



VIRAJ PROFILES PRIVATE LIMITED

Building A Sustainable Stainless World

BUILDING A **SUSTAINABLE STAINLESS** WORLD ■ ■ ■





ABOUT US



Overview

Viraj Profiles Private Limited is one of the most prominent manufacturers and exporters of Stainless steel products worldwide. With a turnover of around USD 1.5 billion, the company exports a vast range of products to its clientele of 1300+ customers scattered across 90 countries that are spread over 6 continents.

A Brief History

Since its inception in 1992, we started as a small factory. But with time, effort, and the trust of our employees in us, we became the employer of choice for over 9,000 people.

Viraj started by manufacturing stainless steel flanges and bright bars, then established the profiles division, and later commenced working on wires by establishing the wire division in 2001. By 2011, Viraj stood second in the world for the production of stainless steel products. By 2017, Viraj had also become the world's largest manufacturer of bright bars.

Mission

We believe in providing excellent product quality, on-time delivery, and best-in-class service to our clients. We aim to deliver operational excellence through continuous innovation and technological upgrades.

Notable Insights

We provide a large range of stainless steel products with 100+ approvals and certifications from International agencies.

We have partnered with SIEMENS and PRAXAIR USA to deliver top-grade products with technological enhancements.

To date, Viraj has dedicated Steel Melting Shops, a Profile Plant, a Wire Rod Plant, a Fastener Plant, and a Flanges Plant.

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STAINLESS STEEL MELTING SHOP

Melting facility:

We have two stainless steel melting shops encompassing seven induction furnaces, two AOD converters with computerized Intelligent Refining System and three continuous billet / bloom casters.

Process Route:

- Induction melting
- AOD refining
- Continuous / Ingot casting

Capacity:

Our Steel Melting Shop has a melting capacity of 6,36,000 TPA, providing raw material for our dedicated state-of-the-art plants manufacturing Bright Bars & Profiles, Wire Rod & Wires, Fasteners, and Flanges.

Grades:

Austenitic, Ferritic, martensitic, austenitic – ferritic (duplex) and precipitation hardening. Eg: 304, 304L, 316, 316L, 321, 304H, 304HC, 316Ti, 303, 410, 420, 347, 201, 302, 302HQ, 430, 310, F-51, 416, 317L, 403, 431, 310S, 314, 347H, 202, 204CU. LER grade and other Duplex grades. EN grades such as - 1.4404, 1.4301 etc.

Products:

Square Billet : 80mm, 100mm, 120mm, 140mm, 160mm, 170mm, 200mm, 250mm & 300mm;

Round Billets : 200mm, 250mm and 300 mm

Ingot : 13 inch x 17 inch, 16 inch x 20 inch & Polygonal Ingot of 7 Tons, 9 Tons, 12 Tons and 15 Tons.

Laboratory:

- A well-equipped NABL certified laboratory with facility of testing ferro alloys and SS samples on X ray-based Spectrometer, Optical emission Spectrometers for testing scrap and SS samples.
- Leco gas analyzers for testing C, S & O & N.





VIRAJ PROFILES PRIVATE LIMITED

Building A Sustainable Stainless World



— STAINLESS STEEL —

WIRE RODS & WIRES



STAINLESS STEEL **WIRE RODS AND WIRES**

This division is engaged in manufacturing stainless steel wire rods and wires. The quality of our product is well established in the international market.

Wires manufactured in this division are mainly used in industries like ship building, medical, agriculture, springs, vineyard, chemical, petroleum, automobile, weaving, braiding, fasteners, food processing, paper mills, welding electrodes and house hold applications.

This division is capable of producing wire rods in extensive size ranges from 5.5mm to 39.5mm and wires from 0.09mm to 15mm.

Our wire rod division is well equipped with a fully automatic wire rod mill and solution annealing, soft annealing and pickling plants with high end automation facilities, and proven quality standards.

Our wires division is well-equipped for producing high quality products having in-house facilities for solution annealing, bright annealing (continuous strand annealing), dry and wet wire drawing, high speed drawing, medium wire pattern laying, fine wire spooling, layer winding, random winding, TIG wire straightening, and cutting facilities.

GRADE:

ASTM:

201, 202, 204Cu, 301, 302, 303, 304, 304Cu, 304HC, 304L, 304H, 310, 310S, 312, 314, 316, 316L, 316LN, 316Ti, 316LCu, 321, 410, 420, 430, 430L.

DIN/EN:

1.4301, 1.4306, 1.4307, 1.4310, 1.4401, 1.4404, 1.4567, 1.4841, 1.4842, 1.4541, 1.4845, 1.4570, 1.4571, 1.4578, 1.4597, 1.4362, 1.4370 and 1.4016.

Electrode Grades:

ER304, ER304L, ER307, ER307S1, ER308, ER308L, ER308LSi, ER310, ER316, ER316L, Er316LSi, Er347, ER347S1, ER309, ER309L, ER430, ER420.

*Specialized Grades – As per customer's requirements.

SPECIFICATIONS:

As per ASTM, DIN, BS, JIS, NACE, AWS, GOST, etc. international standards and customer specific requirements.

PRODUCT RANGE AND SIZES:

| Description | Size Range |
|------------------------------------|---|
| Medium / Thick wire | 0.80 to 16.00 mm |
| Welding wire | MIG – 0.8 to 1.6 mm, TIG – 1 to 4 mm, Core wire – 2.0 to 5.0 |
| Cold heading wire | 2.00 to 16.00 mm |
| Fine wire | 0.07 to 16.00 mm |
| Electro polish wire | 1.0 to 12.0 mm |
| Spring wire | 0.10 to 12.0 mm |
| Rope wire | 0.10 to 4.0 mm |
| Redraw wire | 0.70 to 5.0 mm |
| Tie wire (soft range) | 0.7 to 4.0 mm |
| Tie wire (bright drawn) | 1.60 to 4.0 mm |
| Nail wire | 1.50 to 16.0 mm |
| Conveyor belt wire | 1.60 to 4.0 mm |
| Staple pin wire | 0.80 to 1.6 mm |
| Nickle coated spring wire | 0.80 to 1.6 mm |
| Nicket coated base wire for spring | 2 to 4 mm |

A. GMAW (MIG) – GAS METAL ARC WELDING WIRE

MIG wire bright drawn bright finish / soap drawn (de-coated) matte finish in precision layer wound spools.

| Sr. No. | Sizes (Inches) | Sizes (mm) | SD 200 Plastic Spools | SD 300 Plastic Spools | K 300 Metallic Basket Spools |
|---------|----------------|------------|---|--|---|
| 1 | 0.033" | 0.838 | 10 lbs/5 KGs 30 lbs/15.00 KGs | 25 lbs/12.50 KGs 30lbs/15.00 KGs | 25lbs / 12.50 KGs |
| 2 | 0.035" | 0.889 |  |  |  |
| 3 | 0.040" | 1.016 | | | |
| 4 | 0.045" | 1.143 | | | |
| 5 | 0.062" | 1.575 | | | |

- Spools packed in cardboard boxes, finally packed in wooden boxes / pallets.
- We also offer customized packing and labelling solutions as per customer requirements and drawings.

B. GTAW (TIG) – GAS TUNGSTEN INERT ARC WELDING WIRE

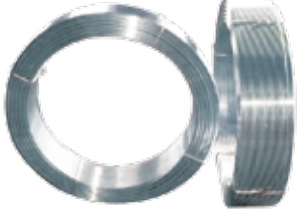
Tig Wire Bright Drawn Bright Finish in cut length 13.79 inches / 350 – 2000 mm.

| Sr. No. | Sizes (Inches) | Sizes (mm) | Plastic Tubes | Packing Type 5 Tubes in one corrugated box 1000 lbs/ 500 KGs wooden box |
|---------|----------------|------------|---|--|
| 1 | 0.0300" | 0.800 |  |  |
| 2 | 0.0350" | 0.900 | | |
| 3 | 0.0400" | 1.000 | | |
| 4 | 0.0450" | 1.200 | | |
| 5 | 0.0620" | 1.600 | | |
| 6 | 0.0800" | 2.000 | | |
| 7 | 0.0930" | 2.400 | | |
| 8 | 0.1250 | 3.200 | | |
| 9 | 0.1560" | 4.000 | | |

- Tubes packed in cardboard boxes, finally packed in wooden boxes / pallets
- We also offer customized packing and labelling as per customer requirements
- Grade and size embossed on both the sides of box for size 1.60mm (0.062") and above
- Customised marking such as: heat no., brand name, batch no., etc. possible on request

C. SAW – SUBMERGED ARC WELDING WIRE

SAW wire bright drawn bright finish / soap drawn (de-coated) matte finish in precision layer wound spools.

| Sr. No. | Sizes (Inches) | Sizes (mm) | Layer wound coils |
|---------|----------------|------------|--|
| 1 | 0.0620" | 1.600 |  |
| 2 | 0.0800" | 2.000 | |
| 3 | 0.0930" | 2.400 | |
| 4 | 0.1250" | 3.200 | |
| 5 | 0.1560" | 4.000 | |

- Spools packed in cardboard boxes, finally packed wooden boxes / pallets
- We also offer customized packing and labelling as per customer requirements and drawings

D. MMAW – MANUAL METAL ARC WELDING WIRE

MMAW wire bright drawn bright finish in cut length / coils

| Sr. No. | Sizes (inches) | Sizes (mm) | Cut Length | Continuous Coil | Loose Coils | |
|---------|----------------|------------|---|--------------------|--|---|
| 1 | 0.0620" | 1.600 |  | 600 2000 lbs | 200 600 lbs | |
| 2 | 0.0800" | 2.000 | | 300 1000KGs | 100 300KGs | |
| 3 | 0.0930" | 2.400 | | 14", 40", 79" Inch |  |  |
| 4 | 0.1250" | 3.200 | | | | |
| 5 | 0.1560" | 4.000 | | | | |

- We also offer customized packing and labelling as per customer requirements and drawings



ANNEALED / SOFT WIRE:

Size: 0.09 – 7.00 mm

Packing: SPOOL, Loose Coil, drum, Tube, Continuous Coil

| Sizes | | Type of Packing |
|-----------------|--|---|
| 0.09 – 2.5 mm | SPOOL DIN125, DIN160, DIN200, DIN250, DIN 355 |  |
| 0.71 – 10.00 mm | Loose Coil |  |
| 0.80 – 1.60 mm | Drum, Tube & carrier |  |

SPRING HARD WIRE (BRIGHT FINISH)



Size: 0.15 – 12.00 mm

Packing: Loose Coil, Invertor coil, Metal spool, Plastic Spool

| Sizes | | Type of Packing |
|-----------------|--|--|
| 0.15 – 0.70 mm | SPOOL DIN125, DIN160, DIN200, DIN250 |  |
| 0.71 – 12.00 mm | Loose Coil |  |
| 0.40 – 3.00 mm | Metal Spool DIN560, DIN760 |  |

SPRING HARD WIRE SOAP COATED MATTE FINISH

Size: 0.40 – 12.00 mm

| Sizes | Type of Packing | |
|-------------|--|--|
| 0.40 – 3 mm | Loose Coil Spool SH390, SH460, DIN 560 Metal, DIN 760 Metal |  |
| 3 – 12 mm | Loose Coil |  |

BRIGHT DRAWN WIRE

Size: 0.09 – 16.00 mm

| Sizes | Type of Packing | |
|-----------------|--|---|
| 0.09 – 2.5 mm | SPOOL DIN125, DIN160, DIN200, DIN250, DIN 355 |  |
| 0.71 – 16.00 mm | Loose Coil |  |

BRIGHT DRAWN WIRE

Size: 1.80 – 12.00 mm

| Sizes | Type of Packing | |
|-----------------|-----------------|--|
| 1.80 – 4.00 mm | Continuous Coil |  |
| 2.00 – 12.00 mm | ESPOOL/ LESPOLL |  |

NICKEL COATED SPRING WIRE

Size: 0.09 – 16.00 mm

| Sizes | Sizes mm | Type of Packing |
|-------|-------------|---|
| 1 | 0.80 – 1.60 |  |
| 3 | 2.00 – 4.00 | |

SUPPLY CONDITIONS:

Wires: Soft finish wires with matte or bright condition, 1/8 hard, 1.4 hard (suitable for electro polish quality), 1/2 hard, 3/4 hard, full hard with coated or de-coated condition.

