

**LAXCON**

**LAXCON STEELS LIMITED**

**Corporate Office**

C-55/2, Wazirpur Industrial Area  
Delhi - 110052, India  
Tel : +91-11-42952500 (100 Lines)  
Fax : +91-11-44797128

**Works**

Plot No 235, Sarkhej Bavla, N.H. No.8A,  
Village- Sari, Taluka Sanand  
Ahmedabad- 382220, Gujarat, India

**For Enquiries**

[sales@laxconsteels.com](mailto:sales@laxconsteels.com)

Website  
[www.laxconsteels.com](http://www.laxconsteels.com)

Oct 2024

**LAXCON**  
The 'Stain' Less People

**LAXCON STEELS LIMITED**

# PRECISION *engineering* FOR *every* NEED.

We pride ourselves on our ability to meet diverse customer requirements through a comprehensive range of advanced processes and state-of-the-art machinery. From steel melting to precision finishing, our flexible manufacturing capabilities ensure that we can deliver both high-volume productions and customized solutions tailored to your specific needs. With a commitment to quality and continuous innovation, we are dedicated to providing the right steel solutions for your projects, no matter the complexity.



# DIFFERENT *grades.* SAME *excellence.*

As an integrated steelmaker, popular steel grades are readily available and most grades can be supplied within a short lead time. We can make several exotic and special grades on demand. In aggregate terms, we possess the capability to make over 1000 grades of steel.

## Austenitic Steels

DIN	ASTM	JIS
1.4310	301	SUS 301
1.4319	302	SUS 302
1.4305	303	SUS 303
1.4301	304	SUS 304
1.4307	304L	SUS 304L
1.4948	304H	SUS F 304H
1.4311	304LN	SUS 304 LN
-	304N	-
1.4312	305	SUS 305 J1
1.4845	310	SUS 310
1.4842	310S	SUS 310 S
1.4841	314	-
1.4401	316	SUS 316
1.4404	316L	SUS 316L
1.4919	316H	-
1.4406	316LN	SUS 316LN
1.4432	-	-
1.4435	-	-
1.4436	-	-
1.3952	-	-
1.4571	316Ti	SUS 316Ti
1.4438	317L	SUS 317L
1.4541	321	SUS 321
1.4878	321H	SUS 321H
1.4460	329	SUS 329 J1
1.4550	347	SUS 347
-	347H SUS	SUS 347H
-	201	-
-	202	-
-	204	-
-	204 CU	-
-	XM 19	-
1.4815	-	-
HK30	-	-
S30432	Super 304	-
1.4828	309	-
1.4418	-	-

## Martensitic Steels

DIN	ASTM	JIS
1.4003	-	-
1.4000	403	SUS 403
1.4006	410	SUS 410
1.4005	416	SUS 416
1.4021	420	SUS 420 J1
1.4028	420B	SUS 420 J2
1.4031	420C	-
1.4034	-	-
1.4104	-	-
1.4057	431	SUS 431
1.4313	F 6NM	-
1.4923	X22CrMoV12-1	-
1.4122	-	-

## Precipitation Hardening Steels

DIN	ASTM	JIS
1.4542	17-4-PH	SUS 630
1.4545	15-5 PH	-
1.4594	-	-
-	15-7 PH	-
-	17-7 PH	-
-	13-8 Mo	-

## Ferritic Steels

DIN	ASTM	JIS
1.4002	405	SUS 405
1.4512	409	SUS 409
1.4016	430	SUS 430
-	430F	SUS 430F
1.4113	434	SUS 434
1.4509	441	-
1.4105	-	-

## Oil & Gas Industries

GRADES
Super 13Cr Ksi 110/95
13Cr80 Ksi
9Cr80 Ksi

## Alloy Steels

INTERNAL STANDARD	EN	DIN	SAE/AISI
EN 18	EN 18	37Cr4	5140
EN 19	EN 19	42Cr4Mo2	4140/4142
EN 24	EN 24	34CrNiMo6	4340
EN 353	EN 353	-	-
EN 354	EN 354	-	4320
SAE-8620	EN 362	-	SAE 8620
EN 45	EN 45	55Si7	9255
EN 45A	EN 45A	60Si7	9260
50CrV4	EN 47	50CrV4	6150
SAE 4130	-	25CrMo4	SAE 4130
SAE 4140	-	42CrMO4	SAE 4140
15CDV6	-	1.7734	-
21CrMoV5-7	-	1.7709	-
20CrMoVTi B4-10	-	-	-

ASTM	UNS	DIN
F 5/F 5A	K 41545	12CrMo195
F 9	K 90941	X12CrMo91
F 11 (CL2)	K 11572	13CrMo44
F 22 (CL3)	K 21590	10CrMo910
F 91	-	X10CrMoVNB9-1
F 12	K 11562	-

