

CREEP RESISTANT STEELS

Available Product Variants

- Long Products*
- Semi-Finished Products / Billet
- Plates

* Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

Components featuring elevated high-temperature strength for use in thermal engines and power plants, such as turbine blades, turbine discs, screws, bolts, pins and shafts.

Process Melting

- VID

Applications

- > Aerospace
- > Components for Industrial Gas Compressors
- > Fasteners, Bolts, Nuts
- > Other Automotive Components (Turbochargers, Piston Rings, Sensors, etc.)
- > Other Power Generation Components
- > Steam Valves
- > Water Power
- > Motorsport industry
- > Distributors for Component Applications
- > Forging Applications
- > Other Aerospace Components
- > Power Generation (Gas/Steam/Nuclear)
- > Tubular Products, Flanges, Fittings
- > Wind Power
- > Blades & Shafts for Turbines and Compressors
- > Distributors or producers of standard parts without knowledge of final applications
- > Mechanical Engineering
- > Other Components
- > Shafts
- > Turbine and Engine Parts (Aerospace)

Technical data

Material designation		Standards	
ST12T	Market grade	10088-1	EN ISO
ST12TE		10216-2	
X22		10222-2	
1.4922	SEL	10302	ASTM
1.4923		A370	
X20CrMoV11-1	EN		
X22CrMoV12-1			

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	Ni	V
0.22	0.25	0.7	11.4	0.95	0.7	0.3

Thermal Expansions between 20°C | 68°F and ...

Temperature (°C)	100	200	300	400	500	600
Thermal expansion (10 ⁻⁶ m/(m.K))	10.5	11	11.5	12	12.3	12.5

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.