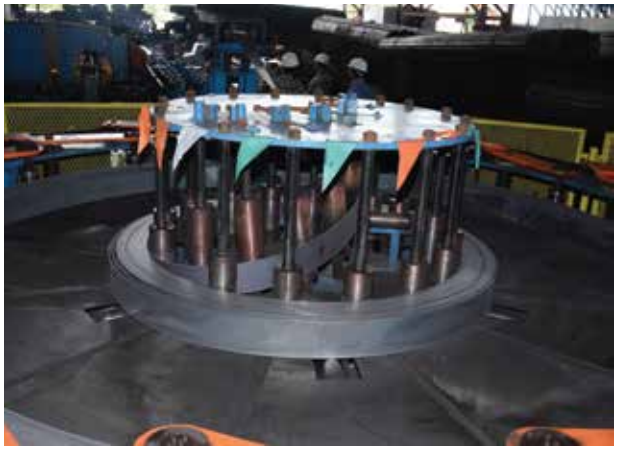
The CCP consists of Four Waste Heat Recovery Boiler (WHRB), One Atmospheric Fluidised Combustion Boiler (AFCB) and Two Condensing Turbo Generator of 23 MW. Total capacity of Power Generation is 23 MW

## SPONGE IRON

Sponge iron is obtained by direct reduction (elimination of oxygen) of iron ore, without melting it in a blast furnace. Sponge iron is an intermediate iron product used as a substitute for steel scrap while producing steel through the electric induction furnace route, the entire production of sponge iron is consumed in-house for manufacturing of MS Billets.

## M.S. BILLETS

The Billets being a semi-finished product is used as a feedstock for rolling mill for production of long products like wire-rods and structurals. Steel Billets is also used extensively in forge shops and also as feed-stock for seamless tubes. A-One consumes entire billets in-house for manufacturing rolling products.



## ROLLING MILL

Rolling product are manufactured using M.S. Billets as the main feed-stock. At 100% capacity utilization, the plant would require 4,00,000 MTPA (Considering 4.6% as wastage / scrap) of M.S.Billets. Since our own Billets casting capacity is around 4,00,000 MTPA. The entire production of M.S. Billets is confirming to the internation-al standard.

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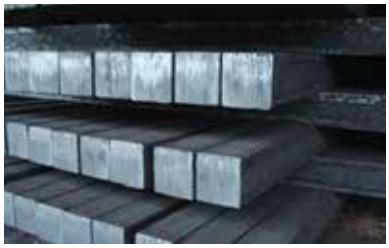
# THERMEX TMT BARS


Processing of Raw Materials


Charging Into Furnace


Conversion To Billets


Quenched Billets


Cooling Beds


TMT Rolling


Ribbing


Bending


Bundling & Stacking


Labelling & Packing


A-One TMT BARS DISPATCH

## SECTION WEIGHT

| SECTION | A-ONE WEIGHT RANGE (Kg./Mtr.) | Average Wt. of A-ONE TMT (Kg./Mtr.) | Average Market Std.Wt. TMT (Kg./Mtr.) | Saving with A-ONE TMT upto | |
|---|---|---|---|---|---|
| | | | | In Weight (Kg./Mtr.) | In % |
| 8 | 0.367-0.395 | 0.381 | 0.408 | 0.027 | 7.06 |
| 10 | 0.574-0.617 | 0.595 | 0.638 | 0.043 | 7.15 |
| 12 | 0.844-0.888 | 0.866 | 0.910 | 0.044 | 5.12 |
| 16 | 1.501-1.579 | 1.540 | 1.618 | 0.078 | 5.05 |
| 20 | 2.396-2.467 | 2.432 | 2.504 | 0.072 | 2.98 |
| 25 | 3.375-3.755 | 3.795 | 3.907 | 0.112 | 2.96 |
| 32 | 6.121-6.314 | 6.312 | 6.408 | 0.190 | 3.05 |

A-ONE THERMEX TMT BARS are produced in Fe 500, Fe 500D, Fe 550D, CRS confirming to IS: 1786 Grade. However carbon levels are restricted much lower than those confirming to specification, which results in excellent ductility, high bendability and superior weldability. **(In case of Weldable Bars the Carbon content should be 0.25% Max.)