EN	DIN	SAE/AISI
EN - 31	100 Cr6	52100
H - 11	1.2343	X37CrMov5-1
H - 13	1.2344	X40CrMov5-1
H - 12	1.2605	X35CrWMoV5
DB - 6	1.2714	---

## Duplex Steels

DIN	ASTM	JIS
1.4410	F-53 (S32750)	-
1.4462	F-51 (S31803)	SUS 329 J3L
1.4362	2304 (S32304)	-
-	F-60 (S32205)	-



## Bright *Bars*



**Size Range**  
5 mm - 115 mm (3/16 inch - 4-1/2 inch)

**Supply Conditions**  
Length - Upto 6.5 meters  
Cold Drawn, Centreless Ground, Peeled & Polished, Rough Peeled or Smooth Turned Bars  
Tolerance - h7, h8, h9, h10, h11, k12, k13, ASTM A484  
Surface Finish Ra upto 0.2 mm (8.7 RMS)  
Straightness upto 0.5 mm per metre  
Grit Polish - K240, K320 or as per customer's requirement  
Heat Treatment - Soft Annealing, Solution Annealing, Oil & Water Quenching, Tempering & Aging  
Bars End Finish - Chamfered ends, 30°, 45°, 60° and Plain Ends without Burrs or Sharp Edges  
Specifications - as per EN, DIN, JIS, ASTM, BS, ASME, GOST, AISI (NACE MR0175, MR0103)  
Eddy current tested as per customers requirement  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

## Precision Shaft *Quality Bars*



**Size Range**  
8 mm - 81 mm (5/16 inch - 3 3/16 inch)

**Supply Conditions**  
Length - Upto 6.4 meters  
Tolerance - h7, h8, h9, j6, f7, f8  
Straightness - 0.015" TIR per 10 ft.  
Heat Treatments - Soft Annealing, Solution Annealing, Quench & Tempered  
Eddy current tested as per customer's requirement  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

## Hexagonal *Bright Bars*



**Size Range**  
16 mm - 55 mm (5/8 inch - 2 1/6 inch)

**Supply Conditions**  
Length - Upto 6 meters  
Tolerance - h11, k12, k13, ASTM A484  
Grit Polish as per customer's request  
Heat Treatment - Solution Annealed, Oil & Water Quenched / Tempered  
Bars End Finish - Chamfered ends, 30°, 45°, 60°, and Plain Ends without Burrs or Sharp Edges  
Specifications - as per EN, DIN, JIS, ASTM, BS, ASME, AISI, etc.  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

Black	Bright	Bright (inch)	Black	Bright	Bright (inch)	Black	Bright	Bright (inch)
16	15	3/5"	25	24	15/16"	40	38	1 1/2"
17	16	5/8"	26	25	1"	42	40	1-4/7"
18	17	2/3"	27	26	1-3/127"	43	42	1-2/3"
19	18	5/7"	28	27	1-1/16"	45	43	1-45/64"
20	19	3/4"	30	28	1 1/8"	47	45	1-4/5"
21	20	4/5"	32	30	1-3/16"	53	50	2"
22	21	5/6"	34	32	1 1/4"	55	52	2-1/16"
23	22	7/8"	36	34	1 3/8"	57	55	2-1/6"
24	23	-	38	36	1-3/7"			

## Square *Bright Bars*



**Size Range**  
12.70 mm - 55 mm (1/2 inch - 2-1/6 inch)

**Supply Conditions**  
Length - Upto 6 meters  
Tolerance - h11, k12, k13, ASTM A484  
Grit Polish as per customer's request  
Heat Treatment - Solution Annealed, Oil & Water Quenched / Tempered  
Bars End Finish - Deburred Ends, Plain Ends without Burrs or Sharp Edges  
Specifications - As per EN, DIN, JIS, ASTM, BS, ASME, AISI, etc.  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

Black	Bright	Bright (inch)	Black	Bright	Bright (inch)	Black	Bright	Bright (inch)
14	12	1/2"	24	23	-	40	38	1 1/2"
14	12.7	1/2"	25	24	15/16"	42	40	1-4/7"
16	14	5/9"	26	25	1"	43	41	1-5/8"
16	15	3/5"	27	26	1-3/127"	45	43	1-45/64"
18	16	5/8"	28	27	1-1/16"	46	44	1 3/4"
18	17	2/3"	30	28	1 1/8"	47	45	1-7/9"
19	18	5/7"	32	30	1-3/16"	50	47	1-7/8"
20	19	3/4"	34	32	1 1/4"	50	48	1-8/9"
21	20	4/5"	36	34	1 3/8"	53	50	2"
22	21	5/6"	38	36	1-3/7"	58	55	2-1/6"
23	22	7/8"						