TYPES OF PACKAGING:

- M.S. carrier packaging
- Basket spools packaging
- Carton case packaging
- Spools packaging
- Packing in corrugated drums
- Pattern layered coils packaging
- Packing in corrugated boxes
- Euro coil packaging
- Packing in spiral corrugated tubes
- Mill coil packaging

TESTING FACILITIES:

- Computerised tensile testing machine (capacity range 20kg to 40 ton)
- Bend testing, wrap testing, torsion testing machine
- Hardness testing machine
- Microscope with image analyser with micro photo facilities
- IGC test facilities
- Cold upset test facility
- PMI tester (Niton gun X-ray analyser)
- Spectro and Leco analysers for chemical composition-optical emission spectro and gas analysers
- Radioactive contamination testing

APPLICATIONS OF WIRES:

Wires: Soft finish wires with matte or bright condition, 1/8 hard, 1/4 hard (suitable for electro polish quality), 1/2 hard, 3/4 hard, full hard with coated or de-coated condition.

| Product | Applications |
|-----------------------------------|--|
| Welding wire | For electrode core wire, submerged arc welding wire, TIG and MIG welding wire |
| Cold heading wire | For nut, bolt, tapping screws, machine screw, Philip head screws, wood screw, screw cross head |
| Weaving / braiding /knitting wire | For meshes, nets, screens, conveyer belts, kitchen appliances, wire cloths |
| Electro polish wire | For pet cages, kitchen ware, grill racks, decorative handles, wire baskets |
| Spring wire | For corrosion resistant springs, heat resistant springs, electronic and electrical appliance |
| Rope wire | For corrosion and wear resistant wire ropes |
| Redraw wire | For further drawing into fine and superfine wires |
| Tie wire | For fastening cables, garden wattles, wattled walls, fencing |
| Staple wire | For corrosion resistant industrial staple |
| Nail wire | For corrosion resistant nails |



VIRAJ PROFILES PRIVATE LIMITED

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— STAINLESS STEEL —

FASTENERS

STAINLESS STEEL FASTENERS

The Viraj fasteners division specializes in the manufacturing of stainless steel fasteners. Viraj has sophisticated, state-of-the-art machines employed for production and stringent supervision that ensures flawless quality control over products. SPC analysis is used as a tool to supervise the ongoing processes. We have an in-house facility for inspection and testing to produce world class quality products. Multi stage inspection checks

by a trained and skilled workforce ensures that defect free products are delivered to customers. Our product range consists of more than 20,000 SKUs. Our customers span six continents and include the market leaders in every geography. Since its inception in 2006, the Viraj fastener division has become a world leader in the manufacturing of stainless steel fasteners and is a reputed brand worldwide.



GRADE:

304, 304L, 316, 316L, 316Ti, Alloy group A2 and A4.

PROPERTY CLASS:**For Bolt & Screws:**

A2-70, A2-80, A4-70, A4-80, F593C, F593D, F593G, F593H.

For Nut:

A2-70, A2-80, A4-70, A4-80, F594C, F594D, F594G, F594H, A2-035, A4-040.

For SHCS:

F837B, F837C, F837E, F837.

For Threaded rod:

A2-70, A2-80, A4-70, A4-80, F593C, F593D, F593G, F593H, CL1- B8, B8M.

PRODUCT RANGE:

| Hexagon Head Bolt | | | | Hexagon Head Screw | | | |
|-------------------|---------|---------------|--------------|--------------------|--------|---------------|-------------|
| DIN 931/ISO 4014 | | ANSI B 18.2.1 | | DIN 933/ISO 4017 | | ANSI B 18.2.1 | |
| Size | Length | Size | Length | Size | Length | Size | Length |
| | | 1/4" | 1 1/4" - 6" | | | 1/4" | 3/8" - 6" |
| | | 5/16" | 1 1/4" - 7" | | | 5/16" | 1/2" - 7" |
| M5 | 25-100 | 3/8" | 1 1/2" - 10" | M5 | 10-70 | 3/8" | 5/8" - 8" |
| M6 | 25-150 | 7/16" | 1 3/4" - 6" | M6 | 10-150 | 7/16" | 3/4" - 6" |
| M8 | 30-180 | 1/2" | 1 7/8" - 10" | M8 | 10-180 | 1/2" | 3/4" - 8" |
| M10 | 35-250 | 9/16" | 2" - 8" | M10 | 16-200 | 9/16" | 1" - 8" |
| M12 | 40-250 | 5/8" | 2" - 10" | M12 | 20-200 | 5/8" | 1" - 8" |
| M14 | 45-250 | 3/4" | 2 5/8" - 10" | M14 | 25-200 | 3/4" | 1 1/2" - 8" |
| M16 | 50-250 | 7/8" | 2 3/4" - 10" | M16 | 25-200 | 7/8" | 1 1/2" - 8" |
| M18 | 60-250 | 1" 3 | 1/4" - 10" | M18 | 40-200 | 1" | 1 3/4" - 8" |
| M20 | 60-250 | 1 1/8" | 4" - 14" | M20 | 40-200 | 1 1/8" | 2" - 6" |
| M22 | 70-250 | 1 1/4" | 4" - 14" | M22 | 40-200 | 1 1/4" | 2-1/2" - 6" |
| M24 | 80-250 | 1 3/8" | 4 1/2" - 14" | M24 | 40-200 | 1 3/8" | 3" - 6" |
| M27 | 90-350 | 1 1/2" | 4 1/2" - 14" | M27 | 50-200 | 1 1/2" | 3" - 6" |
| M30 | 90-350 | - | - | M30 | 50-200 | - | - |
| M33 | 110-350 | - | - | M33 | 70-200 | - | - |
| M36 | 110-350 | - | - | M36 | 80-200 | - | - |

| Hexagon Socket Head Cap Screw | | | | | |
|-------------------------------|----------|----------|-------------|-----------|-------------|
| DIN912/ISO4762 | | | ANSI B 18.3 | | |
| Size | Length | | Size | Length | |
| | F/T | H/T | | F/T | H/T |
| M5 | 10 - 70 | 30 - 70 | 3/8" | 5/8" - 6" | 1 3/4" - 6" |
| M6 | 10 - 100 | 35 - 150 | 7/16" | 3/4" - 6" | 2" - 6" |
| M8 | 12 - 160 | 40 - 160 | 1/2" | 3/4" - 6" | 2 1/4" - 6" |
| M10 | 16 - 150 | 45 - 150 | 5/8" 1 | 1/4" - 6" | 2 1/2" - 6" |
| M12 | 20 - 150 | 55 - 150 | 3/4" | 2" - 8" | 3" - 8" |
| M14 | 30 - 150 | 60 - 150 | 7/8" | 2" - 8" | 3 1/4" - 8" |
| M16 | 30 - 150 | 65 - 150 | 1" | 2" - 8" | 3 1/2" - 8" |
| M18 | 50 - 200 | 70 - 200 | - | - | - |
| M20 | 50 - 200 | 80 - 200 | - | - | - |
| M22 | 50 - 200 | 80 - 200 | - | - | - |
| M24 | 50 - 200 | 90 - 200 | - | - | - |

A2-80 / A4-80 - GRADE UP TO M20

| Round Head Square Neck Bolt or Carriage Bolt | | | | |
|--|----------|-------|-------------|-------------|
| DIN 603 | | | ANSI B 18.5 | |
| Size | Length | Size | Length | |
| | | | F/T | H/T |
| M 5 | 16 - 65 | 1/4" | 5/8" - 3" | 1-1/4" - 4" |
| M 6 | 16 - 80 | 5/16" | 3/4" - 4" | 1-1/2" - 6" |
| M 8 | 20 - 100 | 3/8" | 3/4" - 4" | 1-3/4" - 6" |
| M 10 | 20 - 100 | - | | |

| Hex Wood/Lag Screw | |
|--------------------|----------|
| DIN 571 | |
| Size | Length |
| M5 | 25 - 70 |
| M6 | 25 - 100 |
| M8 | 30 - 150 |
| M10 | 40 - 150 |
| M12 | 45 - 150 |

| Hexagon Socket Button Head Screw | | | |
|---|---------------|--------------------|---------------|
| ISO7380-1 | | ANSI B 18.3 | |
| Size | Length | Size | Length |
| M3 | 10 - 40 | | |
| M4 | 10 - 50 | | |
| M5 | 10 - 60 | | |
| M6 | 10 - 100 | 1/4" | 3/8" - 4" |
| M8 | 12 - 150 | 5/16" | 1/2" - 6" |
| M10 | 16 - 150 | 3/8" | 5/8" - 6" |
| M12 | 20 - 150 | 1/2" | 3/4" - 6" |

| Hexagon Socket Flange Button Head Screw | | | |
|--|---------------|-------------|---------------|
| ISO7380-2 | | | |
| Size | Length | Size | Length |
| M3 | 10 - 40 | M8 | 12 - 150 |
| M4 | 10 - 50 | M10 | 16 - 150 |
| M5 | 10 - 60 | M12 | 20 - 150 |
| M6 | 10 - 100 | | |

| Hexagon Socket Countersunk Head Cap Screw | | | | | | |
|--|---------------|----------------|----------------|--------------------|---------------|-------------|
| DIN7991/ISO10642 | | | | ANSI B 18.3 | | |
| Size | Length | | | Size | Length | |
| | F/T | H/T DIN | H/T ISO | | F/T | H/T |
| | | 7991 | 10642 | | | |
| M3 | 10 - 40 | 25 - 40 | 30 - 40 | - | - | - |
| M4 | 10 - 50 | 30 - 50 | 30 - 50 | - | - | - |
| M5 | 10 - 75 | 35 - 75 | 35 - 75 | - | - | - |
| M6 | 10 - 100 | 40 - 100 | 40 - 100 | - | - | - |
| M8 | 12 - 150 | 50 - 150 | 50 - 150 | 1/4" | 1/2" - 4" | 1 3/4" - 4" |
| M10 | 16 - 200 | 50 - 200 | 55 - 200 | 5/16" | 1/2" - 4" | 2" - 6" |
| M12 | 20 - 200 | 60 - 200 | 65 - 200 | 3/8" | 5/8" - 6" | 2 1/4" - 8" |
| M14 | 40 - 200 | 60 - 200 | 70 - 200 | 1/2" | 1" - 6" | 2 1/2" - 8" |
| M16 | 40 - 200 | 70 - 200 | 80 - 200 | 5/8" | 1 5/8" - 8" | 3 1/4" - 8" |
| M18 | 40 - 200 | 70 - 200 | - | 3/4" | 1 5/8" - 8" | 3 1/2" - 8" |
| M20 | 40 - 200 | 80 - 200 | 100 - 200 | - | - | - |

