

## ASTM A694 F65 Flange Manufacturer & Supplier in China

We are a leading **manufacturer of ASTM A694 F65 high-yield carbon steel flanges**, engineered for high-pressure piping applications in oil, gas, and petrochemical systems. Our product range includes weld neck, blind, and slip-on flanges with full compliance to ASME, ANSI, and API standards.

All flanges are:

- Heat treated (normalizing or quenching + tempering)
- Supplied with EN 10204 3.1 / 3.2 certificates
- 100% inspected via ultrasonic or magnetic particle testing
- Suitable for sour service (NACE MR0175) upon request

**Available Pressure Classes:**

ANSI 300#, 600#, 900#, 1500#, 2500#

**Standard:**

- ASTM A694 / ASME SA694

This specification covers **carbon and alloy steel forgings for pipe flanges, fittings, valves**, and parts for high-pressure transmission service.

**Grade:**

- F65 (indicates a minimum yield strength of 65,000 psi or 450 MPa)



## Chemical Composition (%)

	Composition, %
	Heat Analysis
Carbon, max	0.30
Manganese, max	1.60
Phosphorus, max	0.025
Sulfur, max	0.025
Silicon	0.15 - 0.35
Copper <sup>A</sup>	
Nickel <sup>A</sup>	
Chromium <sup>A</sup>	
Molybdenum <sup>A</sup>	
Vanadium <sup>A</sup>	
Columbium (Niobium) <sup>A</sup>	
Boron <sup>A</sup>	

All elements listed in Table 2 shall be reported. Where no composition limit is listed, values are to be reported but no limits apply except as covered in 6.3.

## Mechanical Properties

Property	Minimum Requirement
Yield Strength	450 MPa (65 ksi)
Tensile Strength	535 MPa (78 ksi)
Elongation	≥ 21% (Longitudinal)
Hardness	≤ 235 HB (Brinell)

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## Heat Treatment

- All F65 components must be **heat-treated**, typically by:
  - Normalizing
  - Quenching and tempering
  - Tempering

This enhances **toughness and strength** and ensures grain refinement.

## Common Product Forms

- **Flanges:** ASTM A694 F65 **Weld Neck Flange**, ASTM A694 F65 **Blind flange**, ASTM A694 F65 **Slip-On flange**, **Threaded**, **Socket Weld**
- **Forged fittings**
- **Custom forged components**

## Flange Standards:

- ASME B16.5 (1/2" - 24")
- ASME B16.47 Series A & B (26" - 60")
- MSS SP-44
- API 6A (upon request)

**Pressure Ratings:** Class 150#, 300#, 600#, 900#, 1500#, 2500#

## Certifications & Testing

- EN 10204 3.1 / 3.2 MTC
- NACE MR0175/ISO 15156 compatibility on request
- Ultrasonic Testing (UT)
- Magnetic Particle Testing (MT)
- Charpy Impact Testing (for low-temperature applications)