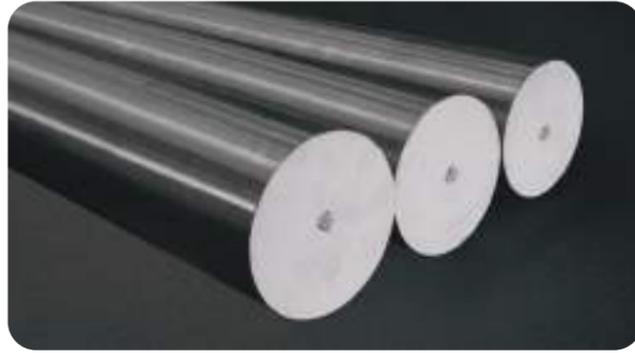
## Cold Drawn *Flat Bars*



**Supply Conditions**  
Length - 2 meters - 6 meters (8 feet to 20 feet)  
Tolerance - h11 and ASTM A 484  
Surface Finish - Cold Drawn and Pickled Condition  
Heat Treatment - Solution Annealed  
Grades - AISI: 304L, 316L, 316Ti, 321, DIN: 1.4307, 1.4404, 1.4571, 1.4541  
Inkjet printing as per grade & size  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

Size (mm)	Thickness (mm)	Size (inch)	Thickness (inch)
20	10, 12, 15	4/5"	2/5", 15/32", 3/5"
25	10, 12, 15, 20	1"	2/5", 15/32", 3/5", 4/5"
30	8, 10, 12, 15, 20	1-3/16"	5/16", 2/5", 15/32", 3/5", 4/5"
40	8, 10, 12, 15, 20, 25, 30	1-4/7"	5/16", 2/5", 15/32", 3/5", 4/5", 1", 1-3/16"
50	10, 12, 15, 20, 25, 30, 40	2"	2/5", 15/32", 4/5", 3/5", 1", 1-3/16", 1-4/7"
60	10, 12, 15, 20, 30, 40	2-3/8"	2/5", 15/32", 3/5", 4/5", 1-3/16", 1-4/7"
64	33	2-1/2"	1-2/7"
70	10, 20	2-3/4"	2/5", 4/5"
80	10, 15, 20, 30	3-1/7"	2/5", 15/32", 4/5", 1-3/16"
100	10, 12	4"	2/5", 15/32"

# Forged & Proof *Machined Bars*



**Size Range**  
120 mm - 550 mm (4-3/4 inch - 21-2/3 inch)

**Supply Conditions**  
Length - Upto 6 meters  
Tolerance - ASTM A484, EN10060  
Ultrasonic tested  
Heat Treatment - Soft Annealed, Solution Annealed, Normalizing, Quenched & Tempered  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

# HRAP Flat *Bars*



**Supply Conditions**  
Length - Upto 6.4 meters  
Hot Rolled, Annealed & Pickled (HRAP)  
Tolerance - ASTM A484, EN 10058  
Both ends are color coded as per customer's specific requirement  
Specifications - as per EN, DIN, JIS, ASTM, BS, ASME, etc.  
Inkjet printing as per grade & size  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