| Slotted CSK Head Screw DIN 963 | | Slotted Raised CSK Oval Head Screw DIN 964 | | Slotted Chesse Head Screw DIN 84 | | Slotted Pan Head Screw DIN 85 | |
|---|---------------|---|---------------|---|---------------|--|---------------|
| Size | Length | Size | Length | Size | Length | Size | Length |
| M3 | 10 - 40 | M3 | 10 - 40 | M3 | 10 - 40 | M3 | 10 - 40 |
| M4 | 10 - 50 | M4 | 10 - 50 | M4 | 10 - 50 | M4 | 10 - 50 |
| M5 | 10 - 60 | M5 | 10 - 60 | M5 | 10 - 60 | M5 | 10 - 60 |
| M6 | 10 - 80 | M6 | 10 - 80 | M6 | 10 - 80 | M6 | 10 - 80 |

| Cross Recessed CSK Flat Head Screw DIN 965 (TYPE H&Z/TORX) | | Cross Recessed Raised CSK Oval Head Screw DIN 966 (TYPE H & Z) | | Cross Recessed Raised Cheese DIN 7985 (TYPE H&Z/TORX) | |
|---|---------------|---|---------------|--|---------------|
| Size | Length | Size | Length | Size | Length |
| M3 | 10 - 40 | M3 | 10 - 40 | M3 | 10 - 40 |
| M4 | 10 - 50 | M4 | 10 - 50 | M4 | 10 - 50 |
| M5 | 10 - 75 | M5 | 10 - 75 | M5 | 10 - 75 |
| M6 | 10 - 100 | M6 | 10 - 100 | M6 | 10 - 100 |
| M8 | 12 - 150 | M8 | 12 - 150 | M8 | 12 - 150 |
| M10 | 16 - 150 | M10 | 16 - 150 | M10 | 16 - 150 |

| Slotted Pan Head Tapping Screw DIN-7971 | | Slotted CSK Flat Head Tapping Screw DIN-7972 | | Slotted Raised CSK (Oval) Head Tapping Screw DIN-7973 | |
|--|---------------|---|---------------|--|---------------|
| Size | Length | Size | Length | Size | Length |
| ST 2.9 | 9.5 - 38 | ST 2.9 | 9.5 - 38 | ST 2.9 | 9.5 - 38 |
| ST 3.5 | 9.5 - 38 | ST 3.5 | 9.5 - 38 | ST 3.5 | 9.5 - 38 |
| ST 3.9 | 9.5 - 38 | ST 3.9 | 9.5 - 38 | ST 3.9 | 9.5 - 38 |
| ST 4.2 | 9.5 - 50 | ST 4.2 | 9.5 - 50 | ST 4.2 | 9.5 - 50 |
| ST 4.8 | 9.5 - 60 | ST 4.8 | 9.5 - 60 | ST 4.8 | 9.5 - 60 |
| ST 5.5 | 13 - 60 | ST 5.5 | 13 - 60 | ST 5.5 | 13 - 60 |
| ST 6.3 | 13 - 60 | ST 6.3 | 13 - 60 | ST 6.3 | 13 - 60 |

| Cross Recessed Pan Head Tapping Screw (TYPE H & Z) DIN-7981 | | Cross Recessed CSK Flat Head Tapping Screw (TYPE H & Z) DIN-7982 | | Cross Recessed Raised CSK (Oval) Head Tapping Screw (TYPE H & Z) DIN-7983 | |
|--|---------------|---|---------------|--|---------------|
| Size | Length | Size | Length | Size | Length |
| ST 2.9 | 9.5 - 38 | ST 2.9 | 9.5 - 38 | ST 2.9 | 9.5 - 38 |
| ST 3.5 | 9.5 - 38 | ST 3.5 | 9.5 - 38 | ST 3.5 | 9.5 - 38 |
| ST 3.9 | 9.5 - 38 | ST 3.9 | 9.5 - 38 | ST 3.9 | 9.5 - 38 |
| ST 4.2 | 9.5 - 50 | ST 4.2 | 9.5 - 50 | ST 4.2 | 9.5 - 50 |
| ST 4.8 | 9.5 - 60 | ST 4.8 | 9.5 - 60 | ST 4.8 | 9.5 - 60 |
| ST 4.8 | 13 - 60 | ST 5.5 | 13 - 60 | ST 5.5 | 13 - 60 |
| ST 6.3 | 13 - 60 | ST 6.3 | 13 - 60 | ST 6.3 | 13 - 60 |

| ANSI B 18.6.3 Cross Recessed Pan Head Machine Screw | | Cross Recessed Truss Head Machine Screw | | Cross Recessed Flat CSK Head Machine Screw | | Cross Recessed Raised CSK Oval Head Machine | |
|--|---------------|--|---------------|---|---------------|--|---------------|
| Size | Length | Size | Length | Size | Length | Size | Length |
| 1/4" | 3/8"- 4" | 1/4" | 3/8"- 4" | 1/4" | 3/8"4" | 1/4" | 3/8"-4" |
| 5/16" | 1/2" - 5" | - | - | 5/16" | 1/2"- 5" | - | - |
| 3/8" | 7/8" - 5" | - | - | - | - | - | - |

| Hexagon flange bolt (FT) - DIN 6921 | | |
|--|---------------|------------|
| Size | Length | |
| | min | max |
| M8 | 16 | 60 |
| M10 | 16 | 60 |
| M12 | 20 | 70 |

| Hexalobular socket CSK Flat Head Screw ISO 14581 | | | Hexalobular raised CSK Head Screw ISO 14581 | | |
|---|------------------|------------------|--|------------------|------------------|
| Size | Len (Min) | Len (Max) | Size | Len (Min) | Len (Max) |
| M3 | 10 | 40 | M3 | 10 | 40 |
| M4 | 10 | 40 | M4 | 10 | 40 |
| M5 | 10 | 50 | M5 | 10 | 50 |
| M6 | 12 | 100 | M6 | 12 | 100 |
| M8 | 12 | 100 | M8 | 12 | 100 |
| M10 | 16 | 100 | M10 | 16 | 100 |

| Hexalobular Pan Hd. Tapping Sc. (Cross Recess) ISO 14585 | | | Hexalobular CSK Tapping Sc. (Cross Recess) ISO 14586 | | |
|--|-----------|-----------|--|-----------|-----------|
| Size | Len (Min) | Len (Max) | Size | Len (Min) | Len (Max) |
| ST 2.9 | 9.5 | 38 | ST 2.9 | 9.5 | 38 |
| ST 3.5 | 9.5 | 38 | ST 3.5 | 9.5 | 38 |
| ST 4.2 | 9.5 | 50 | ST 4.2 | 9.5 | 50 |
| ST 4.8 | 9.5 | 60 | ST 4.8 | 9.5 | 60 |
| ST 5.5 | 13 | 60 | ST 5.5 | 13 | 60 |
| ST 6.3 | 13 | 60 | ST 6.3 | 13 | 60 |

| Hexalobular Raised CSK (Oval) Head Tapping Screw ISO 14587 | | | |
|--|----------|--------|----------|
| Size | Length | Size | Length |
| ST 2.9 | 9.5 - 38 | ST 4.8 | 9.5 - 60 |
| ST 3.5 | 9.5 - 38 | ST 5.5 | 13 - 60 |
| ST 4.2 | 9.5 - 50 | ST 6.3 | 13 - 60 |

| DIN934 / ISO4032 | DIN439 / ISO4035 | ANSI B 18.2.2 | | |
|------------------|----------------------|-----------------------|-----------------|---------------------|
| Hexagon Nuts | Hexagon Thin Nuts | Heavy Hexagon Nuts | Hexagon Nuts | Hexagon Jam Nuts |
| M5 - M27 | M6 - M27 | 1/4" - 7/8" | 1/4" - 1" | 1/4" - 1" |

| DIN557 | DIN562 | DIN928 | DIN929 |
|-------------|------------------|------------------|-------------------|
| Square Nuts | Square Thin Nuts | Square Weld Nuts | Hexagon Weld Nuts |
| M5 - M12 | M6 - M8 | M6 - M10 | M5 - M12 |

| DIN982 | DIN985 | IFI 100 - 107 |
|------------------|-----------------|------------------|
| Thick Nyloc Nuts | Thin Nyloc Nuts | Thick Nyloc Nuts |
| M 6 - M 12 | M6 - M12 | 1/4" - 3/8" |

| | | |
|-------------------------|---------------------------|--|
| Nylock Nut-Thick | Hexagon Flange Nut | Hexagon Flange Nut with Serration |
| ISO7040 | IFI-145 / 18.16.4 | IFI-145 / 18.16.4 |
| M10 - M12 | 1/4" - 1/2" | 1/4" - 1/2" |

| | | |
|----------------------------|---|---------------------|
| DIN6923 | | BS 1083 |
| Hexagon Flange Nuts | Hexagon Flange Nuts with Serration | Hexagon Nuts |
| M 6 - M 12 | M 6 - M 12 | 1/4" - 1" |

| | | | |
|------------------|--|------------------|--------------------------------|
| JIS B1181 | Hexagon Nut | JIS B1190 | Hexagon Flange Nut Size |
| Size | M 6 to M 16 (M 20, M 24 - New Developmet) | Size | M6 to M12 |

| | | |
|--------------------|--------------------------------------|-------------------------|
| ISO4033 | ISO8675 | DIN936 |
| Hexagon Nut | Hexagon Thin Nut (Fine Pitch) | Hexagon Thin Nut |
| M 6 - M 20 | M6 to M24 | M6 to M20 |

| Threaded Rod | | | | |
|------------------------|-------------|---------------------|---|-----------------|
| DIN 975/DIN 976 | | | ANSI B 18.31.3/IFI 136/ ASTM A 193/BSW (CLASS-1) | |
| | Size | Length | Size | Length |
| Long Length | M5 | 0.50 Mtr - 1.0 Mtr | 1/4" | 0.5 mtr - 3 mtr |
| | M6-M36 | 0.5 mtr - 3 mtr | | 3' - 12' |
| Short Length | M6 | 30 - 160 | 5/16" - 11/2" | 0.5 mtr - 3 mtr |
| | | | | 3' - 12' |
| Short Length | M8 | 30 - 250, 300 - 490 | | |
| | M10 | 40 - 250, 300 - 490 | | |
| | M12 | 50 - 250, 300 - 490 | | |
| | M14 | 50 - 250, 300 - 490 | | |
| | M16 | 60 - 250, 300 - 490 | | |
| | M18 | 60 - 250, 300 - 490 | | |
| | M20 | 60 - 250, 300 - 490 | | |

| Hexagon socket thin head cap screw with Blind hole DIN6912, HT | | Hexagon socket thin head cap screw DIN7984, HT | |
|---|----------|---|----------|
| Size | Length | Size | Length |
| M6 | 25 - 100 | M6 | 30 - 150 |
| M8 | 25 - 150 | M8 | 35 - 150 |
| M10 | 30 - 150 | M 10 | 40 - 150 |
| M12 | 45 - 150 | M 12 | 50 - 150 |

