



***Kashi Vishwanath Steels Pvt. Ltd.***

Narain Nagar Industrial Estate, Bazpur Road, Kashipur-244713 (Uttarakhand)

Tel.: 05947-262109, 262209, 262138 Fax : 05947-262103

Regd. Office : D-6, Vivek Vihar, Phase-1, Delhi-110095

E-mail : [kvspremier@kvspremier.com](mailto:kvspremier@kvspremier.com) Website : [www.kvspremier.com](http://www.kvspremier.com)

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THE LEGACY CONTINUES...

POWERCON TMT BARS • ANGLE • CHANNEL • FLAT • SQUARE • ROUND

# A TRADITION OF EXCELLENCE



With leading-edge manufacturing technologies, KVS Premier Group seeks to excel by providing the best quality products and the best possible service to the customers. The focus on continuous improvement and proficient R&D has enabled the group to stay ahead in the industry. Applauded for its tough construction, superb finishing & high durability, KVS Premier Group Construction Steel range (TMT Bars & Light Structural Steel) represents reliability and quality to customers.

KVS Premier Group is proud to be a part of the legacy that is earned over last three decades and aspires to become an epitome of excellence. Highly Respectable Jindal-Galwalia family have always been the driving force behind the company's outstanding growth story. The group also feels privileged and enjoys the blessings of the Group Chairman Mr. Mithlesh Kumar Galwalia.

Under the enterprising, dynamic & visionary leadership of Mr. Devendra Kumar Agrawal as Managing Director, ably supported by his son Mr. Arpan Jindal, Director, the group has attained new heights of excellence and recognition. With the combined force of innovation, adaptation of new technologies, the group, is consistently striving to attain its set goals of delivering assured quality, responsive service, establishing new benchmarks and achieve the pinnacle of success in the industry.



## FROM THE MD'S DESK

With India moving ahead with confidence on the economic growth trajectory, secondary steel industry in the country is also growing at a matching pace. KVS Premier Group, having seen various trade cycles and having achieved many laurels during its journey spanning last thirty years, continues to stand fully committed to producing innovative products conforming to strict quality standards, so as to retain the hard earned customer satisfaction and make its humble contribution in nation building.

KVS Premier Group has always been known as a symbol of excellence and customer service. As a part of its endeavour, the group offers a wide range of more than 60 product combinations in the field of Construction, Steel and Light Structural sections to its customers to meet their total requirements under one roof. Not one to sit on the laurels of its past achievements, the group strives consistently to adopt latest technology and practice cost cutting measures so as to minimize product cost without compromising on quality and staying sensitive towards environmental conservation. With the intent to protect and promote interests of all its stakeholders, KVS Premier Group rededicates itself to the object of continued exploration of new horizons and achieving greater heights in the times to come.

