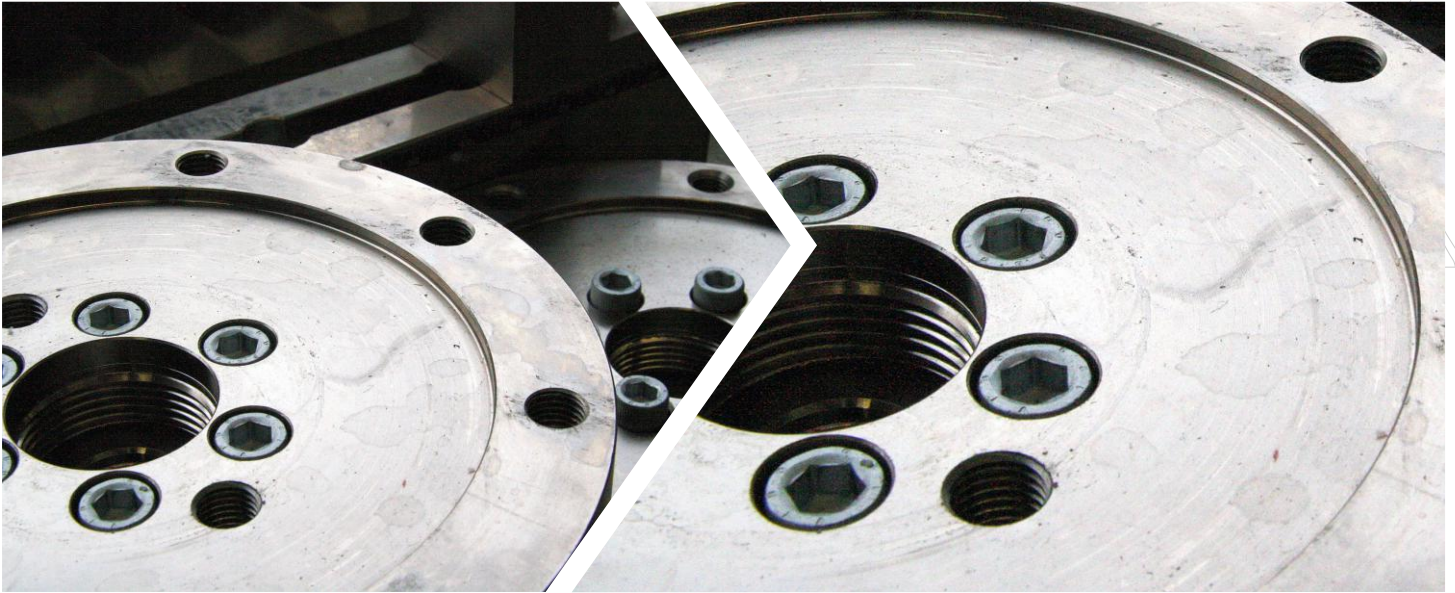


## Stainless steel



### Generic Data :

|                    |                 |
|--------------------|-----------------|
| Technical Name     | Stainless steel |
| Process            | Machining       |
| Accuracy           | (+/-)150 µm     |
| Maximum Build Size | 400x400x300 mm  |

Stainless Steel, also known as inox steel or inox is an iron alloy that contains about 10.5% chromium content by mass along with carbon. Unlike carbon steel, stainless steels do not suffer uniform corrosion when exposed to wet environments. Unprotected carbon steel rusts readily when exposed to the combination of air and moisture.

### Characteristics

- + Strength and hardness
- + High toughness
- + Ductility
- + Corrosion resistant
- + Higher hot strength
- Non-magnetic unlike other ferrous alloys
- Loses lustre with time
- Dirt prone, impressions fingerprints, etc are left behind

### Applications

- ✓ Architecture, locomotion
- ✓ Pulp, Paper and Biomass conversion
- ✓ Chemical Processing, Petrochemical
- ✓ Food and Beverage
- ✓ Medicine, culinary use

| Material Properties            | Value     | Unit              | Standard Test Method |
|--------------------------------|-----------|-------------------|----------------------|
| Density                        | 8.00      | g/cm <sup>3</sup> | ASTM DATA            |
| Natural Color                  | Dark gray | -                 | -                    |
| <b>Mechanical Properties</b>   |           |                   |                      |
| Tensile Strength               | 215       | MPa               | ASTM DATA            |
| Ultimate Tensile Strength      | 505       | MPa               | ASTM DATA            |
| Elongation at Break            | 70        | %                 | ISO DATA             |
| Charpy notched impact strength | 325       | J                 | ISO DATA             |
| Izod Impact notched (23°C)     | 150       | J                 | ASTM DATA            |
| Hardness, Rockwell B           | 70        | -                 | -                    |
| <b>Thermal Properties</b>      |           |                   |                      |
| Thermal Conductivity           | 16.2      | W/m-K             | Annealed; ASTM DATA  |
| Melting Temperature            | 1400      | °C                | -                    |