## MECHANICAL PROPERTIES

Because of its unique method of manufacturing, A-ONE TMT processes a combination of strength and ductility that is far in excess of the minimum limit specified in the standard IS: 1786. In case of yield strength for A-ONE TMT, though the standard specifies a minimum of 500 N/mm$^2$ and designers use this value for design, the typical values are as high as 550 N/mm$^2$. For the same product, the typical value to ductility as measured by enlongation is 18% minimum as against the standard value of 14.5% minimum. Undoubtedly these superior values of strength and ductility are a guarantee of a higher level of safety.

## BENDABILITY

The tough outer surface and soft core of A-ONE TMT results in a rebar with excellent Bendability. The bar can be bent easily around mandrels much smaller in diameter than what is specified in IS: 1786. This has an obvious advantage at construction sites.

## DIMENSION TOLERANCE

A-ONE TMT is supplied with sectioned weight lower than the nominal value and is guaranteed for not more than 1% heavy. This ensures higher meterage per unit weight for A-One TMT compared to ordinary rebars.

## SEISMIC RESISTANCE PROPERTIES

Several studies were conducted on concrete beam column joints reinforced with A-ONE TMT to evaluate its performance under repeated reversed condition during an earthquake. The energy dissipation was found to be almost same for each cycle, indicating uniformly maintained ductility untill the failure is last revealed for the superior seismic resistant property for A-ONE TMT.

## CORROSION RESISTANT CHARACTERISTICS

Even TMT is produced by Thermo-Mechanical Treatment and not by cold twisting. Therefore there are no torsional reducing stress in bar which results in superior corrosion resistance characteristics compared to traditional cold twisted bar. On account of its composite and uniform micro-structure A-ONE TMT has comparatively better corrosion resistant properties compared to other TMT bars while being embedded inside concrete.

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# HOW IS A–ONE TMT SUPERIOR

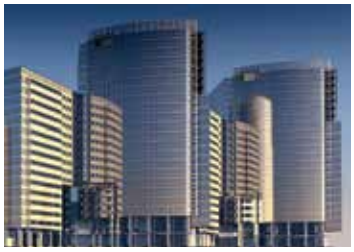
| | | |
|---|---|---|
|  IRON ORE | Uses virgin Iron-ore and deploys state-of-the-art Steel making and refining process | High Clean & Homogenous Steel Quality. |
|  DRI-EIF-LRF-CCM | Steel is made using DRI - EIF - LRF CCM Routing | A highly controlled steel chemistry with very low level of Sulphur & Phosphorus. |
|  UNIQUE POSITION | Only brand in South India with 0.25 million tonnes capacity like main steel plants. | Prime Quality at Premium Price |
|  UNIFORM RIB PATTERN | Provides Precise and Uniform parallel rib pattern engraved through computer controlled Robot notch making machines | Excellent Bond strength with concrete |
| EARTHQUAKE RESISTANT | Exceeds UTS / YS (Ultimate tensile strength to Yield strength) ratio and High percentage elongation | Superior earthquake resistant quality due to high capability of absorbing energy |
| UNIFORM PRICES | Has Predefined and Transparent Pricing | Fixed and Uniform rates |
| A-ONE GOLD TMT BARS, MS TUBES & PIPES A COMBINATION OF STRENGTH & FLEXIBILITY TRUST WORTHY | Is a Renowned & an Award Winning Brand | World Class Quality |

# STEEL PIPES & TUBES

ERW Black Steel Pipes and Tubes are used for various engineering purposes, fencing, scaffolding, line pipes etc. These Pipes & Tubes are available in various qualities, wall thickness, diameter and finishes depending on the requirement of the end user. In manufacturing these ERW Pipes and Tubes. we utilize superior quality, continuous casted, fully kilned, fine-grain, control-rolled, low carbon steel. High Strength Corrosion Resistance, high malleability , superior strength, sturdy & durability are the special features of high performance ERW Steel Pipes & Tubes that are manufactured by us.