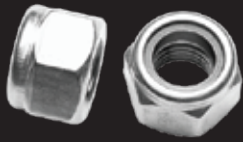
| Dowel Screw Hexagon End | | Dowel Screw Middle Hex | | Dowel Screw Without Hex | |
|----------------------------|-----------|---------------------------|-----------|----------------------------|----------|
| Size | Length | Size | Length | Size | Length |
| M10 | 160 - 250 | M10 | 80 - 200 | M6 | 50 - 160 |
| M12 | 200 - 300 | M12 | 100 - 250 | M8 | 60 - 160 |

| ISO14579-FT | | Hexalobular Socket head cap screw | | ISO14579-HT | | Hexalobular Socket head cap screw | |
|-------------|------|--------------------------------------|-------|-------------|------|--------------------------------------|------|
| Size. | Min. | Max. | Size. | Min. | Max. | Size. | Max. |
| M6 | 10 | 100 | M6 | 35 | 150 | | |
| M8 | 12 | 160 | M8 | 40 | 160 | | |
| M10 | 16 | 150 | M10 | 45 | 150 | | |
| M12 | 20 | 150 | M12 | 55 | 150 | | |

| JIS B1180-FT | | Hexagon head screw | | JIS B1180-HT | | Hexagon head Bolt | |
|--------------|------|--------------------|-------|--------------|------|-------------------|------|
| Size. | Min. | Max. | Size. | Min. | Max. | Size. | Max. |
| M6 | 10 | 150 | M6 | 30 | 150 | | |
| M8 | 12 | 150 | M8 | 40 | 150 | | |
| M10 | 16 | 250 | M10 | 45 | 250 | | |
| M12 | 20 | 200 | M12 | 50 | 250 | | |
| M16 | 25 | 200 | M16 | 65 | 250 | | |
| M18 | 40 | 200 | M18 | 70 | 250 | | |
| M20 | 40 | 200 | M20 | 80 | 250 | | |
| M24 | 40 | 200 | M24 | 90 | 250 | | |

| Testing Facilities | Certifications | Certified from (TUV) |
|--------------------|------------------|----------------------|
| Tensile Test | EN-ISO 10204-3.1 | ISO 9001-2008 |
| Impact Test | | CE |
| Hardness Test | EN-ISO 10204-3.2 | ADW2 / PED |
| IGC Test | - | PED |

Following RoHS compliance





VIRAJ PROFILES PRIVATE LIMITED

Building A Sustainable Stainless World



— STAINLESS STEEL —

BRIGHT BARS

STAINLESS STEEL **BRIGHT BARS**

Viraj is equipped with a state-of-the-art, continuous hardening and tempering furnace for the heat treatment of Ferritic and Martensitic stainless steel. This helps to fulfill the requirements of the most discerning and quality conscious customers.

Apart from Austenitic, Martensitic and Ferritic, we have also developed Duplex, Precipitation Hardening and High Sulphur – Improved machinability Grades.

On the value addition and quality enhancement front, Viraj is now offering Pump Shaft Quality (PSQ) Bright bars from

½" to 2" diameter and will further increase it up to 150 mm. The PSQ quality will be achieved with precision equipment required for the manufacture of the same.

Forged bars are produced in size ranges from 6 ½" to 23" (160 mm to 600 mm)

Viraj has commissioned an automatic storage and retrieval system for improving the service level to customers.





GRADE

AISI:

201, 202, 204CU, 301, 303, 304, 304H, 304/304L, 316, 316H, 316/316L, 309, 309S, 310, 310S, 316Ti, 317, 317L, 347, 321, 321H, 410, 416, 420, 430, 430F, 431, 630, 17-4PH, F51, F60

DIN:

WNR1.4301, WNR1.4305, WNR1.4306, WNR1.4307, WNR1.4401, WNR1.4404, WNR1.4571, WNR1.4541, WNR1.4828, WNR1.4841, WNR1.4845, WNR1.4449, WNR1.4438, WNR1.4310, WNR1.4550, WNR1.4541, WNR1.4878, WNR1.4006, WNR1.4005, WNR1.4021, WNR1.4028, WNR1.4016, WNR1.4104, WNR1.4105, WNR1.4057, WNR1.4542, WNR1.4462

Supply Conditions:

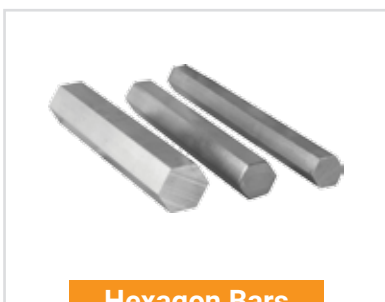
- Solution Annealing
- Annealed
- Strain Hardened
- Centre less Ground
- Centre less Ground and Polished
- Cold Drawn Polished
- Peeled Bars
- Peeled and Polished Bars
- QT 700
- QT 850
- As Drawn
- Forged and Rough Turned
- Buffed (Mirror Finish)
- 100% Ultrasonically Tested
- Chamfered
- Hardened and Tempered
- PSQ
- Smooth Turned
- QT 800
- QT 900

*Specially calcium-treated and finished with high Sulphur material that is ideal for improved machinability.

| Product | Size Range (mm) | Size Range (inch) | Tolerances |
|----------------------------------|-----------------|-------------------|----------------------------------|
| Round Bars | | | |
| Cold Drawn | 2 to 9 | 0.08 to 0.35 | h9, h10, h11 |
| Cold Drawn Polished | 2 to 38 | 0.08 to 1.49 | h9, h10, h11 |
| Peeled and Polished | 38 to 200 | 1.49 to 7.87 | h9, h10, h11, K12, K13, EN 10060 |
| Forged and Rough Peeled | 160 to 600 | | EN 10060 |
| Hexagon | 5 to 80 | 0.19 to 3.14 | h11 |
| Square | 5 to 80 | 0.19 to 3.14 | h11 |
| Centerless Ground | | | |
| Round | 12 TO 55 | 0.47 to 2.16 | h8, h9, h11 |
| Chamfered (One/Both Side) | | | |
| Round | 12 to 55 | 0.47 to 2.16 | |
| Hexagon | 15 to 30 | 0.59 to 1.18 | |
| Pump Shaft Quality | | | |
| Round | 12 to 76.2 | 0.47 to 3 | h7, h8, h9, f8 |

Testing Facilities:

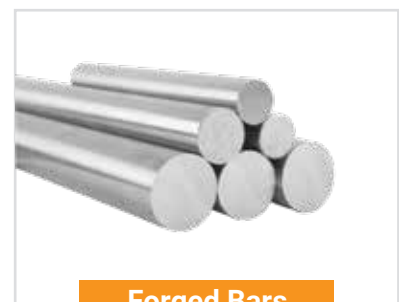
- ✓ Tensile testing machine
- ✓ Impact testing machine
- ✓ Hardness testing machine
- ✓ Microscope with image analyzer and micro photo facilities
- ✓ Ultrasonic testing machine with continuous bar feeling facility
- ✓ Precision digital laser micrometer
- ✓ Eddy current tester
- ✓ Surface roughness tester
- ✓ IGC test facilities
- ✓ Radiation servo meter



Hexagon Bars



Square Bars



Forged Bars

Packing:

Bars are packed in 500kg to 3000kg bundles. Each bar is colour coded, wrapped in HDPE and then strapped along with identification labels on each bundle.

Applications of Bright Bars:

- ✓ Automobile industry – This is a major sector as it consists of consumers using bright bars in all engine components. Nuts, bolts and shafts are made out of special grades of bright bars.
- ✓ In pumps / electric motor industries.
- ✓ In railways for the manufacture of engines as well as coaches.
- ✓ In the defense sector for making various arms and ammunitions.
- ✓ For various fabrication jobs where accuracy is important.
- ✓ For making shafts in conveyors.
- ✓ In all other engineering industries such as

- Auto industry
- Agricultural equipment
- Health & sports equipment
- Textile industry
- Food processing industry
- Decorative & furniture
- Hoses & fittings
- Tools & Fixtures
- Bearings, hinges & gears
- Material handling & storage
- Oil & petroleum





VIRAJ PROFILES PRIVATE LIMITED
Building A Sustainable Stainless World



STAINLESS STEEL
PROFILES

STAINLESS STEEL PROFILES

The profile division engaged in manufacturing and exporting stainless steel angles, flats, special profiles like channels (tapered and non-tapered), unequal angles and beams in an extensive size range.

This division has all in-house facilities for rolling, straightening, shot blasting, solution

annealing, pickling and buffing, and a well-equipped laboratory with testing facilities to ensure high product quality. This division has got a high demand in the international market because of its superior quality products and on time delivery.



GRADE:**ASTM:**

304, 304I, 304h, 303, 316, 316L, 321, 316Ti

DIN:

1.4301, 1.4307, 1.4306, 1.4841, 1.4305, 1.4401, 1.4404, 1.4541 and 1.4571

LIST OF DRAWN FLAT BAR SIZES

| Sr. No. | Sizes (Inch) | Sr. No. | Sizes (mm) |
|---------|---------------|---------|------------|
| 1 | 19.05 X 6.35 | 1 | 20 X 5 |
| 2 | 19.05 X 7.94 | 2 | 20 X 6 |
| 3 | 19.05 X 9.53 | 3 | 20 X 8 |
| 4 | 19.05 X 12.7 | 4 | 20 X 10 |
| 5 | 19.05 X 15.88 | 5 | 20 X 12 |
| 6 | 25.4 X 6.35 | 6 | 25 X 5 |
| 7 | 25.4 X 7.94 | 7 | 25 X 6 |
| 8 | 25.4 X 9.53 | 8 | 25 X 8 |
| 9 | 25.4 X 12.7 | 9 | 25 X 9 |
| 10 | 25.4 X 15.88 | 10 | 25 X 10 |
| 11 | 25.4 X 19.05 | 11 | 25 X 12 |
| 12 | 31.75 X 4.76 | 12 | 25 X 15 |
| 13 | 31.75 X 6.35 | 13 | 25 X 20 |
| 14 | 31.75 X 9.53 | 14 | 30 X 5 |
| 15 | 31.75 X 12.7 | 15 | 30 X 6 |
| 16 | 31.75 X 15.88 | 16 | 30 X 8 |
| 17 | 31.75 X 19.05 | 17 | 30 X 9 |
| 18 | 31.75 X 25.4 | 18 | 30 X 10 |
| 19 | 31.75 X 4.76 | 19 | 32 X 12 |
| 20 | 31.75 X 6.35 | 20 | 32 X 15 |
| 21 | 31.75 X 7.94 | 21 | 38 X 9 |
| 22 | 38.1 X 9.53 | 22 | 38 X 12 |
| 23 | 38.1 X 12.7 | 23 | 38 X 15 |
| 24 | 38.1 X 15.88 | 24 | 40 X 5 |
| 25 | 38.1 X 19.05 | 25 | 40 X 6 |
| 26 | 38.1 X 25.4 | 26 | 40 X 8 |
| 27 | 38.1 X 31.75 | 27 | 40 X 9 |
| 28 | 44.45 X 6.35 | 28 | 40 X 10 |