**DEVENDRA KUMAR AGRAWAL**  
(MANAGING DIRECTOR)

ESTABLISHING **NEW**  
**BENCH MARKS**  
BY PRESENTING **NEW**  
**GENERATION**  
HEAT TREATED TMT BARS

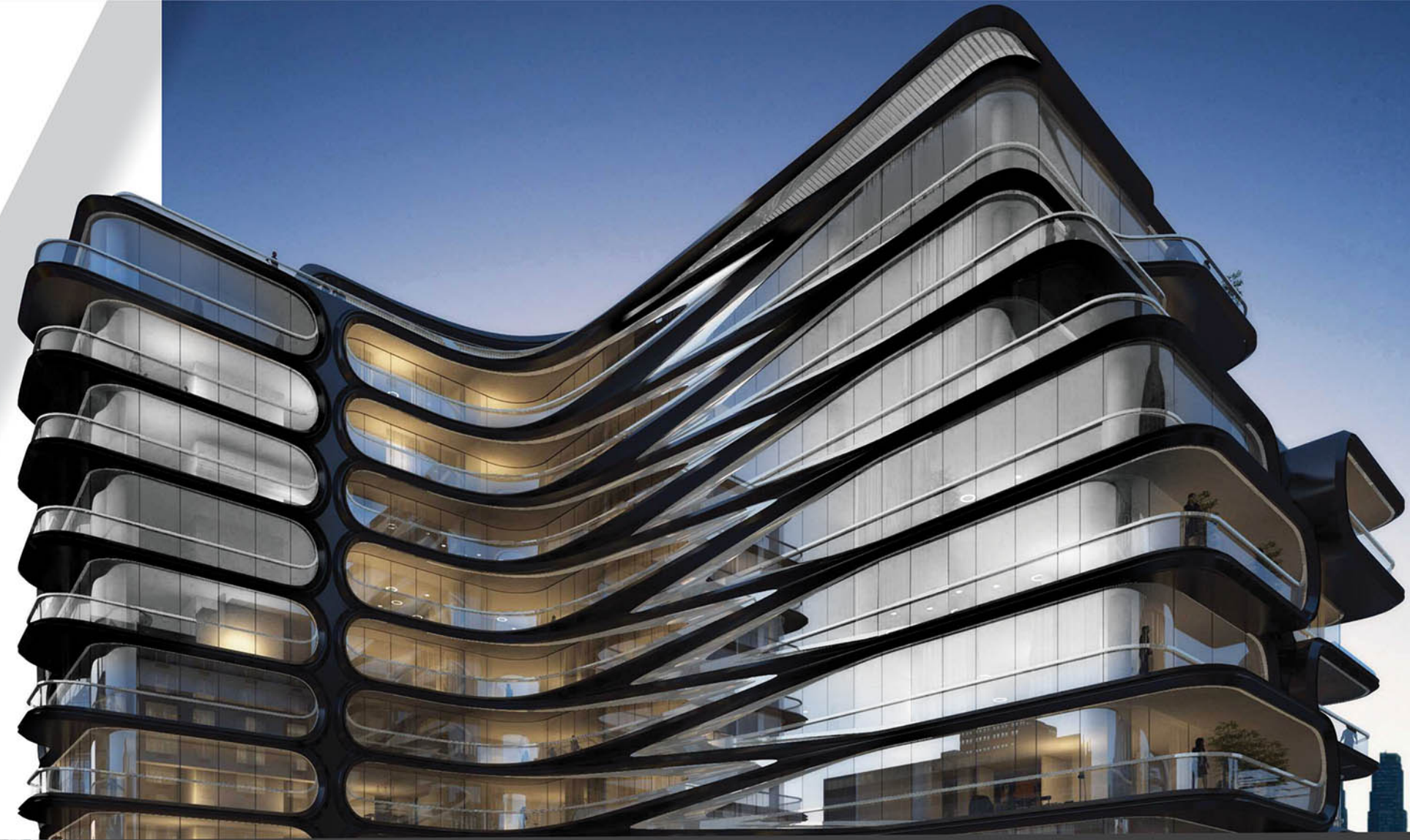
KVS **POWERCON** TMT BARS

KVS POWERCON HEAT TREATED TMT BARS with superior and elastic energy absorbing features are best suited for construction in seismic / non seismic zones, modern construction and structures of high public and strategic importance.

KVS POWERCON TMT BARS are characterized by higher UTS / YS ratio due to which they are capable of absorbing more energy if loaded beyond yield point due to sudden loading as experienced during an earthquake.

KVS POWERCON TMT BARS exhibit minimum Elongation with guaranteed UTS / YS ratio as per BIS. This enables the material to withstand sudden load absorption capacity, which is encountered during earthquake, cyclones, tsunamis etc. thus providing higher safety.

KVS POWERCON TMT BARS are in full conformity with IS : 1786:2008 Grade Fe 415 / 415D, Fe500 / 500D and Fe 550 / 550D specifications.



## MANUFACTURING FACILITIES

- Multiple Induction Furnaces for production of superior and regulated quality of Billets.
- Double Stand 4 / 7 meter Continuous Casting Machine (CCM) Integrated with an Automated Rolling Mill.