# APPLICATION

Agriculture



Construction

Industries

Infrastructure

Oil Sectors

Spherical & Square Pipes

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# Dimension and Properties of Square Hollow Section :

| DESIGNATION IN MM | THICKNESS IN MM | Depth or Width in mm | WEIGHT in Kg./mtr. | Area of Section $CM^2$ | Moment of Inertia about $cm^4$ | Radius of Gyration cm | Elastic Modulus $cm^3$ | Plastic Modulus $cm^3$ |
|---|---|---|---|---|---|---|---|---|
| 20 x 20 | 2 | 20 | 1.12 | | | | | |
| | 2.5 | 20 | 1.35 | | | | | |
| 25 x 25 | 2.6 | 25 | 1.69 | 2.16 | 1.72 | 0.89 | 1.38 | 1.76 |
| | 3.2 | 25 | 1.98 | 2.53 | 1.89 | 0.86 | 1.51 | 1.98 |
| | 2.6 | 30 | 2.1 | 2.68 | 3.23 | 1.1 | 2.15 | 2.68 |
| 30 x 30 | 3.2 | 30 | 2.49 | 3.17 | 3.62 | 1.07 | 2.41 | 3.08 |
| | 4 | 30 | 2.26 | 3.75 | 3.97 | 1.03 | 2.64 | 3.5 |
| | 2.6 | 32 | 2.69 | 2.88 | 4.02 | 1.18 | 2.51 | 3.11 |
| 32 x 32 | 2.9 | 32 | 3.19 | 3.42 | 4.54 | 1.15 | 2.84 | 3.59 |
| | 4 | 32 | 2.75 | 4.07 | 5.02 | 1.11 | 3.14 | 4.11 |
| | 2.6 | 38 | 3.29 | 3.51 | 7.14 | 1.43 | 3.76 | 4.57 |
| 38 x 38 | 2.9 | 38 | 3.63 | 3.86 | 7.68 | 1.41 | 4.04 | 4.97 |
| | 3.2 | 38 | 3.63 | 4.19 | 8.18 | 1.4 | 4.3 | 5.34 |
| | 3.6 | 38 | 3.95 | 4.62 | 8.76 | 1.38 | 4.61 | 5.8 |
| | 4 | 38 | 2.92 | 5.03 | 9.26 | 1.36 | 4.87 | 6.22 |
| 40 x 40 | 2.6 | 40 | 3.49 | 3.72 | 8.45 | 1.51 | 4.22 | 5.12 |
| | 3.2 | 40 | 3.85 | 4.45 | 9.72 | 1.48 | 4.86 | 6.01 |
| | 3.6 | 40 | 4.2 | 4.91 | 10.45 | 1.46 | 5.22 | 6.53 |
| | 4 | 40 | 4.07 | 5.35 | 11.07 | 1.44 | 5.54 | 7.01 |
| 49.5 x 49.5 | 2.9 | 49.5 | 4.93 | 5.19 | 18.37 | 1.88 | 7.42 | 8.93 |
| | 3.6 | 49.5 | 5.95 | 6.28 | 21.42 | 1.85 | 8.66 | 10.6 |
| | 4.5 | 49.5 | 6.91 | 7.58 | 24.64 | 1.8 | 9.96 | 12.47 |
| 72 x 72 | 3.2 | 72 | 8.22 | 8.54 | 66.32 | 2.79 | 18.42 | 21.8 |
| | 4 | 72 | 9.66 | 10.47 | 79.03 | 2.75 | 21.95 | 26.32 |
| | 4.8 | 72 | 9.67 | 12.31 | 90.31 | 2.71 | 25.09 | 30.49 |

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# Dimension and Properties of Rectangular Hollow Section :