LIST OF DRAWN FLAT BAR SIZES

| Sr. No. | Sizes (Inch) | Sr. No. | Sizes (mm) |
|---------|---------------|---------|---------------------------|
| 29 | 44.45 X 15.88 | 29 | 40 X 12 |
| 30 | 44.45 X 19.05 | 30 | 40 X 15 |
| 31 | 44.45 X 25.4 | 31 | 40 X 20 |
| 32 | 44.45 X 31.75 | 32 | 50 X 5 |
| 33 | 50.8 X 6.35 | 33 | 50 X 6 |
| 34 | 50.8 X 7.94 | 34 | 50 X 8 |
| 35 | 50.8 X 9.53 | 35 | 50 X 9, 50 X 10 |
| 36 | 50.8 X 12.7 | 36 | 50 X 12 |
| 37 | 50.8 X 15.88 | 37 | 50 X 15 |
| 38 | 50.8 X 19.05 | 38 | 50 X 20 |
| 39 | 50.8 X 25.4 | 39 | 50 X 25 |
| 40 | 50.8 X 31.75 | 40 | 50 X 30 |
| 41 | 50.8 X 38.1 | 41 | 50 X 40 |
| 42 | 63.5 X 6.35 | 42 | 54 X 12 |
| 43 | 63.5 X 9.53 | 43 | 60 X 6 |
| 44 | 63.5 X 12.7 | 44 | 60 X 8 |
| 45 | 63.5 X 15.88 | 45 | 60 X 9 |
| 46 | 63.5 X 19.05 | 46 | 60 X 10 |
| 47 | 63.5 X 25.4 | 47 | 60 X 12 |
| 48 | 63.5 X 31.75 | 48 | 60 X 15 |
| 49 | 76.2 X 6.35 | 49 | 60 X 20, 60 X 25 |
| 50 | 76.2 X 9.53 | 50 | 60 X 30 |
| 51 | 76.2 X 12.7 | 51 | 60 X 40 |
| 52 | 76.2 X 15.88 | 52 | 65 X 9 |
| 53 | 76.2 X 19.05 | 53 | 65 X 12 |
| 54 | 76.2 X 25.4 | 54 | 70 X 8 |
| 55 | 101.6 X 6.35 | 55 | 70 X 9 |
| 56 | 101.6 X 9.53 | 56 | 70 X 10 |
| 57 | 101.6 X 12.70 | 57 | 70 X 12 |
| 58 | 101.6 X 9.53 | 58 | 70 X 15 |
| 59 | 101.6 X 12.70 | 59 | 70 X 20, 70 X 25, 70 X 30 |
| 60 | 101.6 X 15.88 | 60 | 75 X 6 |
| 61 | 101.6 X 19.05 | 61 | 75 X 8 |
| 62 | 101.6 X 25.4 | 62 | 75 X 9 |
| 63 | 101.6 X 31.75 | 63 | 75 X 10 |

LIST OF DRAWN FLAT BAR SIZES

| Sr. No. | Sizes (mm) |
|---------|--|
| 64 | 75 X 12 |
| 65 | 75 X 15, 75 X 20, 75 X 25, 75 X 30 |
| 66 | 80 X 8 |
| 67 | 80 X 10 |
| 68 | 80 X 12 |
| 69 | 80 X 15, 80 X 20, 80 X 25, 80 X 30 |
| 70 | 100 X 6 |
| 71 | 100 X 8 |
| 72 | 100 X 9 |
| 73 | 100 X 10 |
| 74 | 100 X 12 |
| 75 | 100 X 15, 100 X 20, 100 X 25, 100 X 30 |

| Sr. No. | Equal Angle Size Range |
|---------|--|
| 1 | 19 X 19 X 3 |
| 2 | 19.05 X 19.05 X 3.17 |
| 3 | 20 X 20 X 3 / 4 |
| 4 | 25 X 25 X 3 / 4 / 5 / 6 |
| 5 | 25.4 X 25.4 X 3.17 / 4.76 / 6.35 |
| 6 | 30 X 30 X 3 / 4 / 5 / 6 |
| 7 | 31.7 X 31.7 X 3.17 / 4.76 / 6.35 |
| 8 | 32 X 32 X 3 |
| 9 | 35 X 35 X 3 / 4 / 5 / 6 |
| 10 | 38 X 38 X 3 / 4 / 5 / 6 |
| 11 | 38.1 X 38.1 X 3.17 / 4.76 / 6.35 |
| 12 | 40 X 40 X 3 / 4 / 4.5 / 5 / 6 |
| 13 | 44.45 X 44.45 X 3.17 / 4.76 / 6.35 |
| 14 | 45 X 45 X 3 / 4 / 5 / 6 |
| 15 | 50 X 50 X 3 / 4 / 4.5 / 5 / 6 / 7 / 8 / 9 / 10 |
| 16 | 50.8 X 50.8 X 3.17 / 4.76 / 6.35 / 7.94 / 9.53 |
| 17 | 60 X 60 X 5 / 6 / 7 / 8 / 10 |
| 18 | 63.5 X 63.5 X 4.76 / 6.35 / 7.94 / 9.53 |
| 19 | 65 X 65 X 5 / 6 / 7 / 8 / 9 / 10 |
| 20 | 70 X 70 X 5 / 6 / 7 / 8 / 9 / 10 |
| 21 | 75 X 75 X 5 / 6 / 7 / 8 / 9 / 10 / 12 |
| 22 | 76.2 X 76.2 X 4.76 / 6.35 / 7.94 / 9.53 / 12.7 |
| 23 | 80 X 80 X 6 / 7 / 8 / 10 |

| Sr. No. | Equal Angle Size Range |
|--------------------|---|
| 24 | 88.9 X 88.9 X 6.35 / 7.94 / 9.53 |
| 25 | 90 X 90 X 6 / 8 / 9 / 10 |
| 26 | 100 X 100 X 6 / 7 / 8 / 9 / 10 / 12 |
| 27 | 101.6 X 101.6 X 6.35 / 7.94 / 9.53 / 12.7 |
| Large Angle | |
| 28 | 120 X 120 X 10 / 12 / 13 |
| 29 | 127 X 127 X 9.53 / 12.7 |
| 30 | 150 X 150 X 10 / 12 / 13 / 15 |
| 31 | 152.4 X 152.4 X 9.53 / 12.7 |

| Sr. No. | Unequal Angle Size Range |
|----------------|----------------------------------|
| 1 | 50 X 30 X 5 |
| 2 | 60 X 30 X 5 |
| 3 | 60 X 40 X 5 / 6 |
| 4 | 75 X 50 X 6 |
| 5 | 80 X 40 X 6 |
| 6 | 100 X 50 X 6 |
| 7 | 120 X 80 X 8 / 10 |
| 8 | 130 X 65 X 8 / 10 |
| 9 | 50.8 X 25.4 X 6.35 |
| 10 | 76.2 X 38.1 X 6.35 |
| 11 | 76.2 X 50.8 X 4.76 / 6.35 / 9.53 |
| 12 | 101.6 X 76.2 X 6.35 / 9.53 |
| 13 | 125 X 75 X 9 |
| 14 | 127 X 76.2 X 6.35 / 9.53 |
| 15 | 150 X 100 X 10 |
| 16 | 152 X 76.2 X 9.53 |
| 17 | 152.4 X 101.6 X 9.53 / 12.7 |

| Sr. No. | Flat Size Range, Width X Thickness (mm) |
|----------------|---|
| 1 | 19.05 x 3.17 / 4.76 / 6.35 / 7.94 / 9.53 / 12.7 x 15.88 |
| 2 | 20 x 3 / 4 / 5 / 6 / 8 / 9 / 10 / 12 / 15 |
| 3 | 25 x 3 / 4 / 4.5 / 5 / 6 / 8 / 9 / 10 / 12 / 15 / 20 |
| 4 | 25.4 X 3.17 / 4.76 / 6.35 / 7.94 / 9.53 / 12.7 / 15.88 / 19.05 |
| 5 | 30 X 3 / 4 / 4.5 / 5 / 6 / 8 / 9 / 10 / 12 / 15 / 16 / 20 / 22 / 25 |
| 6 | 31.7 X 3.17 / 4.76 / 6.35 / 7.94 / 9.53 / 12.7 / 15.88 / 19.05 / 25.4 |
| 7 | 32 X 4 / 4.5 / 5 / 6 / 8 / 9 / 10 / 12 / 15 |
| 8 | 35 X 4 / 5 / 6 / 8 / 9 / 10 / 12 / 15 / 20 / 22 / 25 / 30 |

| Sr. No. | Flat Size Range, Width X Thickness (mm) |
|---------|--|
| 9 | 38 X 4 / 4.5 / 5 / 6 / 9 / 12 / 15 / 19 / 20 / 25 |
| 10 | 38.1 X 3.17 / 4.76 / 6.35 / 7.94 / 9.53 / 11.11 / 12.7 / 15.88 / 19.05 / 25.4 / 31.75 |
| 11 | 40 X 3 / 4 / 4.5 / 5 / 6 / 8 / 9 / 10 / 12 / 15 / 16 / 20 / 25 / 30 |
| 12 | 44.45 X 4.76 / 6.35 / 7.94 / 9.53 / 12.7 / 15.88 / 19.05 / 25.4 / 31.75 |
| 13 | 45 X 4 / 5 / 6 / 8 / 9 / 10 / 12 / 15 / 20 / 25 / 30 / 35 / 40 |
| 14 | 50 X 4 / 4.5 / 5 / 6 / 8 / 9 / 10 / 12 / 14 / 15 / 16 / 19 / 20 / 25 / 30 / 35 / 40 |
| 15 | 50.8 X 4.76 / 6.35 / 7.94 / 9.53 / 12.7 / 15.88 / 19.05 / 25.4 / 31.75 / 38.1 |
| 16 | 55 X 10 / 12 / 15 / 16 |
| 17 | 60 X 5 / 6 / 8 / 9 / 10 / 12 / 15 / 16 / 19 / 20 / 25 / 30 / 35 / 40 |
| 18 | 63.5 X 6.35 / 7.94 / 9.53 / 11.11 / 12.7 / 15.88 / 19.5 / 25.4 / 31.75 / 38.1 |
| 19 | 65 X 5 / 6 / 8 / 9 / 10 / 12 / 15 / 16 / 20 / 25 / 30 / 35 / 40 |
| 20 | 70 X 5 / 6 / 8 / 9 / 10 / 12 / 15 / 20 / 25 / 30 / 35 / 40 |
| 21 | 75 X 5 / 6 / 7 / 8 / 9 / 10 / 12 / 15 / 16 / 19 / 20 / 25 / 30 / 35 / 40 / 50 |
| 22 | 76.2 X 4.76 / 6.35 / 7.94 / 9.53 / 12.7 / 15.88 / 19.05 / 25.4 / 31.75 / 38.1 / 50.8 |
| 23 | 80 X 5 / 6 / 8 / 9 / 10 / 12 / 15 / 20 / 25 / 30 / 35 / 40 / 50 |
| 24 | 88.9 / 6.35 / 9.53 / 12.7 / 15.88 / 19.05 / 25.4 / 31.75 / 38.1 |
| 25 | 90 X 6 / 8 / 10 / 12 / 15 / 16 / 19 / 20 / 25 / 30 / 40 |
| 26 | 100 X 6 / 8 / 9 / 10 / 12 / 15 / 16 / 20 / 25 / 30 / 35 / 40 / 45 / 50 / 60 |
| 27 | 101.6 X 6.35 / 7.94 / 9.53 / 12.7 / 15.88 / 19.05 / 25.4 / 31.75 / 38.1 / 50.8 |
| 28 | 110 X 10 / 15 / 20 / 25 / 30 |
| 29 | 120 X 8 / 10 / 12 / 15 / 16 / 20 / 25 / 30 / 40 |
| 30 | 125 X 9 / 10 / 12 / 15 / 20 / 25 / 30 / 40 |
| 31 | 127 X 9.53 / 12.7 / 15.88 / 19.5 / 25.4 / 31.75 / 38.1 |
| 32 | 130 X 10 / 15 / 20 / 25 / 30 |
| 33 | 140 X 10 / 12 / 15 / 20 / 25 / 30 |
| 34 | 150 X 9 / 10 / 12 / 15 / 16 / 20 / 25 / 30 / 40 |
| 35 | 152.4 X 9.53 / 12.7 / 15.88 / 19.5 / 25.4 / 31.75 / 38.1 |
| 36 | 175 X 16 |