KVS POWERCON TMT Bars  
Available Sizes (in mm)

|    |    |    |    |
|----|----|----|----|
| 8  | 10 | 12 | 16 |
| 20 | 25 | 28 | 32 |



# THE **TECHNOLOGICAL** ADVANTAGE IN PROCESS

## TURBO COOLING SYSTEM FOR HEAT TREATMENT PROCESS

KVS POWERCON TMT BARS draw their strength from a computer controlled inline process of hardening & tempering, which involves:

### QUENCHING

The hot rolled bar leaves the final mill stand and is rapidly quenched by a special water spray system. This converts the surface layer of the bar to a hardened structure called Martensite while the core remains austenitic.

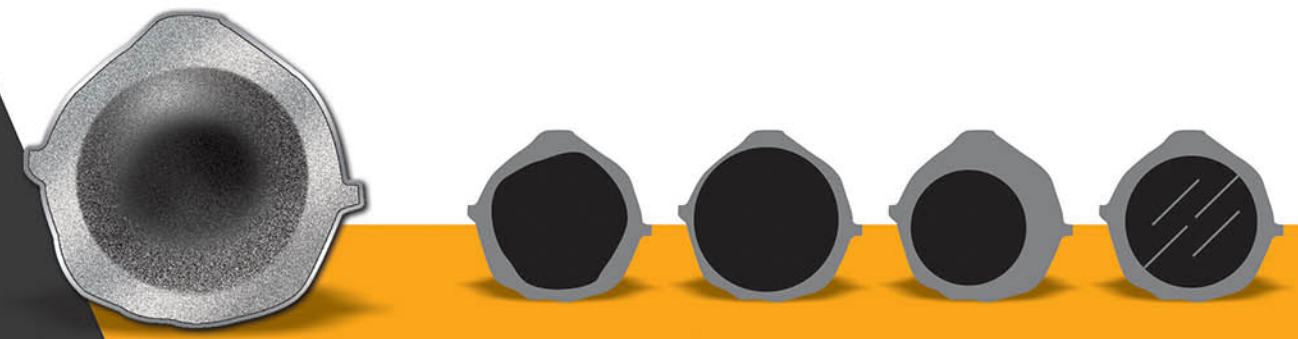
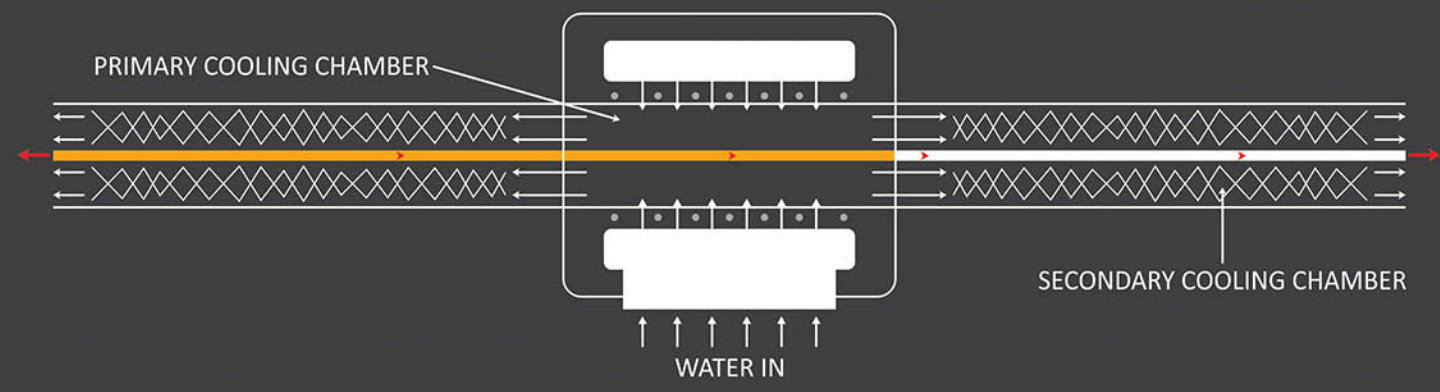
### SELF TEMPERING

The bar leaves the quenching box with the core temperature being higher than that at the surface. This allows the heat to flow to the surface from the core, thereby tempering the surface, resulting in a structure called Martensite. The core remains austenitic at this stage.

### ATMOSPHERIC COOLING

Cooling takes place on the walking cooling bed, where the austenitic core is transferred to a ductile Ferrite-Pearlite core leaving a strong outer layer of tempered Martensite and a ductile core of Ferrite-Pearlite.

