



Forging Materials & Grades

Closed-die forged parts from 5 kg to 520 kg — heat treated, tested and machined in house

Family	Grades	Typical Use
Carbon steel	ASTM A105 · AISI 1045 (45#)	Valve bodies and covers, flanges, general machine parts
Low-temperature steel	ASTM A350 LF2	Valves and fittings for low-temperature service, down to -46 °C
Alloy steel	AISI 4130, 4135 (35CrMo), 4140 (42CrMo), 5140 (40Cr) · ASTM A182 F91, F92	High-strength shafts and valve parts; F91 / F92 for power station and high-temperature service
Stainless steel	ASTM A182 F304, F316 · AISI 420 (2Cr13) · ASTM A564 17-4 PH	Corrosion-resistant valve and pump parts; 420 for wear parts; 17-4 PH where high strength and corrosion resistance are both needed
Duplex & super duplex	ASTM A182 F51 (2205) · F53 (2507) · F55 (Zeron 100)	Offshore, subsea, desalination and chemical service
Nickel alloys	UNS N06625 (Alloy 625) · N07718 (Alloy 718) · N08825 (Alloy 825)	High-temperature and highly corrosive service, wellhead and process equipment
Structural steel	Q355D (≈ EN S355 / ASTM A572 Gr.50)	Structural and machinery components

Duplex and super duplex. F51 sits at PREN ≥ 34; the super duplex grades F53 and F55 at PREN ≥ 40. Forged to ASTM A182, solution treated and quenched with recorded cycles.

TESTING ON EVERY ORDER

- Chemical composition on every heat, by GNR spark optical emission spectrometer
- Tensile, yield and elongation; Charpy impact incl. low-temperature bath; Brinell hardness
- UT, MT, PT and VT; microstructure examination
- Material identity re-verified with handheld XRF before packing

HEAT TREATMENT

- Cycles follow the grade: normalising, quench & temper, solution annealing, ageing
- Furnace and cooling-medium temperatures monitored and recorded per batch; records can ship with the order
- Grade-specific reference cycles (per ASTM tables) explained on the website

Grades we forge regularly. If yours is not on this list, send the specification with your drawing — we will tell you honestly whether it fits our process. · **Quotation usually within 24 hours.**