| DESIGNATION IN MM | THICKNESS IN MM | Depth or Width in mm | Width of Sector in mm | Weight in Kg/meter | Area of Section $CM^2$ | Moment of Inertia about $cm^4$ | | Radius of Gyration cm | | Elastic Modulus $cm^3$ | | Plastic Modulus $cm^3$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | B | | | X-X | Y-Y | X-X | Y-Y | X-X | Y-Y | X-X | Y-Y |
| 40 X 20 | 1.6 | 40 | 20 | 1.44 | | | | | | | | | |
| | 2 | 40 | 20 | 1.78 | | | | | | | | | |
| | 2.5 | 40 | 20 | 2.2 | | | | | | | | | |
| 50 X 25 | 2.9 | 50 | 25 | 2.98 | 3.8 | 10.93 | 3.6 | 1.7 | 0.97 | 4.37 | 2.88 | 5.72 | 3.48 |
| | 3.2 | 50 | 25 | 3.24 | 4.13 | 11.63 | 3.6 | 1.68 | 0.96 | 4.65 | 3.04 | 6.14 | 3.73 |
| 60 X 40 | 2.9 | 60 | 40 | 4.12 | 5.25 | 24.74 | 13.11 | 2.17 | 1.58 | 8.25 | 6.56 | 10.25 | 7.73 |
| | 2.9 | 66 | 33 | 4.07 | 5.19 | 27.33 | 9.12 | 2.29 | 1.33 | 8.28 | 5.53 | 10.59 | 6.49 |
| 66 X 33 | 3.6 | 66 | 33 | 4.93 | 6.28 | 31.87 | 10.52 | 2.25 | 1.29 | 9.66 | 6.37 | 12.56 | 7.66 |
| | 4.5 | 66 | 33 | 5.95 | 7.58 | 36.64 | 11.93 | 2.2 | 1.25 | 11.1 | 7.23 | 14.77 | 8.94 |
| | 2.9 | 80 | 40 | 5.03 | 6.41 | 50.87 | 17.11 | 2.82 | 1.63 | 12.72 | 8.56 | 16.07 | 9.88 |
| 80 X 40 | 3.2 | 80 | 40 | 5.5 | 7.01 | 54.94 | 18.41 | 2.8 | 1.62 | 13.74 | 9.21 | 17.46 | 10.75 |
| | 4 | 80 | 40 | 6.71 | 8.55 | 64.79 | 21.49 | 2.75 | 1.59 | 16.2 | 10.74 | 20.19 | 12.77 |
| | 3.2 | 96 | 48 | 6.71 | 8.54 | 98.61 | 33.28 | 3.4 | 1.97 | 20.54 | 13.87 | 25.85 | 15.91 |
| 96 X 48 | 4 | 96 | 48 | 8.22 | 10.47 | 117.54 | 39.32 | 3.55 | 1.94 | 24.49 | 16.3 | 31.21 | 19.14 |
| | 4.8 | 96 | 48 | 9.66 | 12.31 | 134.35 | 44.55 | 3.3 | 1.9 | 27.99 | 18.56 | 36.13 | 22.08 |
| | 3.6 | 122 | 61 | 9.67 | 12.32 | 232.61 | 78.83 | 4.34 | 2.35 | 38.13 | 25.84 | 47.71 | 29.42 |

## Tolerances :

Thickness All Size : = 10%
Outside Dimension of Sides : 1% with a minimum of = / -0.5 mm Weight
On Individual : + 10%
On Individual : - 8%
On Lots of 10 Ton, Nmin : +7.5%
Squareness of Corners : 90 degree + 2 degree
Radii of the Corners-Outside 3t, Max. where “t” is the Thickness of the Section
Length : +6 mm
Customised Length ranging from 4 Mtr. to 15 Mtr. may be supplied.

## Tensile Properties of Hollow Section :

| GRADE | Tensile Strength | Yield Stress | ELONGATION | |
|---|---|---|---|---|
| | Min. MPa | Min. MPa | | |
| Yst 210 | 330 | 210 | 12 | 20 |
| Yst 240 | 410 | 240 | 80 | 15 |
| Yst 310 | 450 | 310 | 8 | 10 |

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# Dimension and Properties of Square Hollow Section :

