



VIRAJ PROFILES PRIVATE LIMITED

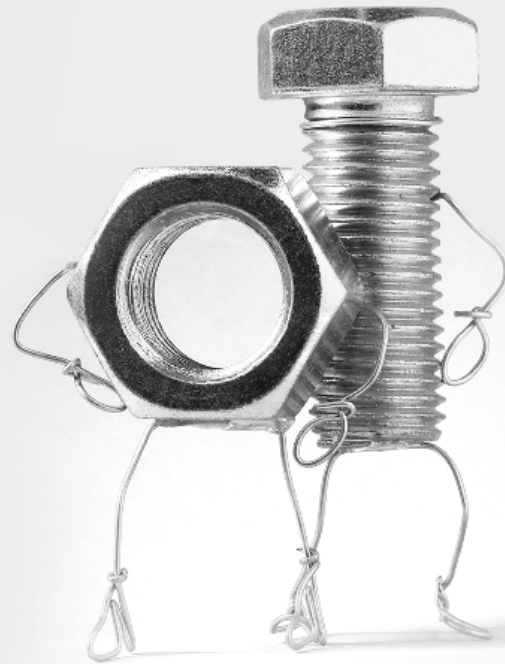
Building A Sustainable Stainless World

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:

Our stainless steel melting shop encompasses five induction furnaces, three AOD converters with computerised 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: 80 mm, 100 mm, 120 mm, 140 mm, 160 mm, 170 mm, 200 mm, 250 mm & 300 mm.

Round Billet: 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:

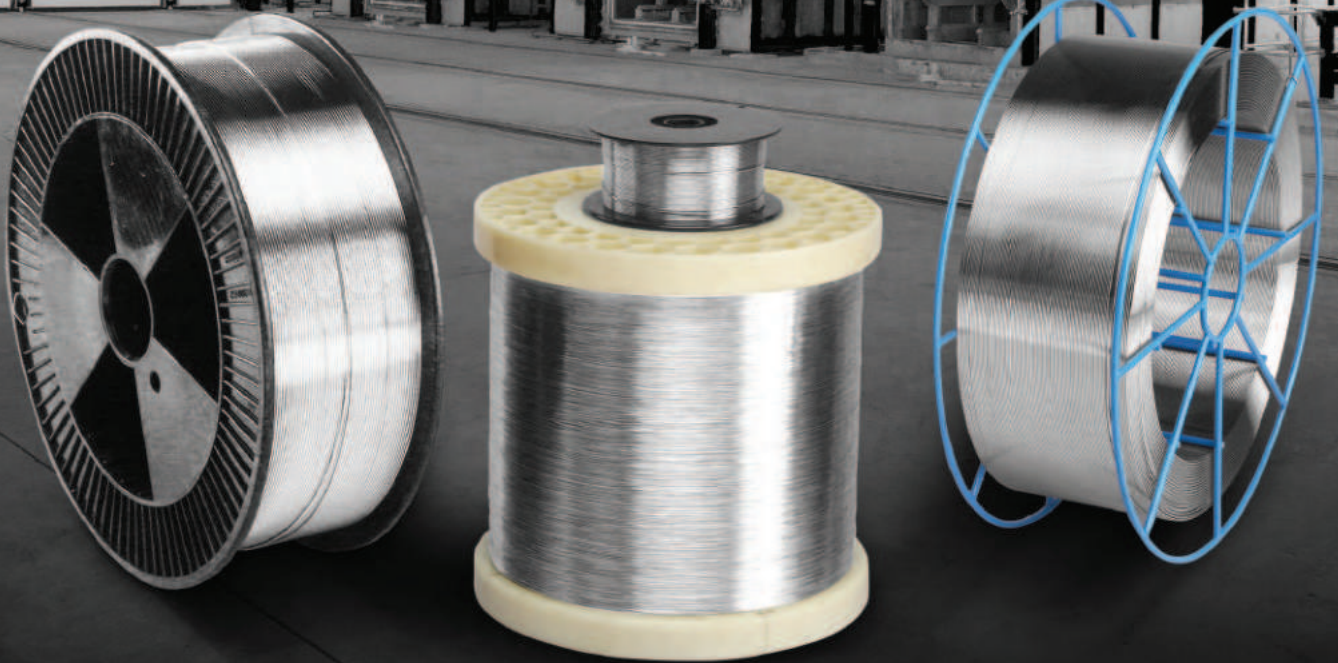
- A well equipped NABL certified laboratory with facility of testing ferro alloys and SS samples on X ray based Spectrometers.
- Optical emission Spectrometers for testing scrap and SS samples.
- Leco gas analyzers for testing C, S & OHN.





