

300M VAC-ARC steel is a modified 4340 steel with increased silicon content for higher tempering temperatures.

300M's **higher tempering temperature results in the bonus of a stress-relieved structure perfect for heavy loads.** 300M is known for its strength, high hardenability, and good ductility, especially in heavy sections. The alloy is primarily used in structural aircraft applications, with as high as 275/300 ksi ultimate tensile strength and 60-70 ksi√in fracture toughness. The vacuum arc remelting process ensures optimal cleanliness, ductility, and toughness with a preferred ingot structure for manufacturing and performance. 300M's balance of strength and toughness makes it the perfect alloy solution for key aerospace structural applications such as aircraft landing gear.

Similar alloys: 300M-HS (high strength)



KEY FEATURES OF 300M

- **High strength:** 300M has high hardenability and strength, making it suitable for heavy sections. It is primarily used in the 275/300 ksi ultimate tensile strength range for aircraft landing gear and other structural components.
- **Good ductility and toughness:** Combined with high strength, the alloy maintains good ductility and toughness, essential properties for materials used in structural applications.
- **High tempering temperature:** The added silicon in the alloy allows for the use of a higher tempering temperature.
- **Optimum cleanliness and preferred ingot structure:** The alloy is produced using vacuum arc remelting (VAR), which provides optimum cleanliness, ductility, and toughness with a preferred ingot structure.
- **Workability:** The alloy can be forged, welded by gas or arc fusion methods, and machined for optimum machinability. It should be normalized and tempered for the best results.