Size (mm)	Thickness (mm)	Size (inch)	Thickness (inch)
20	15, 16	4/5"	3/5", 5/8"
22	11, 13, 16, 17, 18	7/8"	7/16", 64/125", 5/8", 2/3", 5/7"
25	5, 6, 8, 10, 12, 15, 20	1"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 4/5"
26	11, 13, 16, 21	1-3/127"	7/16", 64/125", 5/8", 5/6"
30	5, 6, 8, 10, 12, 15, 16, 20, 25	1-3/16"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1"
32	5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 20, 21	1-1/4"	3/16", 1/4", 5/16", 23/64", 2/5", 7/16", 15/32", 64/125", 3/5", 5/8", 4/5", 5/6"
35	5, 6, 8, 10, 12, 15, 20	1-3/8"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 4/5"
40	5, 6, 8, 10, 12, 15, 20, 25, 30	1-4/7"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 4/5", 1", 1-3/16"
42	9, 11, 13, 16, 21, 26, 31	1-2/3"	23/64", 7/16", 64/125", 5/8", 5/6", 1-3/127", 1-2/9"
45	5, 6, 8, 10, 12, 15, 18, 20, 25	1-7/9"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 5/7", 4/5", 1"
50	5, 6, 8, 9, 10, 12, 15, 16, 20, 25, 30, 32, 35, 40	2"	3/16", 1/4", 5/16", 23/64", 2/5", 15/32", 3/5", 5/8", 4/5", 1", 1-3/16", 1-1/4", 1-3/8", 1-4/7"
52	11, 13, 16, 21, 26, 31, 32, 42	2-1/16"	7/16", 64/125", 5/8", 5/6", 1-3/127", 1-2/9", 1-1/4", 1-2/3"
55	5, 6, 8, 10, 12, 15, 16, 20, 25	2-3/16"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1"
57	32	2-1/4"	1-1/4"
60	5, 6, 8, 10, 12, 15, 20, 25, 30, 32, 35, 40	2-3/8"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 4/5", 1", 1-3/16", 1-1/4", 1-3/8", 1-4/7"
63	5, 6, 8, 10, 11, 12, 13, 15, 16, 20, 21, 25, 30, 32, 42	2-1/2"	3/16", 1/4", 5/16", 2/5", 7/16", 15/32", 64/125", 3/5", 5/8", 4/5", 5/6", 1", 1-3/16", 1-1/4", 1-2/3"
65	10, 12, 15, 16, 20, 25, 30, 32, 35, 40	2-5/9"	2/5", 15/32", 3/5", 5/8", 4/5", 1", 1-3/16", 1-1/4", 1-3/8", 1-4/7"
70	6, 8, 10, 12, 15, 16, 20, 25, 30, 34, 35, 40	2-3/4"	1/4", 5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1", 1-3/16", 1-1/3", 1-3/8", 1-4/7"
72	11, 21, 46	2-5/6"	7/16", 5/6", 1-4/5"
75	5, 8, 9, 10, 12, 15, 16, 20, 25, 30, 35, 40, 46	3"	3/16", 5/16", 23/64", 2/5", 15/32", 3/5", 5/8", 4/5", 1", 1-3/16", 1-3/8", 1-4/7", 1-4/5"
76	50, 55	2"	2", 2-1/6"
80	8, 10, 12, 15, 16, 20, 25, 30, 35, 40, 50	3-1/8"	5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1", 1-3/16", 1-3/8", 1-4/7", 2"
82	11, 13, 16, 21, 31	3-1/4"	7/16", 64/125", 5/8", 5/6", 1-2/9"
90	8, 10, 12, 15, 16, 20, 30, 40, 50	3-1/2"	5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1-3/16", 1-4/7", 2"
100	5, 6, 8, 10, 12, 15, 16, 20, 25, 30, 40	4"	3/16", 1/4", 5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1", 1-3/16", 1-4/7"
101.6	5, 11, 13	4"	3/16", 7/16", 64/125"
110	40	1-4/7"	1-4/7"
120	10, 12, 15, 16	4-5/7"	2/5", 15/32", 3/5", 5/8"
140	45	1-7/9"	1-7/9"
150	8, 10, 12, 15, 16, 20, 30	5-29/32"	5/16", 2/5", 15/32", 3/5", 5/8", 4/5", 1-3/16"

# HRAP *Equal Angles*



Size (mm)	Thickness (mm)	Size (inch)	Thickness (inch)
20 X 20	3	3/4"X3/4"	1/8"
25 X 25	3, 4, 5, 6	1"X1"	1/8", 1/6", 3/16", 1/4"
30 X 30	3, 4, 5	1-1/6"X1-1/6"	1/8", 1/6", 3/16"
32 X 32	3, 4, 5, 6	1-1/4"X1-1/4"	1/8", 1/6", 3/16", 1/4"
35 X 35	3, 4, 5	1-3/8"X1-3/8"	1/8", 1/6", 3/16"
38.1 X 38.1	3.17, 4.76, 6.35	1-1/2"X1-1/2"	1/8", 3/16", 1/4"
40 X 40	3, 4, 5, 6	1-4/7"X1-4/7"	1/8", 1/6", 3/16", 1/4"
45 X 45	3, 4, 5, 6	1-7/9"X1-7/9"	1/8", 1/6", 3/16", 1/4"
50 X 50	3, 4, 5, 6, 7, 8, 9, 10	2"X2"	1/8", 1/6", 3/16", 1/4", 9/32", 5/16", 3/8", 2/5"
60 X 60	5, 6, 7, 8, 9	2-3/8"X2-3/8"	3/16", 1/4", 9/32", 5/16", 3/8"
63 X 63	5, 6, 7, 8, 9, 10	2-1/2"X2-1/2"	3/16", 1/4", 9/32", 5/16", 3/8", 2/5"
65 X 65	5, 6, 7, 8, 9	2-5/9"X2-5/9"	3/16", 1/4", 9/32", 5/16", 3/8"
70 X 70	6, 7, 8, 9, 10	2-3/4"X2-3/4"	1/4", 9/32", 5/16", 3/8", 2/5"
75 X 75	5, 6, 7, 8, 9, 10, 12	3" X 3"	3/16", 1/4", 9/32", 5/16", 3/8", 2/5", 1/2"
80 X 80	6, 7, 8, 9, 10	3-1/8"X3-1/8"	1/4", 9/32", 5/16", 3/8", 2/5"
90 X 90	6, 9	3-1/2"X3-1/2"	1/4", 3/8"
100 X 100	6, 8, 9, 10	4" X 4"	1/4", 5/16", 3/8", 2/5"
120 X 120	10, 12, 13, 15	4-3/4" X 4-3/4"	2/5", 1/2", 64/125", 3/5"
125 X 125	10, 12	4-15/16"X4-15/16"	2/5", 1/2"
127 X 127	9, 12	5" X 5"	3/8", 1/2"