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

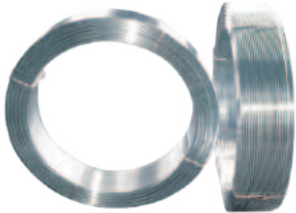
Tig Wire Bright Drawn Bright Finish in cut length 13.79 inches / 350 – 2000 mm.

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			
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



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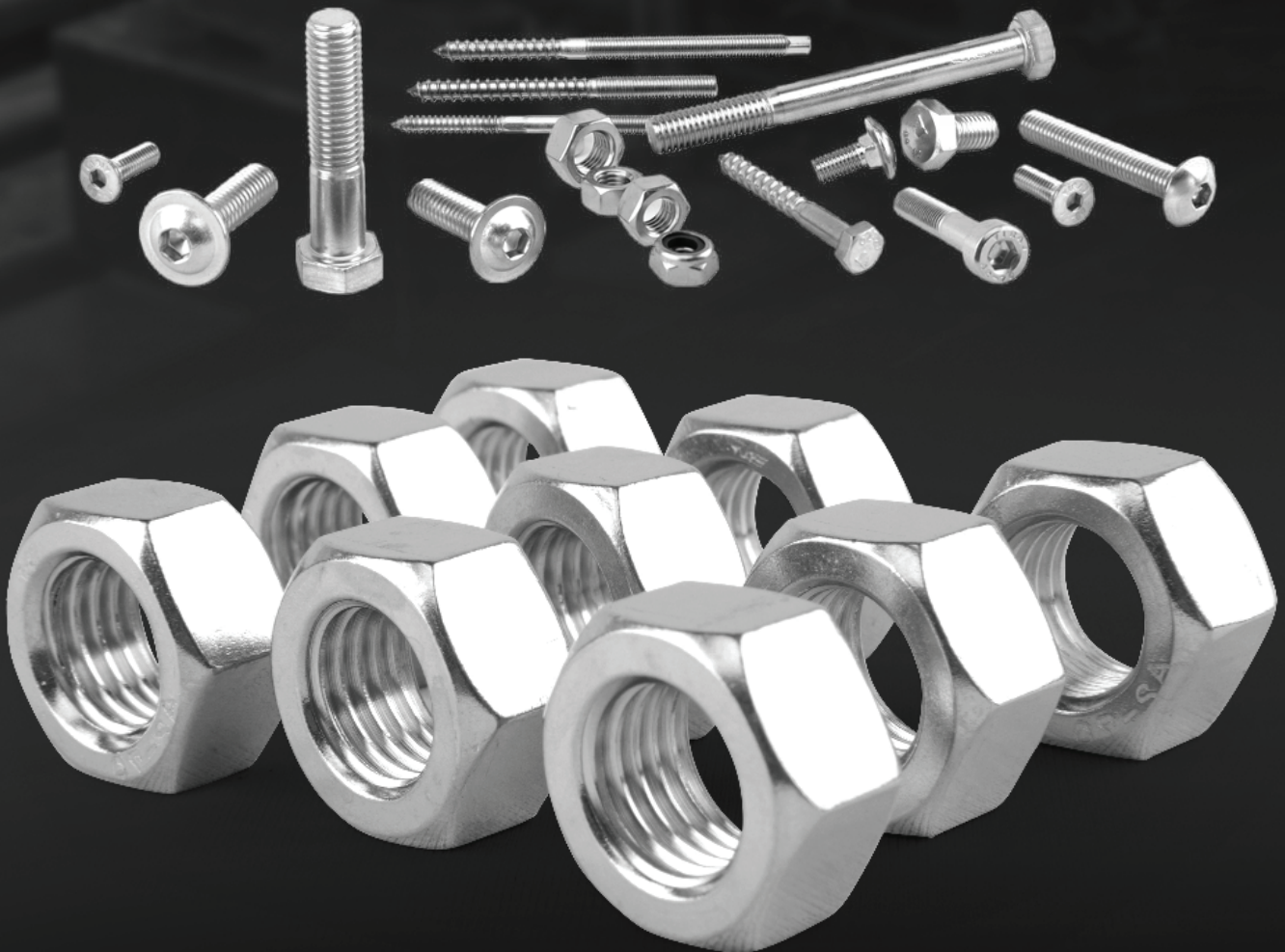
— STAINLESS STEEL —