LIST OF POLISH FLAT BAR SIZES

| Sr. No. | Sizes (Inch) | Sr. No. | Sizes (Inch) | Sr. No. | Sizes (Inch) |
|---------|--------------|---------|--------------|---------|--------------|
| 1 | 20 X 5 | 38 | 50 X 10 | 75 | 75 X 20 |
| 2 | 20 X 6 | 39 | 50 X 12 | 76 | 75 X 25 |
| 3 | 20 X 8 | 40 | 50 X 15 | 77 | 75 X 30 |
| 4 | 20 X 10 | 41 | 50 X 16 | 78 | 80 X 5 |
| 5 | 20 X 12 | 42 | 50 X 20 | 79 | 80 X 6 |
| 6 | 20 X 15 | 43 | 50 X 25 | 80 | 80 X 8 |
| 7 | 25 X 5 | 44 | 50 X 30 | 81 | 80 X 10 |
| 8 | 25 X 6 | 45 | 50 X 32 | 82 | 80 X 15 |
| 9 | 25 X 8 | 46 | 50 X 40 | 83 | 80 X 20 |
| 10 | 25 X 10 | 47 | 54 X 12 | 84 | 80 X 25 |
| 11 | 25 X 12 | 48 | 60 X 5 | 85 | 80 X 30 |
| 12 | 25 X 15 | 49 | 60 X 6 | 86 | 100 X 6 |
| 13 | 30 X 5 | 50 | 60 X 8 | 87 | 100 X 8 |
| 14 | 30 X 6 | 51 | 60 X 10 | 88 | 100 X 10 |
| 15 | 30 X 8 | 52 | 60 X 12 | 89 | 100 X 12 |
| 16 | 30 X 9 | 53 | 60 X 15 | 90 | 100 X 15 |
| 17 | 30 X 10 | 54 | 60 X 20 | 91 | 100 X 20 |
| 18 | 30 X 12 | 55 | 60 X 30 | 92 | 100 X 25 |
| 19 | 30 X 15 | 56 | 60 X 40 | 93 | 100 X 30 |
| 20 | 30 X 20 | 57 | 65 X 9 | 94 | 120 X 8 |
| 21 | 32 X 12 | 58 | 65 X 12 | 95 | 120 X 10 |
| 22 | 32 X 15 | 59 | 65 X 15 | 96 | 120 X 12 |
| 23 | 38 X 9 | 60 | 70 X 6 | 97 | 120 X 15 |
| 24 | 38 X 12 | 61 | 70 X 8 | 98 | 120 X 20 |
| 25 | 38 X 15 | 62 | 70 X 9 | 99 | 120 X 25 |
| 26 | 40 X 4 | 63 | 70 X 10 | 100 | 120 X 30 |
| 27 | 40 X 5 | 64 | 70 X 12 | 101 | 127 X 9 |
| 28 | 40 X 6 | 65 | 70 X 15 | 102 | 127 X 12 |
| 29 | 40 X 8 | 66 | 70 X 20 | 103 | 150 X 9 |
| 30 | 40 X 10 | 67 | 70 X 25 | 104 | 150 X 10 |
| 31 | 40 X 12 | 68 | 70 X 30 | 105 | 150 X 12 |
| 32 | 40 X 15 | 69 | 75 X 6 | 106 | 150 X 15 |
| 33 | 40 X 20 | 70 | 75 X 8 | 107 | 150 X 20 |
| 34 | 40 X 30 | 71 | 75 X 9 | 108 | 150 X 25 |
| 35 | 50 X 5 | 72 | 75 X 10 | 109 | 150 X 30 |
| 36 | 50 X 6 | 73 | 75 X 12 | | |
| 37 | 50 X 8 | 74 | 75 X 15 | | |

LIST OF DRAWN FLAT BAR SIZES

| Sr. No. | Channel Size Range Inch (mm) | Type |
|---------|---|-------------|
| 1 | 3" X 1.41" X 0.17" X 0.273" (76.2 X 35.81 X 4.32 X 6.93) | Taper |
| 2 | 4" X 1.584" X 0.184" X 0.296" (101.6 X 40.23 X 4.67 X 7.52) | Taper |
| 3 | 4" X 1.721" X 0.321" X 0.296" (101.6 X 43.71 X 8.15 X 7.52) | Taper |
| 4 | 5" X 1 7/8" X 3/8" (127 X 47.625 X 9.52) | Taper |
| 5 | 5" X 1.75" X 0.19" X 0.32" (127 X 44.45 X 4.83 X 8.13) | Taper |
| 6 | 5" X 1.885" X 0.325" X 0.32" (127 X 47.88 X 8.26 X 8.13) | Taper |
| 7 | 6" X 1.92" X 0.2" X 0.343" (152.4 X 48.77 X 5.08 X 8.71) | Taper |
| 8 | 6" X 2.034" X 0.314" X 0.343" (152.4 X 51.66 X 7.98 X 8.71) | Taper |
| 9 | 8" X 2.53" X 0.487" X 0.39" (203.2 X 64.26 X 12.37 X 9.90) | Taper |
| 10 | 40 X 35 X 5 X 7 | Taper |
| 11 | 50 X 25 X 5 X 6 | Taper |
| 12 | 50 X 38 X 5 X 7 | Taper |
| 13 | 60 X 30 X 6 X 6 | Taper |
| 14 | 65 X 42 X 5.5 X 7.5 | Taper |
| 15 | 75 X 40 X 4.7 X 6.9 | Taper |
| 16 | 80 X 45 X 6 X 8 | Taper |
| 17 | 100 X 50 X 6 X 8.5 | Taper |
| 18 | 120 X 55 X 7 X 9 | Taper |
| 19 | 140 X 60 X 7 X 10 | Taper |
| 20 | 160 X 65 X 7.5 X 10.5 | Taper |
| 21 | 2" X 1" X 1/8" (50.8 X 25.4 X 3.18) | Non - Taper |
| 22 | 2" X 1" X 3/16" (50.8 X 25.4 X 4.76) | Non - Taper |
| 23 | 2" X 1" X 1/4" (50.8 X 25.4 X 6.35) | Non - Taper |
| 24 | 3" X 1 3/8" X 3/16" (76.2 X 34.925 X 4.76) | Non - Taper |
| 25 | 3" X 1 1/2" X 3/16" (76.2 X 38.1 X 4.76) | Non - Taper |
| 26 | 3" X 1 1/2" X 1/4" (76.2 X 38.1 X 6.35) | Non - Taper |
| 27 | 4" X 2" X 1/4" (101.6 X 50.8 X 6.35) | Non - Taper |
| 28 | 4" X 1 3/4" X 1/4" (101.6 X 44.45 X 6.35) | Non - Taper |
| 29 | 60 X 30 X 5 X 5 | Non - Taper |
| 30 | 80 X 40 X 5 X 5 | Non - Taper |
| 31 | 80 X 40 X 6 X 6 | Non - Taper |
| 32 | 100 X 50 X 5 X 5 | Non - Taper |
| 33 | 100 X 50 X 6 X 6 | Non - Taper |
| 34 | 120 X 60 X 6 X 6 | Non - Taper |
| 35 | 130 X 65 X 6 X 6 | Non - Taper |
| 36 | 150 X 75 X 6 X 6 | Non - Taper |

| Sr. No. | I (S) Beam Size Range |
|---------|--------------------------------------|
| 1 | 76.2 X 59.2 X 4.3 X 6.6 (S 3) |
| 2 | 101.6 X 67.6 X 4.9 X 7.4 (S 4) |
| 3 | 127 X 76.3 X 5.4 X 8.3 (S 5 X 10) |
| 4 | 152.4 X 84.6 X 5.9 X 9.1 (S6 X 12.5) |

TESTING FACILITIES:

- ☑ Tensile testing machine
- ☑ Hardness testing machine
- ☑ Impact testing machine
- ☑ Metallurgical microscope with image analyser
- ☑ IGC test facility
- ☑ Ultrasonic testing
- ☑ PMI test



AUTO PACKING:

Angle/Flats/Special profile packed in 500 to 1000 kg weight in fully automatic, auto packing bundling machine. The automatic machine carries all the bars without any manual operation from pickling line. This machine arranges the bundles in an auto sequence and wraps top & bottom with a LDPE poly film and radially wraps with another LDPE film to make it air tight. Finally it straps the bundles with metal bands at equal intervals by automatic signode strapping. We provide bundle identification tag and respective grade color code at both ends.

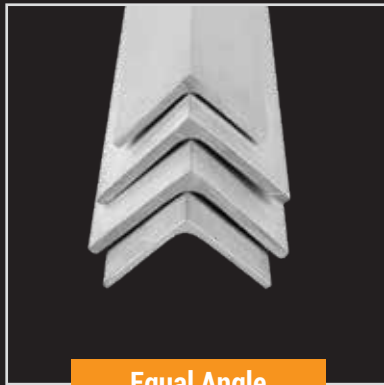


APPLICATIONS OF PROFILES:

- ✓ Used in the construction of buildings because of the durability.
- ✓ Used in hoardings or billboards because of the strength and non-corrosive properties.
- ✓ Used in transmission and communication towers because of the strength and non-corrosive properties.
- ✓ Used in the power industry because of heat resistance.
- ✓ Used in the ship building industry because of non-corrosive properties.