## HEAT TREATMENT PROCESS



**KVS POWERCON TMT BARS** 

**ORDINARY BARS** 

**KAL**  
**AAJ**  
— **AUR** —  
**HAMESHA**



# THE STEEL **REDEFINED**

AN ULTIMATE COMPOSITION WITH  
**IMPRESSIVE FINESSE**

## KVS POWERCON TMT BARS PROPERTIES

### Chemical Properties of KVS POWERCON Fe 500D TMT Bars

| Test                        | IS : 1786 Fe 500D Gr. (%) | KVS Powercon Fe 500D Gr. (Observed Values)% |
|-----------------------------|---------------------------|---|
| Carbon (Max.)               | 0.25%                     | 0.25%                                       |
| Sulphur (Max.)              | 0.040%                    | 0.035%                                      |
| Phosphorus (Max.)           | 0.040%                    | 0.035%                                      |
| Sulphur + Phosphorus (Max.) | 0.075%                    | 0.070%                                      |

### Mechanical Properties of KVS POWERCON Fe 500D TMT Bars

| Test   | IS : 1786 Fe 500D Gr. (%) | KVS Powercon Fe 500D Gr. (Observed Values)% |
|--|---------------------------|---|
| Yield Stress / Proof Stress (N/mm <sup>2</sup> )(Min.) | 500                       | 520   |
| Tensile Strength (N/mm <sup>2</sup> )(Min.)            | 565                       | 590   |
| Elongation (Min.)                                      | 16%                       | 17%   |

### Product Range of Powercon Fe 500D Rebars

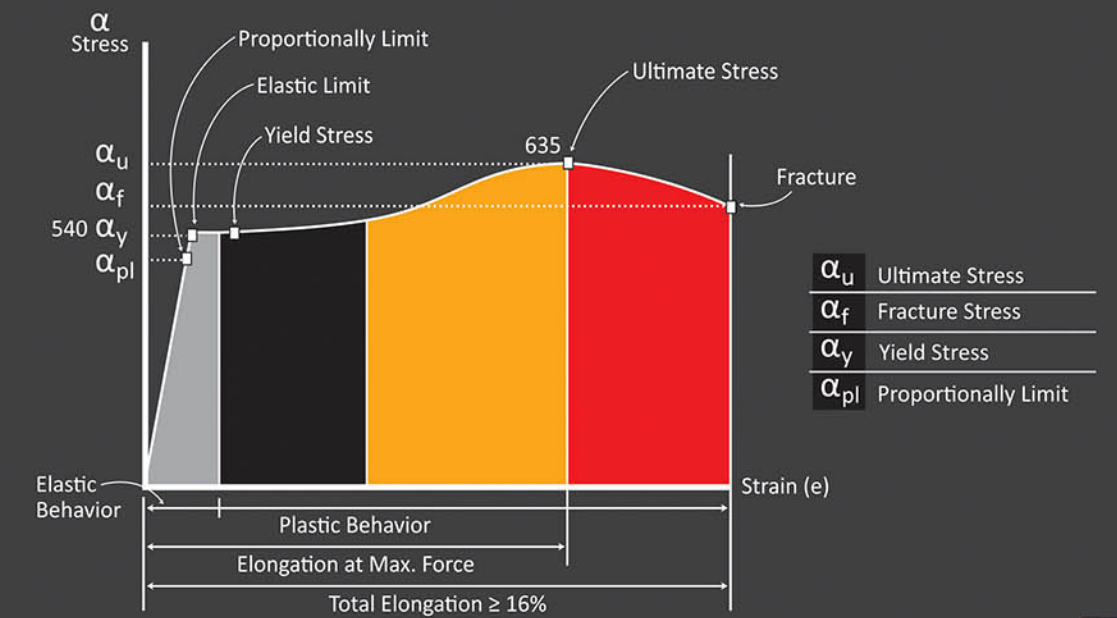
| Nominal Diameter (mm) | Nominal Weight (Kg/mtr) as per IS : 1786 | Weight Range (Kg/mtr) as per IS : 1786 | Powercon Fe 500D Rebars (Kg/mtr) | Packaging (No. of pcs per bundle) |
|-----------------------|--|--|----------------------------------|-----------------------------------|
| 8                     | 0.395                                    | 0.367 - 0.423                          | 0.387 - 0.405                    | 19/20                             |
| 10                    | 0.617                                    | 0.574 - 0.660                          | 0.605 - 0.623                    | 13/14                             |
| 12                    | 0.888                                    | 0.844 - 0.932                          | 0.870 - 0.897                    | 9                                 |
| 16                    | 1.578                                    | 1.499 - 1.657                          | 1.546 - 1.594                    | 5                                 |
| 20                    | 2.466                                    | 2.392 - 2.540                          | 2.417 - 2.491                    | 3                                 |
| 25                    | 3.853                                    | 3.737 - 3.969                          | 3.776 - 3.891                    | 1                                 |
| 28                    | 4.853                                    | 4.689 - 4.979                          | 4.737 - 4.882                    | 1                                 |
| 32                    | 6.313                                    | 6.123 - 6.502                          | 6.187 - 6.376                    | 1                                 |
| 40                    | 9.850                                    | 9.554 - 10.145                         | 9.653 - 9.948                    | 1                                 |