FASTENERS

STAINLESS STEEL **FASTENERS**

The Viraj fasteners division specializes in the manufacturing of stainless steel fasteners products. 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	H/T
			F/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 7991	H/T ISO 10642		F/T	H/T
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 Thick Nyloc Nuts	DIN985 Thin Nyloc Nuts	IFI 100 - 107 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 Hexagon Flange Nuts	Hexagon Flange Nuts with Serration	BS 1083 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 Hexagon Nut	ISO8675 Hexagon Thin Nut (Fine Pitch)	DIN936 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

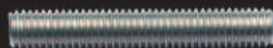
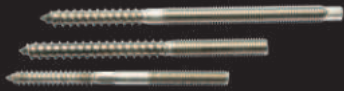
Dowel Screw Hexagon End		Dowel Screw Middle Hex		Dowel Screw Without Hex	
Size	Length	Size	Length	Size	Length
M10	160 - 250	M10	80 - 200	M6	50 - 160
M12	200 - 300	M12	100 - 250	M8	60 - 160

ISO14579-FT Hexalobular Socket head cap screw			ISO14579-HT Hexalobular Socket head cap screw		
Size.	Min.	Max.	Size.	Min.	Max.
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.
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

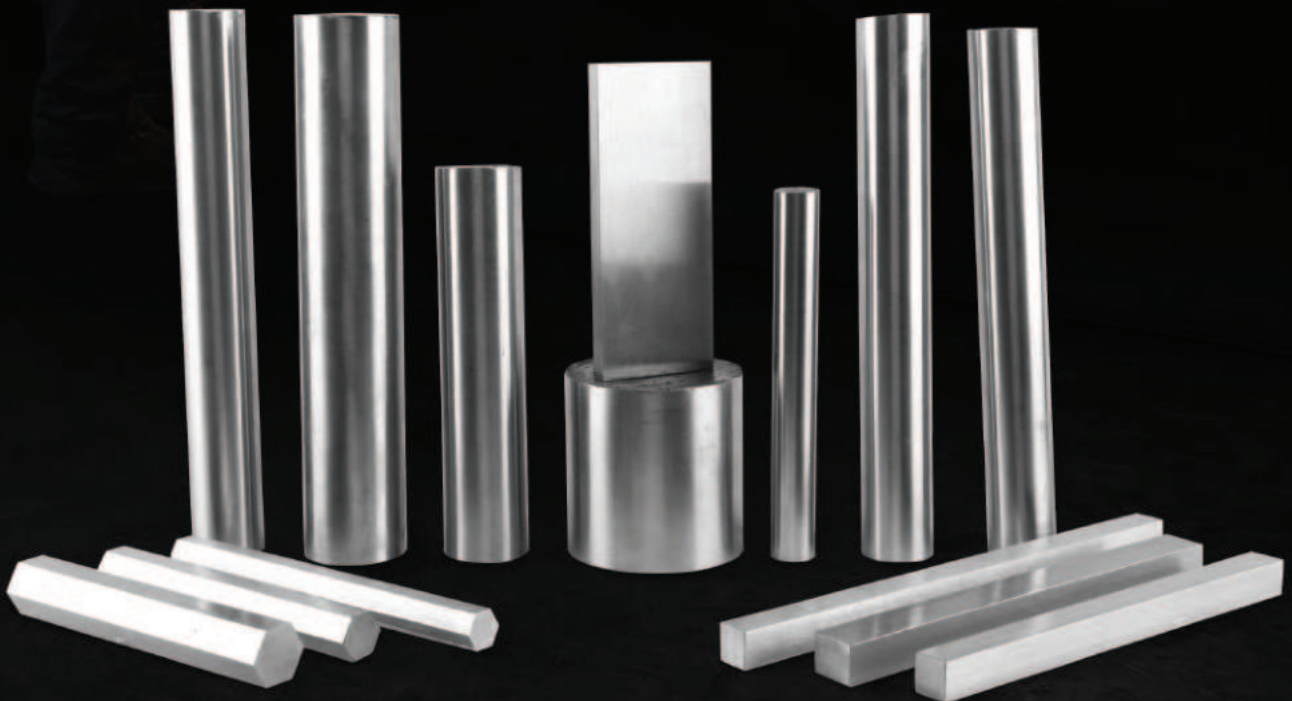
Following RoHS compliance





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:

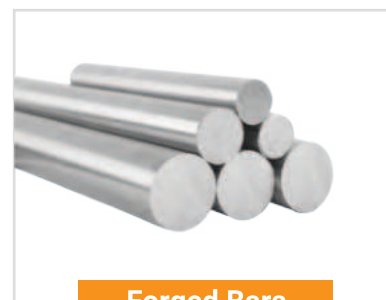
- ✓ Tensile testing machine
- ✓ Impact testing machine
- ✓ Hardness testing machine
- ✓ Microscope with image analyzer and micro photo facilities
- ✓ Ultrasonic testing machine with continuous bar feeling facility
- ✓ Precision digital laser micrometer
- ✓ Eddy current tester
- ✓ Surface roughness tester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

