

A105 LF2

LOW CARBON ENGINEERING STEEL

We are a division of the Smiths Metal Centres Limited Group

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ASTM A105 LF2 is a standard specification for forged carbon steel elements.

The steel is known for its excellent strength and toughness, which makes it suitable for use in high-pressure and high-temperature environments. Components may include flanges, fittings and valves. This steel possesses moderate strength and impact toughness with suitability to be heat treated, up to and including NPS 4.

Heat Treatment:

- **Forging** Commence 1150°, max finish 925°
- **Annealing** 800° to 830° surface cool
870/ 915° air cool
- **Normalizing** 830° to 850° water quench
- **Hardening** 850° to 870° oil quench
- **Tempering** 425° to 870° according to properties

Chemical Composition (weight, %)

	C	Mn	Si	Cu	Cr	Ni
Min.		0.60	0.15			
Max.	0.35	1.05	0.35	0.40	0.30	0.40
	Mo	P	S	V		
Min.						
Max.	0.12	0.035	0.040	0.08		

* Properties as per ASME SA-105

We stock **A105 LF2** in round and square bars of various diameters. We supply the product in standard lengths or cut to your specific size requirements.

Rust Prevention:

Rust can occur with carbon steel. Oil varnishing provides lubrication. Anti-rust painting gives a protective layer, and electric zinc coating prevents the reach of water and oxygen. Both are viable methods for rust prevention.

Suitability:

A105 LF2 reliably operates under temperatures from 0° to 550°. This class of steel lends itself well to hydro-carbon and marine engineering processes. It also finds use within nuclear power plants, oil and gas equipment, heat exchangers, pump manufacturing and petrochemical plants.

Flanges:

Forged carbon steel piping components are used for flanges, valves and fittings in pressure systems at higher temperatures and ambient service conditions. **A105 LF2** flanges are a reliable and versatile choice for connecting pipes in various industrial applications, including oil and gas, chemical processing, power generation, and more.

Benefits:

- Serviceable to high temperatures
- Moderate strength
- Long service life
- Good thermal insulation