## Supply Conditions

Length - Upto 6.4 meters  
Tolerance - ASTM A484, EN10056  
Heat treatment process - Hot Rolled, Annealed & Pickled (HRAP)

Bars End Finish - Deburred Ends, Plain Ends without Burrs or Sharp Edges  
Specifications - As per EN, DIN, JIS, ASTM, BS, ASME, etc.  
Grit polish - As per customer's request

Shot Blasting as per customer's request  
Inkjet printing as per grade & size  
Free from Radioactive elements, Mercury & Lead contamination  
Grade confirmation through PMI testing with Handheld Spectrometers

# HRAP *Un-Equal Angles*



Size (mm)	Thickness (mm)	Size (inch)	Thickness (inch)
25 X 15	5	1" X 3/5"	3/16"
30 X 15	3	1-1/6"X3/5"	1/8"
30 X 20	3, 4	1-1/6"X4/5"	1/8", 1/6"
40 X 20	3, 4, 5, 6	1-4/7"X4/5"	1/8", 1/6", 3/16", 1/4"
40 X 30	5, 6	1-4/7"X1-1/6"	3/16", 1/4"
45 X 30	4, 5, 6	1-7/9"X1-1/6"	1/6"3/16", 1/4"
45 X 40	5	1-7/9"X1-4/7"	3/16"
50 X 25	4, 5, 6	2" X 1"	1/6", 3/16", 1/4"
50 X 30	4, 5, 6	2"X1-1/6"	1/6", 3/16", 1/4"
50 X 40	4, 5, 6	2"X1-4/7"	1/6", 3/16", 1/4"
60 X 30	5, 6	2-3/8"X1-1/6"	3/16", 1/4"
60 X 40	5, 6	2-3/8"X1-4/7"	3/16", 1/4"
70 X 50	6, 7	2-3/4"X2"	1/4", 9/32"
75 X 40	6, 10	3"X1-4/7"	1/4", 2/5"
76.2 X 38.1	6	3"X1-1/2"	1/4"
76.2 X 50.8	6, 9	3"X 2"	1/4", 3/8"
80 X 40	6, 8	3-1/8"X1-4/7"	1/4", 5/16"
80 X 65	8	3-1/8"X2-5/9"	5/16"
90 X 60	6	3-1/2"X2-3/8"	1/4"
100 X 50	6, 8, 10	4" X 2"	1/4", 5/16", 2/5"
100 X 75	6, 9, 10	4" X 3"	1/4", 3/8", 2/5"

## Threaded *Bars*



**Size Range**  
M 6 - M 45  
(1/4 inch - 1-7/9 inch)

**Grade**  
A2 / 304 (Class- 50, 70, 80)  
B 8 / 304 (Class-1 & 2)  
A4 / 316 (Class- 50, 70, 80)  
B8M / 316 (Class-1 & 2)