# FOR TOUGHER DUCTILITY

Ductility is a property which helps in elongation of TMT Bar and prevents it from snapping abruptly. KVS POWERCON TMT Bars have the rare combination of high strength with ductility. Elongation along with its Yield stress / Proof Stress [Uy] of a steel rebar plays a major role in its ductility. Elongation of a Steel TMT Bar refers to ability to elongate before failure. It is an ultimate stress / deformation [Um] at fracture. Yield stress corresponds to the Yield Strength [Fy] : which is maximum load that an element can undertake. UTS or Ultimate Tensile Strength defined as ultimate stress a material can withstand, defines the ductility for the material. **Studies prove a higher tensile strength in TMT Bars result in less consumption of steel.**

## STRESS STRAIN CURVE FOR KVS POWERCON TMT BARS

(SHOWING LOADING & UNLOADING PATH)



# A HERITAGE OF LEADERSHIP WITH STRENGTH & TRUST

KVS Premier Group seeks to excel by providing the best quality products and create solutions to the ever changing needs, using the material that plays a vital role in it. Quality is of utmost importance at KVS Premier Group. KVS POWERCON TMT Bars assure that every TMT Bar meets the highest standards laid down for product category. All of our production processes follow these stringent manufacturing principles, ensuring our clients get top quality solutions for their needs.





# THE SYSTEM AND THE PRACTICE

## EXCELLENCE ENDORSED

KVS Premier Group is endeavoring in manufacturing Construction Steel & Structural Steel Sections as per BIS Specification IS : 2830:2012, IS : 2831:2012, IS : 1786:2008, IS : 2062:2011, IS : 15911:2010.

- An ISO 9001:2008 & ISO 14001:2004 Certified company and also possesses OHSAS 18001:2007 Certification.
- Registered with various Central & State Govt. undertaking viz.
  1. RDSO (Research Design Standards Organisation).
  2. MES (Military Engineer Services).
  3. IOCL (Indian Oil Corporation Limited).
  4. AWHO (Army Welfare Housing Organisation).
  5. DGS&D (Director General of Supplies & Disposals).
  6. Uttaranchal Payjal Nigam (Construction Division).
  7. PTCUL (Power Transmission Corporation Of Uttarakhand Limited).
  8. UPSRTC (Uttar Pradesh State Road Transport Corporation).
  9. NTPC (National Thermal Power Corporation).
  10. NHPC (National Hydro Power Corporation).
  11. PSPCL (Punjab State Power Corporation Limited)
  12. U.P. State Bridge Corporation
  13. UPCL (Uttarakhand Power Corporation)
  14. UPPCL (U.P. Power Corporation Limited)
  15. UPRNN (Uttar Pradesh Rajkiya Nirman Nigam Limited)
  16. U.P. Samaj Kalyan Nirman Nigam
  17. Rural Engineering Services, etc.