| NB NOMINAL BORE in mm | Outside Diameter in mm | Thickness(WT) in mm | Weight (Mass) Kg /mtr | Area of Cross Section $cm^2$ | Internal Volume $cm^3$ / m | Surface | | Moment of Inertia $cm^4/m$ | Modulus of Section $cm^3$ | Radius of Gyration cm | Square of Radius of Gyration $cm^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | External $cm^3/m$ | Internal $cm^3/m$ | | | | |
| 15 | 21.3 | 2 | 0.952 | 1.21 | 235 | 669 | 543 | 0.57 | 0.54 | 0.69 | 0.47 |
| | 21.3 | 2.6 | 1.2 | 1.53 | 204 | 669 | 506 | 0.68 | 0.64 | 0.67 | 0.45 |
| | 21.3 | 3.2 | 1.43 | 1.82 | 174 | 669 | 468 | 0.77 | 0.72 | 0.65 | 0.42 |
| 20 | 26.9 | 2.3 | 1.4 | 1.78 | 391 | 845 | 701 | 1.36 | 1.01 | 0.87 | 0.76 |
| | 26.9 | 2.6 | 1.56 | 1.98 | 370 | 845 | 682 | 1.48 | 1.1 | 0.86 | 0.75 |
| | 26.9 | 3.2 | 1.87 | 2.38 | 330 | 845 | 644 | 1.7 | 1.27 | 0.85 | 0.71 |
| 25 | 33.7 | 2.6 | 1.99 | 2.54 | 638 | 1059 | 895 | 3.09 | 1.84 | 1.1 | 1.22 |
| | 33.7 | 3.2 | 2.41 | 3.07 | 585 | 1059 | 858 | 3.6 | 2.14 | 1.08 | 1.18 |
| | 33.7 | 4 | 2.93 | 3.73 | 519 | 1059 | 807 | 4.19 | 2.49 | 1.06 | 1.12 |
| 32 | 42.4 | 2.6 | 2.55 | 3.25 | 1087 | 1332 | 1169 | 6.46 | 3.05 | 1.41 | 1.99 |
| | 42.4 | 3.2 | 3.09 | 3.94 | 1018 | 1332 | 1131 | 7.62 | 3.59 | 1.39 | 1.93 |
| | 42.4 | 4 | 3.79 | 4.83 | 929 | 1332 | 1081 | 8.99 | 4.24 | 1.36 | 1.86 |
| 40 | 48.3 | 2.9 | 3.25 | 4.14 | 1419 | 1517 | 1335 | 10.7 | 4.43 | 1.61 | 2.59 |
| | 48.3 | 3.2 | 3.56 | 4.53 | 1379 | 1517 | 1316 | 11.59 | 4.8 | 1.6 | 2.56 |
| | 48.3 | 4 | 4.37 | 5.57 | 1276 | 1517 | 1266 | 13.77 | 5.7 | 1.57 | 2.47 |
| 50 | 60.3 | 2.9 | 4.11 | 5.23 | 2333 | 1894 | 1712 | 21.59 | 7.16 | 2.03 | 4.13 |
| | 60.3 | 3.6 | 5.03 | 6.41 | 2215 | 1894 | 1668 | 25.87 | 8.58 | 2.01 | 4.02 |
| | 60.3 | 4.5 | 6.19 | 7.89 | 2067 | 1894 | 1612 | 30.9 | 10.25 | 1.98 | 3.92 |
| 65 | 76.1 | 2.9 | 5.24 | 6.67 | 3882 | 2391 | 2209 | 44.74 | 11.76 | 2.59 | 6.71 |
| | 76.1 | 3.6 | 6.44 | 8.2 | 3278 | 2391 | 2165 | 54.01 | 14.19 | 2.57 | 6.59 |
| | 76.1 | 45 | 7.95 | 10.12 | 3536 | 2391 | 2108 | 65.12 | 17.11 | 2.54 | 6.43 |
| 80 | 88.9 | 3.2 | 6.76 | 8.62 | 5346 | 2793 | 2592 | 79.21 | 17.82 | 3.03 | 9.19 |
| | 88.9 | 4 | 8.38 | 10.67 | 5140 | 2793 | 2542 | 96.34 | 21.67 | 3 | 9.03 |
| | 88.9 | 4.8 | 9.96 | 12.68 | 4939 | 2793 | 2491 | 112.49 | 25.31 | 2.98 | 8.87 |

## MECHANICAL PROPERTIES

| Tensile Properties | Tensile Strength | Yield Strength | Elongation on Guage length |
|---|---|---|---|
| | Min MPa | Min MPa | 5.56 Min Percent |
| Yst 210 | 330 | 210 | 20 |
| Yst 240 | 410 | 240 | 17 |
| Yst 310 | 450 | 310 | 14 |
| Yst 315 | 490 | 355 | 10 |

| TOLERANCE | THICKNESS | Notes |
|---|---|---|
| Upto & Including +0.4 mm | +10% | 1. 1 Mpa = 1N/MM2=0.102 KGF/MM2 |
| 48.3 mm -0.8 mm | | 2. Elongation Percent for tube upto and including |
| Over 48.3 mm +1.0% | | 25 mm nominal bore for all grades shall be 12 minimum |

# STRUCTURAL STEEL

Structural Steel is mainly used for the purpose of building Steel Structures, and it is also known as Section Steel in common terms.