Threading method -  
Thread Rolling

Threading condition -  
Fully Threaded

Thread Type -  
ANSI B1.1 Class 2A Fit

Length - Upto 6 meters  
Tolerance ASME B1.1 & B1.13 M

**Applications**  
Fasteners, Construction,  
Automotive, Fittings and many  
others

Free from Radioactive  
elements, Mercury & Lead  
contamination

Grade confirmation through  
PMI testing with Handheld  
Spectrometers

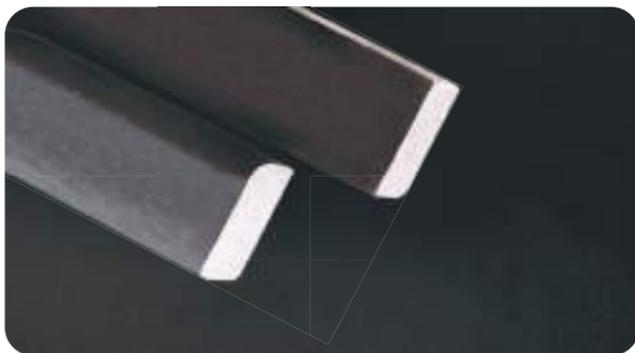
## Deformed *Bars*



**Rolled Size**  
16, 20, 25, 28, 32, 36, 40  
Length - Upto 12 meters

**Tolerance**  
IS 16651, BS 6744

## Hot Rolled Round *Cornered Squares (RCS)*



**Size Range**  
45 RCS 55 RCS 63 RCS  
75 RCS 80 RCS 85 RCS  
90 RCS 95 RCS 100 RCS

Length - Upto 8 meters

Hot Rolled (Black) Surface

100% Ultrasonic tested

Spot ground or fully ground condition

Free of surface defects/cracks

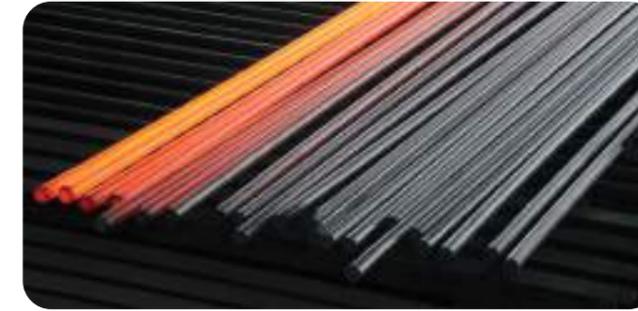
Cold-swappable

Smooth ends without sharp edges

**Applications**  
Hot Forgings - Open die and close die forgings  
Free from Radioactive elements, Mercury & Lead  
contamination

Grade confirmation through PMI testing  
with Handheld Spectrometers

## Hot Rolled *Round Bars*



**Size Range**  
16 mm - 125 mm (5/8 inch - 5 inch)

**Supply Conditions**

Length - Upto 8 meters

Tolerance - ASTM A484, EN10060

Hot Rolled (Black) Surface

100% Ultrasonic tested

Spot ground or fully ground condition

Cold-swappable

Heat Treatment - Soft Annealing, Solution Annealing,  
Spheroidized Annealing, Oil and Water Quenching,  
Tempered & Normalized

Free from Radioactive elements, Mercury & Lead  
contamination

Grade confirmation through PMI testing  
with Handheld Spectrometers

## Continuous Cast *Billets / Blooms*



**Supply Conditions**

Length - Upto 8.5 meters

Saw end cuts

Spot ground or fully ground condition (as per request)

Suitable for Forging, Rolling, Ring Rolling & Up-setting

Marked with Heat number, Grade, Size & Weight

**Applications**

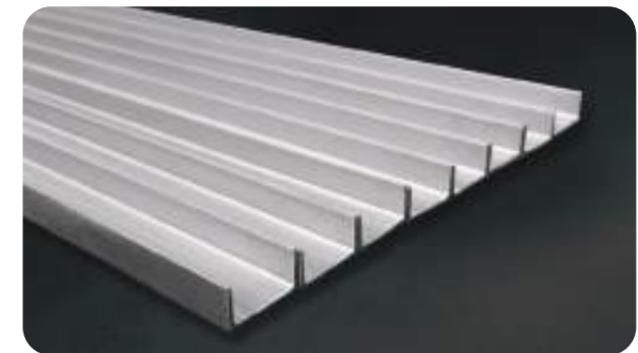
Rolling, Hot Forging and Ring Rolling

Free from Radioactive elements, Mercury & Lead  
contamination

Grade confirmation through PMI testing  
with Handheld Spectrometers

Size (mm)	Shape	Weight (Kg/Mtr.)	Size (mm)	Shape	Weight (Kg/Mtr.)
100	Square	78	150 MM	Round	140
120	Square	114	200 MM	Round	246
130	Square	130	250 MM	Round	385
140	Square	154	300 MM	Round	560
160	Square	200	220 X 250	Rectangular	428
200	Square	314	190 X 130	Rectangular	192
240 X 240	Square	452	280 X 140	Rectangular	305
300 X 300	Square	706	300 X 160	Rectangular	375

## Channels



**Length**  
- Upto 6.4 meters

**Supply condition**  
- HRAP

Deburred ends  
or plain ends

Inkjet printing as  
per grade & size

Tolerance  
- EN 10279

**NON - TAPER Size**

**Size (mm)**

**Size (inch)**

101.6X44.45X6.35	4" X 1-3/4" X 1/4"
101.6X50.8X6.35	4" X 2" X 1/4"
100X50X5X5	4" X 2" X 1/5" X 1/5"
100X50X6X6	4" X 2" X 1/4" X 1/4"
80X40X6X6	3-1/7" X 1-4/7" X 1/4" X 1/4"
80X40X5X5	3-1/7" X 1-4/7" X 1/5" X 1/5"
75X40X6X6	3" X 1-4/7" X 1/4" X 1/4"
75X40X5X5	3" X 1-4/7" X 1/5" X 1/5"
50X25X5X5	2" X 1" X 1/5" X 1/5"