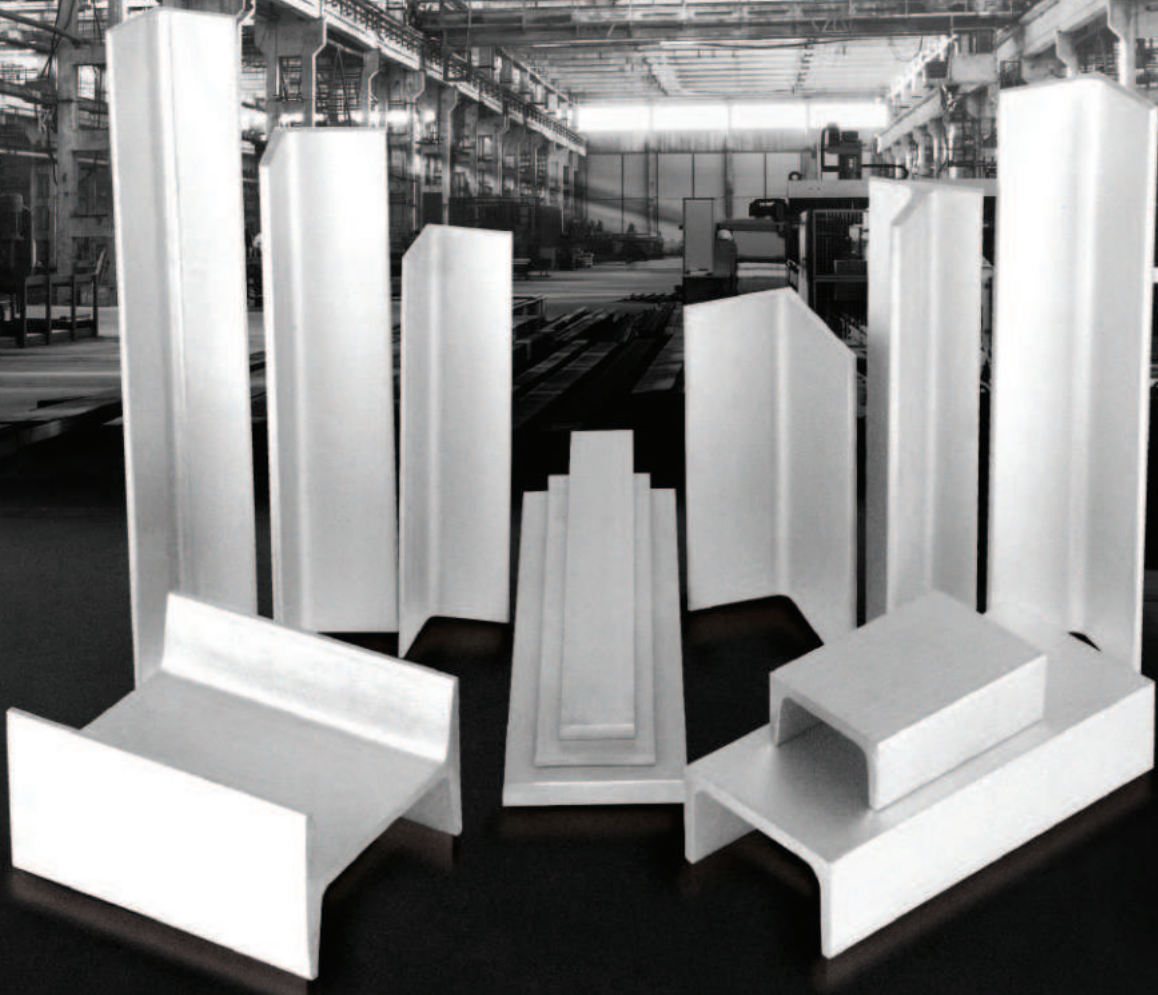
- | | |
|-----------------------------|-------------------------------|
| ▪ Auto industry | ▪ Hoses & fittings |
| ▪ Agricultural equipment | ▪ Tools & Fixtures |
| ▪ Health & sports equipment | ▪ Bearings, hinges & gears |
| ▪ Textile industry | ▪ Material handling & storage |
| ▪ Food processing industry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





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, 304L, 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)

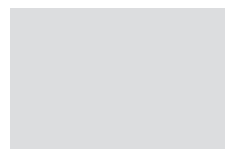
TESTING FACILITIES:

- ☑ 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 machines carries all the bars without any manual operation from pickling line. This machine arranges all the bundles in auto sequence and wraps top & bottom by LDPE poly film and radially wrap by 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.

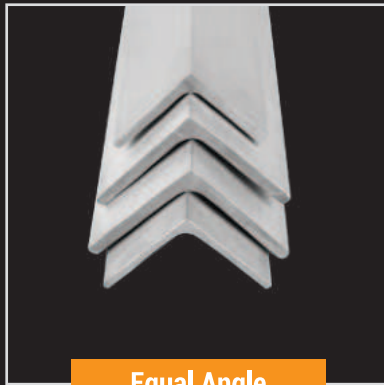


APPLICATIONS OF PROFILES:

- ✓ 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



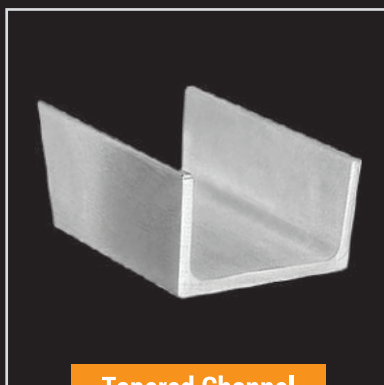
Non Tapered Channel



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 90+ approvals / certificates 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)/ Itegral 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