Steel Structures are constructed using these Structural Steel by fabrications as per requirment and ideas of the Structural Steel engineer.

Structural Steel is mainly used in Fabrication or Construction of various Heavy and Light Structures, like Bridges, Towers, Industrial Sheds, Ware House, Gates, Doors, Grills, Windows, Etc.

Structural Steel is available in a wide range of shapes-Beam, Angles, Channels, Flats, Squares Etc. The most important element of Structural Steel is analyzed by its Carbon and Steel content. Structural Steel is categorized based on its chemical composition. There are Mild Structural Steel and Carbon-Manganese Steel: The most important ingredient of Mild Structural Steel are Iron, Carbon and Manganese. The Strength and Ductility are high, and are widely used due to its Commercial viability. Structural Steel has high Strength, Superior Bendability, and better Weldability because of its shapes and appriopriate chemical composition.

A-ONE GOLD
TMT BARS, MS TUBES & PIPES
A COMBINATION OF STRENGTH & FLEXIBILITY

# WHY JALAN STRUCTURES?

- Self Sourcing of Raw Materials
- Integrated Manufacturing Facility
- In-House Research and Development
- Highly Experienced Technical Team
- Best Chemical Composition
- Better Quality Control
- High Strength & Ductility
- Available in all Shapes and Sizes
- One Stop for all Structural Steel Requirements
- Economically Viable
- Wide Range & Network

# OUR HISTORY

A-ONE Group has always been a forerunner in Steel Manufacturing driven by strong Principles. We are humbled and honoured to be one of the biggest players in the market! With our services lined up ranging from STEEL for Infrastructure and Development activities - Billets, TMT Steel Bars, MS Steel Rods & Structural Steel - We are truely a full-cycle operator.

Maintaining a set of strong and consistent work ethics has always been important for us, throughout all the years we are in business. That's all because, for us being ahead of schedule and ahead of the competition is not just our work, but our motto and a lifestyle.

**Mr. Krishan Kumar Jalan**

He is a very wise, calm and impactful person who beams with optimism. He is a Commerce Graduate with over 40 years of experience in entrepreneurial initiatives and business. With over 10 years experience in the steel industry, He is the Chairman of A-ONE Group actively involved in imbibing Excellence, Integrity, Business Ethics and focuses all his time in innovating the Corporate Strategy and New Initiatives of the business.

**Mr. Sunil Kumar Jalan aka Jullian**

He is the Director of A-ONE Group and his primary focus is on Technology, Human Resource, Operations of the Companies and Strategizes the Sales, Finance & Accounting Objectives.

**Mr. Sandeep Kumar Jalan**

He is the Technical-Director of A-ONE Group, managing Technical operations of the Group Companies and looks after the purchases, Production & brings on New Innovations for the Company.

A-ONE Group is very Optimistic about the ability of the team across the company, whether it is the experienced technical staff for production or maintenance, finance and accounts team, HR personnel, Purchase team, Administration team and Sales & Marketing Team.

# REACH US AT

**Corporate Office :**

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1st Floor/'D' Block, Sahakaranagar,
Bangalore-560 092
Karnataka, India.

**Works :**

Plot No.IP 62 & 63, Road No.3,
KIADB Industrial Area,
Gauribidanur-561 208
Dist- Chickaballapur Dist,
Karnataka, India.

**Works :**

Ward No.2, Plot No.412,
Sidiginamola Village,
Bellary-Alur Highway,
Bellary-561208 Karnataka

**Aaryan Hitech Steels India Pvt. Ltd.**

Plot No.IP 68 & IP 69,
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Email - office@aonesteelgroup.com
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A-ONE GOLD©

**TMT BARS, MS TUBES & PIPES**

**A COMBINATION OF STRENGTH & FLEXIBILITY**

**RASHTRA NIRMAN MEIN SAMARPIT!**

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