Equal Angle



Equal Angle



Unequal Angle



Non Tapered Channel



Non Tapered Channel



Flat



Tapered Channel



Tapered Channel



I-Beam



VIRAJ PROFILES PRIVATE LIMITED

Building A Sustainable Stainless World



STAINLESS STEEL FLANGES



STAINLESS STEEL **FLANGES**

Viraj is the world leader in stainless steel forged flanges. We serve customers across 90 countries and six continents. Viraj flanges are reputed and well known across the PVFF Industry for their reliability and quality.

The flanges division encompasses an integrated forge shop which manufactures all types of pipe fitting i.e. flanges, butt welding fittings (stubends) in various specifications (ASME, EN, DIN, AFNOR, AWWA, GOST, BS, JIS, AS, MSS, SA, UNI SABS/SANS, NS, VSM.) as well as forged bars.

Flanges are produced in size ranges from ½" to 40".

Viraj has an established and stringent quality system with 130+ certifications till date in accordance with various specific requirements and applications. These approvals and certifications enable our customers to supply Viraj flanges to major end users across a variety of industries.

Our integrated operations include facilities for cutting, forging, ring rolling and machining with CNC lathes, VMC (machining centre), high capacity forging press and mobile manipulator for making big diameter forged round bars. We also have an in-house heat treatment shop and well equipped laboratory facilities for mechanical and metallurgical testing, PMI testing with X-Ray and Optical Emission Spectroscopy. We also have fully equipped Radiation Contamination Monitoring facilities.

INDUSTRIES WE SERVE:

- ✓ Pipeline engineering
- ✓ Oil & gas – upstream & downstream
- ✓ Mechanical & plant engineering
- ✓ Ship building
- ✓ Boiler and Pressure Vessels
- ✓ Fertilizer industry
- ✓ Waste water
- ✓ Chemical & petrochemical
- ✓ Power industries (nuclear, natural gas, wind, solar)
- ✓ Aerospace
- ✓ Food processing



MAKEABILITY CHART:

| Dimensional specifications with size range | | | |
|--|--|--|---|
| Specification | Item description | Size Range | Pressure Class |
| ASME – B16.5 | Slip-on flange, Welding neck flange, Blind flange, Threaded flange, Lap joint flange, RTJ flange | ½" to 24" ½" to 12" | 150, 300, 400, 600, 900, 1500 2500 |
| ASME – B 16.47 | Welding neck flange, Blind flange | 26" to 40" (A-MSS) 26" to 30" (A-MSS) 26" to 36" (B-API) 26" to 30" (B-API) | 150, 300, 400, 600, 900, 75, 150, 300, 400, 600 900 |
| ASME – B 16.36 | Welding neck flange Slip-on flange, Threaded flange | 1" to 24" 1" to 12" | 300, 400, 600, 900, 1500, 2500 |
| DIN FLANGE | DIN2512, DIN2513, DIN 2514, DIN2527, DIN 2566, DIN2573, DIN2576, DIN2627, DIN2628, DIN2629, DIN2631, DIN2632, DIN2633, DIN2434, DIN2635, DIN2637, DIN2628, DIN2641, DIN2642, DIN2655, DIN2656, DIN2673 | 10 to 1000 | PN6 to PN 320 |
| Pr EN 1092 – 1 | Plate flange (01) Loose plate flange (02,04) / Blind flange (05) Welding neck flange (11) / Hubbed slip-on flange (12) Hubbed threaded flange (13) / Integral flange (21), weld-on collar (32) Lapped pipe end (33) Weldneck collar (34) | 10 to 1000 | ISO-PN2.5 to PN100 |

| Specification | Item description | Size Range | Pressure Class |
|---------------------------------|--|---------------|--|
| EN 1759 – 1 | Plate flange (01)/ Blind flange (05) | ½" to 24" | 150, 300, 400, 600, |
| | Welding neck flange (11)/Hubbed slip-on flange (12) Hubbed threaded flange (13)/ Hubbed socket weld (14) Loose Hubbed flange (15) Integral flange (21) | (15 to 600) | 900, 1500 2500 (12") |
| AFNOR NEF 29-20 | Plate flange (01)/Loose plate flange (02,04)/ 3Blind flange (05) Welding neck flange (11)/ Hubbed Slip-on flange (12) Screwed flange (13) Hubbed socket Welding (14) Loose Hubbed (15)/Integral flange (21) | 10 to 600 | ISO-PN2.5 to PN420 |
| JIS B2220/B2291 | Slip-on plate flange (SOP), Slip-on Hub (SOH), Socket Welding flange (SW), Welding neck flange (WN), Lap joint (LJ), Threaded flange (TR)/ ltegral flange (IT) Blank flange (BL) | 10 to 600 | 5K, 10K, 15K, 20K, 30K |
| BS4504 SECTION 3.1 | Welding neck (111)/Slip-on plate (101)/ Screwed boss (113)/ Slip-on boss (112)/ Blind plate flange (105) | 0.375" To 36" | PN2.5 to PN40 |
| BS4504 PART 1 | Welding neck (2), Plate slip-on (30), Screwed boss (4), Slip-on boss (5), Blind plate flange (8) | 0.375" to 36" | PN2.5 to PN 400 |
| BS 1560 SECTION 3.1 | Welding neck (111), Socket weld (114), Screwed boss (113), Slip-on boss (112), Blind flange (105), Lapped flange (115) | ½" to 24" | 150 LBS to 2500 LBS |
| BS 10: 1962 | Welding neck, Plate Slip-on, Screwed boss, Slip-on boss, Plate blind flange | ½" to 36" | TABLE D/E/F/H |
| SABS/SANS 1123 | Integral (1), Welding neck (2), Plate for welding (3), Screwed boss (4), Slip-on boss (5) Plate blank (8) | 10 to 1000 | 250, 600, 1000, 1600, 2500, 4000 kPa |
| AWWA C228 | Ring type Slip-on flanges, Blind flanges | 2" to 40" | SA (50Psi), SB (86Psi), SD (150/75Psi), SE (275Psi), SFPsi) |
| Italian standard UNI FLANGES | Plan flanges (2276, 2277, 2278, 6083, 6084) Welding neck (2280, 2281, 2282, 2283, 2284, 2285, 2286) Lapped flanges (6088, 6089, 6090, 2999, 2300) Blind flanges (6091, 6092, 6093, 6094, 6095, 6096, 6097) Threaded flanges (2253, 2254) | 15 to 200 | PN 6 to PN 40 |
| Norwegian Standard (NS) | Blind flanges, Plain welding flanges | 150 to 800 | PN 6 to PN 40 |

| Dimensional specifications with size range | | | |
|--|--|--------------------------|----------------------------------|
| Specification | Item description | Size Range | Pressure Class |
| Flanges to VSM (Swiss) Standards | Flat flange for welding (18695, 19696, 18697) Weld neck (18716, 18718), Blind flange (18703) | | PN 6 to PN 16 |
| AS 4087 AS 2129 | Blank, Plate, Screwed, weld neck (W.N/W.O.N), Integral flange blank, Plate, Boss, Weld neck, Integral flange | 50 to 1000 15 to 1000 | PN16, PN21, PN35, TABLE D & E |
| GOST | Plate flange (GOST 12820-80), Weld neck flange GOST 12821-80, Blind flange (GOST 12836-67) | 10 to 1000 | 0.6MPa to 6.3 MPa |
| ASME/ANSI B 16.9 MASS SP-43 | STUB END – TYPE A,B,C (Short pattern) | ½” to 24” | All Schedules |

GRADE:

| | |
|---|---|
| ASTM182/182M ASMESA182/182M ASTM A403/403M ASTM 815/815M | F 304, F304L, F304H, F310, F316, F316L, F316H, F347, F347H, F317, F317L, F321H, F316Ti, F347 , F347H, F51, F60 & F53 S31803, S32205 |
| JIS G3214 | SUS F304, SUS F304L, SUS F304H, SUS F316, SUS F316L, SUS F316H, SUS F347, SUS F347H, SUS F317, SUS F317L, SUS F321, SUS F321H |
| NF E29 – 204 (AFNOR) | BF Z7 CN 18-09 (F304), BF Z3 CN 19-09 (304LO), BF Z7 CND 17.11.02 (F316), BF Z3 CND 17.11.02 (F316L), BF Z6 CNDT 17-12 (316 Ti), BF Z6 CN Nb 18-10 (F347), BF Z6 CNT 18-10 (F321) |
| DIN 10222-5 | 1.4301, 1.4306, 1.4307, 1.4541, 1.4571, 1.4401, 1.4404, 1.4410, 1.4438, 1.4450, 1.4462 |
| OTHER PRODUCTS | Long welding neck, Plate flanges (Light weight pattern), Backup flanges (BEV & STD), Beveled ID flanges, Reducing flanges, Case-end |

FLANGES BORE SCHEDULES:

S5S, S10, S10S, S20, S30, S40, S40S, S60, S80, S80S, S100, S120, S140, S160, STD, XS, XXS

FLANGES FACING TYPES:

Flat face, Raised face, Large Raised face, Ring joint, Tongue & Groove face (large & small), Male-Female face

FLANGES FACE FINISH:

Stock Finish serration, Spiral or Phonographic Serration, concentric Serration, Smooth Finish

MANUFACTURING FACILITIES:

- ✓ Raw material cutting: band saw
- ✓ Open / Close Die Forging & Rolling: Hammer / Press / Ring Rolling
- ✓ Machining: CNC lathes/SPM lathes
- ✓ Bolt Hole drilling: High speed CNC Vertical Machining Center
- ✓ Heat treatment: Solution Annealing (batch annealing furnaces)

TESTING FACILITIES:

- ✓ Tensile testing machine (screw driven & Computerized)
- ✓ Impact testing machine (RT & Sub zero)
- ✓ Hardness testing machine
- ✓ Microscope (Image analyzer with color view camera, motorized stage & inclusion inspector)
- ✓ Mobile spectrometer for PMI test : X-ray fluorescence test-gun & OES-Optical Emission Spectrometry
- ✓ Surface roughness tester
- ✓ IGC test facilities
- ✓ Dye penetrate test
- ✓ Ultrasonic testing machine
- ✓ Radiation servo meter
 - Dynamic radiation detection system with weighbridge portal monitors
 - Gamma ray spectroscopy – identifies nuclides & quantifies contamination
 - Portable radiation detection servo meters

PACKING:

- ✓ Protect raised face and bevel end with plastic protection caps
- ✓ Using plywood boxes size 800 x 1200 mm (Euro pallet) for shipment