## IN-HOUSE LABORATORY AND QUALITY CONTROL

- Well equipped Chemical Laboratory for Wet Analysis with Strohlien Apparatus Oven, Hardness Tester, Electronic Balances etc.
- Spectrometers Model GDS 500A, Leco Make, USA with 22 elements.
- UTM of 60 Tons Capacity to check physical properties.
- Team of specialized and qualified technicians to ensure utmost conformity of the product to laid down stringent parameters.

## KVS POWERCON TMT BARS FEATURES

- 1 EXCELLENT BOND STRENGTH
- 2 BENDABILITY
- 3 WELDABILITY
- 4 SUPERIOR DUCTILITY
- 5 GREATER STRENGTH
- 6 FIRE & CORROSION RESISTANT
- 7 EARTHQUAKE RESISTANT



# PRODUCTS **MANUFACTURED**

BY KVS PREMIER GROUP

## PRODUCT PORTFOLIO - TMT BARS

### KVS POWERCON TMT BARS (As per IS : 1786:2008)

(Grades Fe 415/415D, Fe 500/500D, Fe 550/550D)

Sections : 8mm, 10mm, 12mm, 16mm, 20mm, 25mm, 28mm, 32mm

### KVS LIGHT STRUCTURAL STEEL

#### KVS PLAIN ROUNDS (As per IS : 2062:2062, IS : 15911:2010)

Sections : 8mm, 10mm, 12mm, 16mm, 20mm, 25mm, 28mm, 32mm, 40mm

#### KVS ANGLES (As per IS : 2062:2062, IS : 15911:2010)

Sections : A25X25X3mm, A32X32X3mm, A35X35X5mm, A40X40X4/5/6mm, A50X50X4/5/6mm, A65X65X5/6mm, A75X75X6/8mm\*

#### KVS FLATS (As per IS : 2062:2062, IS : 15911:2010)

Sections : F20X3mm, F20X4mm, F20X5mm, F25X6mm, F32X6mm, F38X8mm, F40X6mm, F50X5/6/10/12/16/20mm, F65X6/8/10/12/16/20mm, F75X6/10mm\*, F100X6/12mm\*

#### KVS CHANNELS

(As per IS : 2062:2011, IS : 15911:2010 )

Sections : C75X40mm (LC),  
C75X40mm (MC), C100X50mm

#### KVS SQUARES

(As per IS : 2062:2011, IS : 15911:2010 )

Sections : 8mm, 10mm, 12mm,  
16mm, 20mm, 25mm

**KVS T - IRON** (As per IS : 2062:2011, IS : 15911:2010 ) Sections : T-50X5/6\*, T-75X8/10\*

\*Under Development

### KVS LIGHT STRUCTURAL STEEL PROPERTIES (As per IS : 2062:2011)

| CHEMICAL PROPERTIES |                       | MECHANICAL PROPERTIES                                   |                       |
|---------------------|-----------------------|---|-----------------------|
| TEST                | As per IS : 2062:2011 | TEST  | As per IS : 2062:2011 |
| Carbon (Max.)       | 0.23%                 | Yield Stress / Proof Stress (N/mm <sup>2</sup> ) (Min.) | >250                  |
| Sulphur (Max.)      | 0.045%                | Tensile Strength (N/mm <sup>2</sup> ) (Min.)            | >410                  |
| Phosphorus (Max.)   | 0.045%                | Elongation (Min.)                                       | 23%                   |
| Manganese (Max.)    | 1.50%                 |   |                       |

(As per IS : 15911:2010)

| CHEMICAL PROPERTIES |                        | MECHANICAL PROPERTIES                                   |                        |
|---------------------|------------------------|---|------------------------|
| TEST                | As per IS : 15911:2010 | TEST  | As per IS : 15911:2010 |
| Carbon (Max.)       | 0.25%                  | Yield Stress / Proof Stress (N/mm <sup>2</sup> ) (Min.) | >215                   |
| Sulphur (Max.)      | 0.060%                 | Tensile Strength (N/mm <sup>2</sup> ) (Min.)            | >370                   |
| Phosphorus (Max.)   | 0.075%                 | Elongation (Min.)                                       | 23%                    |
| Manganese (Max.)    | 1.25%                  |   |                        |