**TAPER Size**

**Size (mm)**

**Size (inch)**

101.6X40.23X4.76X7.52	4" X 1-3/5" X 3/16" X 2/7"
101.6X43.71X8.15X7.52	4" X 1-5/7" X 1/3" X 2/7"
100X50X6X8.5	4" X 2" X 1/4" X 1/3"
65X42X5.5X7.5	2-5/9" X 1-2/3" X 2/9" X 2/7"

**Size (mm)**

**Size (inch)**

50X38X5X7	2" X 1-1/2" X 1/5" X 2/7"
50X25X3X3.3	2" X 1" X 1/8" X 1/8"
50X25X5X6	2" X 1" X 1/5" X 1/4"

# Forging Quality *Ingots*



## Supply Conditions

Ingots are supplied in spot ground or fully ground condition

Free from surface defects or cracks

Every piece is marked with Heat number, Colour Code, Grade, Size and Weight

## Applications

Open Die Hot Forgings, Re-Rolling and Ring Rolling

Free from Radioactive elements, Mercury & Lead contamination

Grade confirmation through PMI testing with Handheld Spectrometers

Size (inch)	Size (mm)	Shape	WT/PC	Size (inch)	Size (mm)	Shape	WT/PC
8X9X52"	200 X 230 X 1320	Square	470	20X24X73"	510 X 610 X 1855	Square	4100
9.75X8.75X60"	247 X 222 X 1524	Square	654	23X27X70"	585 X 685 X 1780	Fluted	5100
9X10.5X54"	230 X 270 X 1370	Square	630	26X31X62"	685 X 760 X 1575	Fluted	6100
10X12X52"	250 X 305 X 1320	Square	815	31.5X 38X73"(M-9)	800 X 965 X 1855	Fluted	10200
11X12X52"	280 X 305 X 1320	Square	875	38x47x70"(M-13)	965 X 1195 X 1780	Fluted	14500
11X13X52"(OPEN)	280 X 330 X 1320	Square	950	42.5X52.5X87.5"(M-18)	1080 X 1330 X 2220	Fluted	22000
13X15X62"	330 X 380 X 1575	Fluted	1160	16" X 16" X 90.5"	400 X 2.3 Mtr.	Round	2200
13X15X62"(OPEN)	330 X 380 X 1575	Square	1550	19-2/3" X 19-2/3" X 86.6"	500 X 2.2 Mtr.	Round	3800
14X17X72"	355 X 430 X 1830	Square	2050	24" X 24" X 79"	600 X 2 Mtr.	Round	5100
16.5X20X65"	420 X 510 X 1650	Square	2550	16" X 16" X 158"	400 X 4 Mtr.	Round	3800
18X21X67"	455 X 530 X 1700	Fluted	2500	19-2/3" X 19-2/3" X 158"	500 X 4 Mtr.	Round	5800
21X23X67"	530 X 585 X 1700	Fluted	3400				

# Precipitation *Hardening Steels*



Precipitation Hardening stainless steels are chromium and nickel containing steels that provide an optimum combination of the properties of Martensitic and Austenitic grades. Like Martensitic grades, they are known for their ability to gain high strength through heat treatment and they also have corrosion resistance of austenitic stainless steel.

The high tensile strengths of precipitation hardening stainless steels come after a heat treatment process that leads to precipitation hardening of Martensitic or Austenitic matrix. Hardening is achieved through the addition of one or more of the elements Copper, Aluminium, Titanium, Niobium and Molybdenum.

The most well known precipitation hardening steel is 17-4 PH, the name comes from the additional 17% Chromium and 4% Nickel. It also contains 4% Copper and 0.3% Niobium, 17-4 PH is also known as stainless steel grade 630.

The advantage of precipitation hardening steels is that they can be supplied in a "solution-treated" condition, which is readily machinable. After machining or another fabrication method, a single, low-temperature heat treatment can be applied to increase the strength of the steel. This is known as aging or age-hardening. As it is carried out at low temperature, the component undergoes no distortion.

Our entire product range is available in this grade on request.

## Industry Applications

Oil, Gas, Power, Offshore, Chemical, Nuclear, Food Industry, Aerospace, Pulp and Paper Industry, High Pressure Pump and Valves Components, Measuring and Control, Mechanical Components and Welding Applications.