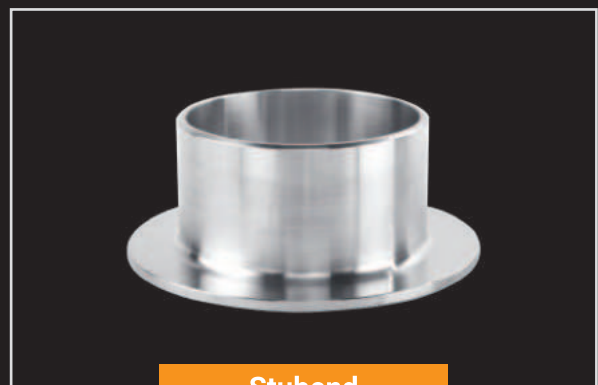
Threaded Flange



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 & Germanischer 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 in the 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 would have been 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

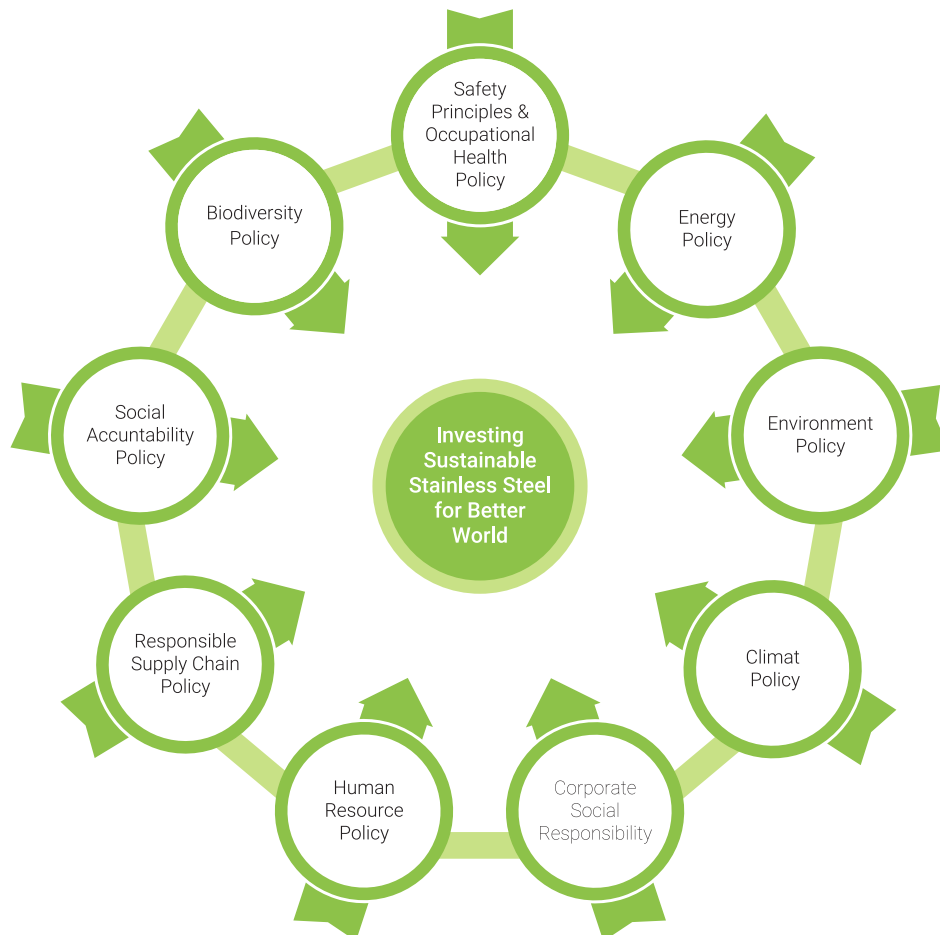
At Viraj Profiles, we enhance the usage of waste and opt for recycling different materials to produce new ones. With sustainability in mind, we try to extend our vision of adopting and being eco-friendly by using recyclable materials in our production of top-grade products that produce zero fumes in 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 excrete carbon waste. With all these points and routines, we ensure that there is the least wastage of resources and optimum utilisation of the same.
- Viraj is moving towards a pure green renewable energy source by setting up a 100 MW Solar Power Plant and joining hands with TATA Power Renewable 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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Vesu, Surat - 395007,
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