Blind Flange



Weld Neck Flange



Slip-on Flange



Socket Weld Flange



Threaded Flange



Lap Joint Flange



Orifice Flange



Stubend



PRODUCT CERTIFICATIONS

| A | B | C | D | E | F | G | H |
|----|---|-----------------|----|----|----|----|----|
| | CERTIFICATIONS & APPROVALS | PRODUCTS | | | | | |
| 1 | ISO 9001-2008 | FL | FA | BB | PR | WR | SM |
| 2 | PRESSURE EQUIPMENT DIRECTIVE - PED 97/23/EC | FL | FA | BB | PR | WR | SM |
| 3 | AD 2000 Merkblatt WO | FL | FA | BB | PR | WR | SM |
| 4 | CPR/CE MARKING | | FA | BB | PR | WR | |
| 5 | SIRIM | | | BB | PR | | |
| 6 | NORSOK | FL | | BB | | | |
| 7 | REACH - LPR | | | | | WR | |
| 8 | CANADIAN REGISTRATION - FITTINGS | FL | | | | | |
| 9 | CANADIAN REGISTRATION - FLANGE | FL | | | | | |
| 10 | INDIAN RAILWAYS | | FA | | | | |
| 11 | Deutsche Bahn (DB) German Railway | | FA | | | | |
| 12 | Vd TUV VIRAJ 307 Si | | | | | WR | |
| 13 | Vd TUV VIRAJ 308 L | | | | | WR | |
| 14 | Vd TUV VIRAJ 308 L | | | | | WR | |
| 15 | Vd TUV VIRAJ 308 L Si | | | | | WR | |
| 16 | Vd TUV VIRAJ 308 L Si | | | | | WR | |
| 17 | Vd TUV VIRAJ 309 L | | | | | WR | |
| 18 | Vd TUV VIRAJ 309L Si | | | | | WR | |
| 19 | Vd TUV VIRAJ 316 L | | | | | WR | |
| 20 | Vd TUV VIRAJ 316 L Si | | | | | WR | |
| 21 | Vd TUV VIRAJ 316L | | | | | WR | |
| 22 | American Bureau of shipping (ABS) -AWC -309L-MIG | | | | | WR | |
| 23 | American Bureau of shipping (ABS) -AWC -309L-TIG | | | | | WR | |
| 24 | American Bureau of shipping (ABS) -AWC -316L Si-MIG | | | | | WR | |
| 25 | American Bureau of shipping (ABS) -AWC -316L -TIG | | | | | WR | |
| 26 | American Bureau of shipping (ABS) -AWC -316L-MIG | | | | | WR | |
| 27 | American Bureau of shipping (ABS)-AWC -308L Si-MIG | | | | | WR | |
| 28 | American Bureau of shipping (ABS)-AWC -308L-MIG | | | | | WR | |
| 29 | American Bureau of shipping (ABS)-AWC -308L-TIG | | | | | WR | |
| 30 | American Bureau of shipping (ABS) | FL | | BB | PR | | SM |
| 31 | Det Norske Veritas & Gemanischer Lloyds(DNV-GL) | FL | | BB | PR | | SM |
| 32 | Lloyd's Register (LR) | FL | | BB | PR | | SM |

*: FL- Flange, FA- Fastener, BB- Bright Bar, PR- Profile, WR-Wire, SM- Steel melting shop



PRODUCT CERTIFICATIONS

| A | B | C | D | E | F | G | H |
|----|---|-----------------|----|---|---|---|----|
| | CERTIFICATIONS & APPROVALS | PRODUCTS | | | | | |
| 33 | Korean Register of shipping (KR) | FL | | | | | SM |
| 34 | Bureau Veritas (BV) | FL | | | | | SM |
| 35 | Nippon Kaiji Kyokai (Class NK) | FL | | | | | SM |
| 36 | BADISCHE ANILIN- UND SODA-FABRIK (BASF) | FL | | | | | |
| 37 | BECHTEL | FL | | | | | |
| 38 | BOROUGE | FL | | | | | |
| 39 | BRITISH PETROLEUM (BP) | FL | | | | | |
| 40 | CANADIAN NATURAL RESOURCE | FL | | | | | |
| 41 | CHEVRON | FL | | | | | |
| 42 | CHICAGO BRIDGE & IRON (CB&I) | FL | | | | | |
| 43 | CHIYODA | FL | | | | | |
| 44 | CONOCOPHILLIPS | FL | | | | | |
| 45 | DOW CHEMICAL (DOW) | FL | | | | | |
| 46 | DRY DOCK WORLD | FL | | | | | |
| 47 | ENAGAS - SPAIN | FL | | | | | |
| 48 | ENGINEERS INDIA LIMITED (EIL) | FL | | | | | |
| 49 | EQUATE PETROCHEMICAL COMPANY-KUWAIT | FL | | | | | |
| 50 | THE KUWAIT AROMATICS COMPANY(KARO) | FL | | | | | |
| 51 | THE KUWAIT OLEFINS COMPANY(TKOC) | FL | | | | | |
| 52 | THE KUWAIT STYRENE COMPANY(TKSC) | FL | | | | | |
| 53 | KUWAIT NATIONAL PETROLEUM COMPANY (KNPC) | FL | | | | | |
| 54 | KUWAIT OIL COMPANY (KOC) | FL | | | | | |
| 55 | ABU DHABI COMPANY FOR ONSHORE OIL OPERATIONS (ADCO) | FL | | | | | |
| 56 | ABU DHABI NATIONAL OIL COMPANY (ADNOC) | FL | | | | | |
| 57 | ABU DHABI OIL REFINING COMPANY (TAKREER) | FL | | | | | |
| 58 | NATIONAL PETROLEUM CONSTRUCTION COMPANY (NPCC) | FL | FA | | | | |
| 59 | ZAKUM DEVELOPMENT COMPANY (ZADCO) | FL | FA | | | | |
| 60 | ESSAR | FL | | | | | |
| 61 | EXXON MOBIL | FL | | | | | |
| 62 | FLUOR | FL | | | | | |

* : FL- Flange, FA- Fastener, BB- Bright Bar, PR- Profile, WR-Wire, SM- Steel melting shop



PRODUCT CERTIFICATIONS

| A | B | C | D | E | F | G | H |
|----|---|-----------------|---|---|---|---|---|
| | CERTIFICATIONS & APPROVALS | PRODUCTS | | | | | |
| 63 | GOST-R | FL | | | | | |
| 64 | IPS/Turner | FL | | | | | |
| 65 | McJUNKIN | FL | | | | | |
| 66 | OXY - OMAN | FL | | | | | |
| 67 | PETROLEUM DEVELOPMENT - OMAN (PDO) | FL | | | | | |
| 68 | PEMEX EXPLORACION Y PRODUCCION – USA | FL | | | | | |
| 69 | PEMEX GAS Y PETROQUIMICA BASICA – USA | FL | | | | | |
| 70 | PEMEX PETROLEOS MEXICANOS – USA | FL | | | | | |
| 71 | PEMEX PETROQUIMICA AND ITS AFFILIATES – USA | FL | | | | | |
| 72 | PEMEX REFINACION – USA | FL | | | | | |
| 73 | QATAR CHEMICAL COMPANY LTD (Q-CHEM I&II) | FL | | | | | |
| 74 | QATAR PETROLEUM (QP) (Under renew) | FL | | | | | |
| 75 | RAS LAFFAN OLEFINS COMPANY LTD (RLOC) | FL | | | | | |
| 76 | RELIANCE (RIL) | FL | | | | | |
| 77 | REPSOL | FL | | | | | |
| 78 | SAIPEMFL | FL | | | | | |
| 79 | SAMSUNG | FL | | | | | |
| 80 | SASOL | FL | | | | | |
| 81 | SAUDI ARAMCO | FL | | | | | |
| 82 | SAUDI CHEVRON | FL | | | | | |
| 83 | SABIC - EPM | FL | | | | | |
| 84 | SABIC - SMO | FL | | | | | |
| 85 | SHELL -GLOBAL (TAMAP- PFF) | FL | | | | | |
| 86 | SYNCRUDE | FL | | | | | |
| 87 | TECNIMONT | FL | | | | | |
| 88 | TRAVIS PERKINS | FL | | | | | |
| 89 | TSE-TURKEY | FL | | | | | |
| 90 | VALERO | FL | | | | | |
| 91 | WIKA - GERMANY | FL | | | | | |
| 92 | WILSON | FL | | | | | |
| | | | | | | | |
| | | | | | | | |

*: FL- Flange, FA- Fastener, BB- Bright Bar, PR- Profile, WR-Wire, SM- Steel melting shop



SUSTAINABILITY

Overview

Viraj Profiles has always kept the concept of sustainability in mind while being a stainless steel manufacturing industry and growing each day. Viraj has always considered developing the world in such a way that it does not affect the needs of future generations.

At every Viraj plant, we manufacture and produce world-class products by following eco-friendly processes. We're able to do this by focusing on energy-efficient mechanisms and ways of conserving energy at every step.

Water Conservation

We acknowledge sustainable development in many ways, one of which is conserving water wherever possible. For that, we use recycled water at every facility and lay a strong emphasis on water harvesting.

This saves a huge amount of water that is consumed in other ways. Being a depleting resource, conserving water is and should be the priority of every industry that includes the mass usage of water.

Industrial Improvements

With technology enhancements and updation for the metal and steel manufacturing industry, we have surpassed the average way every other manufacturing plant works every day. For that, Viraj has installed an automatic temperature-control system that prevents overheating of machinery and the workforce.

With such an installation, laborers and employees feel much more relaxed and productivity enhances considerably. Machines, in addition to human resources, provide increased output because their temperatures do not rise and they do not overheat.



Reduce-Reuse-Recycle

At Viraj Profiles, we reduce waste and opt for recycling different materials to produce new ones. With sustainability as our priority, we try to extend our vision of adopting and being eco-friendly by using recyclable materials in our production of top-grade products that produce zero fumes in our melting shops.

Focus on Sustainability

Stainless Steel has always been at the core of human progress and will continue to be useful because of its magnificent properties, such as durability, flexibility, and most importantly, reusability, as it is a kind of metal that is easy to recycle. But with time, it is important that stainless steel evolves in order to become more sustainable.

At Viraj, we are glad to be taking action towards the same. The following policies at Viraj Profiles clearly demonstrate the company's commitment to a sustainable future.

- There are various committees formed at the corporate level that review the sustainability and governance initiatives around the organisation.
- Viraj's senior leaders also take part actively in various external forums such as the World Steel Association, the United Nations Global Compact (UNGC), the World Economic Forum (WEF), the Global Reporting Initiative (GRI), and other national forums such as the Confederation of Indian Industry (CII) and the Indian Institute of Metals (IIM) to talk about the current scenario and how to cope with it.



Roadmap towards a Green Future

- While contributing towards creating a green and clean environment, our major focus always remains on using materials that do not discharge carbon waste. With all these points and routines, we ensure minimum wastage of resources and optimum utilization of them.
- Viraj is moving towards a pure green renewable energy source by setting up a 100 MW Solar Power Plant and joining hands with Avaada Energy for the next 25 years for its 50% electricity utilisation.
- We're also setting up the most efficient air separation unit at Viraj Profiles Campus from LINDE and PARAXAIR.
- We're installing regenerative burners, high-efficiency motors, pumps, fans VFD, recuperators, and other components, that shall improve direct and indirect energy efficiency by 15% within three years.
- Viraj has joined hands with Thermax India to start working on Absorption Technology using AOD waste gas for Waste Heat Recovery.
- We've initiated steps towards switching 50% of the balance of electrical energy to round-the-clock renewable energy.
- Viraj is further focusing on emissions by identifying baseline parameters and reducing the same.

Thus, Viraj maintains the nature-human relationship by manufacturing quality products while keeping the environment in mind and complying with its social responsibility.





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