

## **Stainless Steel Fabricated Items**

We offer a wide assortment of stainless steel fabricated items such as:

- Screws
- Nuts
- Washers etc.

These stainless steel fabricated items are quite useful engineering components. These are manufactured from highly qualitative raw material that are procured from reliable vendors. These items are highly corrosion resistance, moreover we offer customization of these products as per the client's specifications.

Fabricated from high grade stainless steel and its alloys, we offer a wide assortment of fasteners that are significantly used in various industries. These fasteners are available with us in different types including

- Bolts
- Nuts
- Studs
- Washers
- U bolts
- J bolts
- Anchor rods
- Pins

### **These are available in different**

- **Sizes:** ranging from M12 to M150 & 1/2" to 6"
- **Length:** up to 1000 mm
- **Specifications:** IS, BS, ASTM A193, ASTM A320

## **STAINLESS STEEL**

### **TP304**

Basic grade of stainless steel. Good resistance to high temperature oxidation up to 900 C, Very good mechanical strength and creep resistance. Main applications : Pipe and heat exchanger tubes for chemical and petrochemical industries and for boilers.

### **TP304H**

TP 304 with guaranteed carbon content which gives a better creep resistance. Similar Oxidation resistance to TP 304. Main applications : Heatexchangers, chemical and petrochemical furnaces.

### **TP304L**

Low Carbon version of TP 304 guaranteed no creep resistance above 500 C. Good high temperature oxidation up to 900 C. Main applications: Pipe and heat exchanger tubes in chemical, petrochemical and food industries.

### **TP309S**

Corrosion resistance similar to, but better than, that of Type 304, Good resistance to high temperature oxidation up to 1093 C, Very good creep strength and weld ability .Main applications: Heat Exchanger and condenser tubes, also for sheath tubes on electric heating elements.

### **TP316**

Good resistance to high temperature oxidation up to 900 C. Very good mechanical and creep strength resistance. Main applications : Pipe and heat exchanger tubes in chemical and petrochemical plant. Boilers and food industry.

### **TP316L**

Low carbon version of TP 316.2 which guaranteed no creep resistance above 500 C, Good high temperature oxidation resistance up to 900 C. Main applications : Pipe and heat exchanger tubes in chemical, petro chemical and food industries.

### **TP316Ti**

General corrosion resistance properties rather similar to TP 316, Good resistance to high temperature oxidation up to 900 C. Main applications : Pipe and heat exchanger tubes in chemical, petrochemical and food industries.Boilers and furnace.

### **TP317L**

Properties similar to TP 316L Main applications : Pipe and heat exchanger tubes

### **TP321**

General corrosion resistance similar to those of TP 304. Good high temperature oxidation resistance up to 900 C. Very good mechanical strength and creep resistance. Main applications : Pipe and heat exchanger tubes in chemical and petrochemical plant.

### **TP321H**

Carbon version of TP 321 which ensures greater creep resistance, Behaves much the same as Type 321 in oxidation resistance. Main applications : Heat exchangers, furnaces, boilers in chemicals and petrochemical plant.

### **TP347**

Properties similar to those of TP 321. Main applications : Pipes and heat exchanger tubes in chemical and petrochemical plant.

### **TP410**

Type 410 is least expensive stainless steel. Good resistance to high temperature up to 700 C  
Main application : Exchangers in petrochemical industry, heat recuperators

**TP420**

Good corrosion resistance and good high temperature oxidation resistance up to 700 C. Excellent mechanical characteristics. Main applications : Threaded pipe for oil well

**TP446**

Highest heat resistance ferritic stainless steel. Excellent corrosion resistance to nitric acid, concentrated sulfuric and most alkalis. Good high temperature resistance to 1100 - 1140 C. Main applications : oil and gas furnaces, steam boilers, muffle tubes.

**Specifications:**

<b>CHEMICAL COMPOSITION ( IN PERCENTAGE )</b>										
Grade	C (Max)	Mn (Max)	P (Max)	S (Max)	Si (Max)	Cr	Ni	Mo	Nitrogen (Max)	Cu/ Others
301	0.15	2.00	0.045	0.030	1.00	16.00 - 18.00	6.00 - 8.00	-	0.10	-
304	0.08	2.00	0.045	0.030	0.75	18.00 - 20.00	8.00-10.50	-	0.10	-
304L	0.030	2.00	0.045	0.030	0.75	18.00 - 20.00	8.00-12.00	-	0.10	-
310S	0.08	2.00	0.045	0.030	1.50	24.00-26.00	19.00 - 22.00	-	-	-
316	0.08	2.00	0.045	0.030	0.75	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00	0.10	-
316L	0.030	2.00	0.045	0.030	0.75	16.00 - 18.00	10.00 - 14.00	2.00 - 3.00	0.10	-
317	0.08	2.00	0.045	0.030	0.75	18.00 - 20.00	11.00 - 14.00	3.00 - 4.00	0.10	-
317L	0.030	2.00	0.045	0.030	0.75	18.00 - 20.00	11.00 - 15.00	3.00 - 4.00	0.10	-
321	0.08	2.00	0.045	0.030	0.75	17.00 - 19.00	9.00 - 12.00	-	0.10	Ti5 ( C + N ) Min or 0.70 max
347	0.08	2.00	0.045	0.030	0.75	17.00 - 19.00	9.00 - 13.00	-	-	Cb= 10x ( C Min ) or 1.00 Max
409	0.08	1.00	0.040	0.010	1.00	10.50 - 11.75	0.50	-	-	Ti= 6x (C+ N ) Min or 0.70 Max
409M	0.03	0.81.2	0.030	0.030	0.40.75	11.00-12.00	1.5 max.	-	-	Ti= 6x (C) Min or 0.70 Max

410S	0.08	1.00	0.040	0.030	1.00	11.50- 13.50	0.60	-	-	-
410	0.15	1.00	0.040	0.030	1.00	11.50- 13.50	0.75	-	-	-
420	0.35	0.50	0.035	0.015	0.50	12.00 - 13.00	0.20.3	-	-	-
430	0.12	1.00	0.040	0.030	1.00	16.00 - 18.00	0.75	-	-	-
JSL AUS	0.08	7.08.0	0.070	0.030	0.75	15.50 - 16.50	4.25 - 4.75	-	-	0.9 - 1.10
JS- 203	0.08	9.2510.25	0.070	0.030	0.75	14.25 - 15.25	2.25 - 2.75	-	-	1.60- 2.0
301M	0.10	4.55.5	0.060	0.030	0.75	14.50 - 15.50	6.0 - 7.0	-	-	1.70- 1.90
* Thickness of 1.27mm & below will have elongation of 20% min.										