## Standards

AMS5642, DIN/EN10088-3, AMS 5622 & ASTM A564

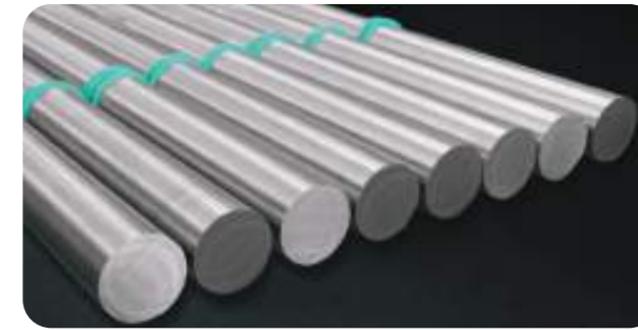
## Grade

15-5PH, 17-4PH / 1.4542 & 1.4594

## Heat Treatment Conditions

Solution Annealing, H 900, H925, H1025, H1075, H1100, H1150, H1150D, H1150M

# Duplex *Steels*



## Applications

Structural Design Components  
Storage and Exchange Equipment  
(High Pressure, Saline applications)  
Heat Exchanger  
Aerospace, Pulp and Paper Industry

Duplex stainless steels are called "duplex" because they have a two-phase microstructure consisting of phases of ferritic and austenitic stainless steel. This structure provides a unique set of benefits.

## Strength

Duplex stainless steels are about twice as strong as regular austenitic or ferritic stainless steel.

## Corrosion Resistance

As with all stainless steels, corrosion resistance depends mostly on the composition of the stainless steel.

The composition of this steel makes it better at resisting corrosion.

## Toughness and Ductility

Duplex stainless steel has significantly better toughness and ductility than ferritic grades.

## Pren Values

Steel Grade	PREN	Steel Grade	PREN
1.4307	18	1.4462	31
1.4404	24	2205	35
904L	34		

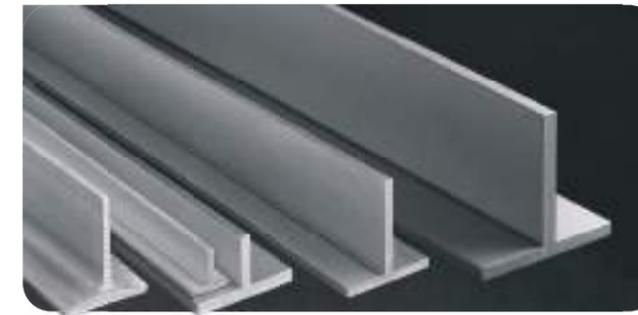
## Mechanical Properties

Grade No.	Yield Strength (Rp 0.2%) (Min) (Mpa)	UTS (Mpa) (Min)	UTS (Mpa) (Max)	% Elongation (Min)	% Reduction Area (Min)	Hardness (BHN) (Max)
1.4462	450	650	880	25	---	270
UNS S31803	448	620	---	25	---	290
UNS S32205	450	655	---	25	---	290

## Chemical Composition

Standard	Grade	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni (Max)	Cu%	N2 (Max)
ASTM A 182	F-51	0.03	1	2	0.03	0.02	21-23	2.5-3.5	4.5-6.5		0.08-0.2
ASTM A 182	F-60	0.03	1	2	0.03	0.02	22-23	3.0-3.5	4.5-6.5		0.14-0.2
ASTM A 182	F-53	0.03	0.8	1.2	0.035	0.02	24-26	3-5	6.0-8.0	0.5	0.24-0.32
ASTM A 276	UNS S32205	0.03	1	2	0.03	0.02	22-23	3.0-3.5	4.5-6.5		0.14-0.2
ASTM A 276	UNS S31803	0.03	1	2	0.03	0.02	21-23	2.5-3.5	4.5-6.5		0.08-0.20
ASTM A 240	UNS S32750	0.03	0.8	1.2	0.035	0.02	24-26	3-5	6.0-8.0	0.5	0.24-0.32
DIN EN 10088-3	1.4462	0.03	1	2	0.035	0.015	21-23	2.5-3.5	4.5-6.5		0.1-0.22
DIN EN 10088-3	1.4460	0.05	1	2	0.035	0.03	25-28	1.3-2.0	4.5-6.5		0.05-0.2
EN 10095	1.4821	0.1-0.2	0.8-1.5	2	0.04	0.015	24.5-26.5		3.5-5.5		0.11
DIN EN 10088-3	1.4410	0.03	1	2	0.035	0.015	24-26	3.0-4.5	6.0-8.0		0.24-0.35
EN 10028-7	1.4362	0.03	1.0	2.0	0.035	0.015	22-24.5	0.1-0.6	3.5-5.5	0.1-0.6	0.05-0.2

# T-Profile



Size (mm)	Size (inch)
50X50X5	2"X2"X3/16"

Length - Upto 6.4 meters

Tolerance & ASTM A484, EN 10055

Hot Rolled Annealed & Pickled (HRAP)

Inkjet printing as per grade & size

Free from Radioactive elements, Mercury & Lead contamination

Grade confirmation through PMI testing with Handheld Spectrometers