



FERRONOVA

STEEL & ENGINEERING PVT. LTD.

ENGINEERED TO EXCEL. BUILT TO LAST.

**PRECISION.
STRENGTH.
PERFORMANCE.**

Delivering high-quality steel products, engineered components & fabrication solutions for the most critical industries worldwide.



AEROSPACE

Precision components for aerospace excellence.



ELECTRIC

Reliable solutions powering the future of energy.



MEDICAL EQUIPMENT

Engineered for safety, precision & life.



AEROSPACE COMPONENTS

High strength materials for critical aerospace applications.



ELECTRIC & POWER SOLUTIONS

Precision-engineered parts for motors, turbines, transformers & power systems.



MEDICAL EQUIPMENT

Superior quality components for medical devices & healthcare systems.



INDUSTRIAL EXCELLENCE

Custom steel solutions for advanced engineering and manufacturing.



ISO 9001:2015
CERTIFIED COMPANY

QUALITY. RELIABILITY. TRUST.



PRECISION
ENGINEERING



SUPERIOR
QUALITY



ADVANCED
MANUFACTURING



ON-TIME
DELIVERY



GLOBAL
SOLUTIONS



www.ferronova.in



ABOUT US

FERRONOVA is a dynamic engineering company committed to delivering high-quality steel products, precision-engineered components, and fabrication solutions for critical industrial applications worldwide.

With a focus on quality, reliability, and customer satisfaction, we continuously strive to exceed expectations and build long-term partnerships across industries.



UNDER THE GUIDANCE OF INDUSTRY VETERAN



Mr. Hariram S. Bishnoi has served Aerospace, Pump, Sugar, EPC industry and more.



His engineering journey started at the age of **15**.



Today, at **55**, his vast experience of more than **4 decades** continues to guide and strengthen the foundation of Ferronova.



FOUNDED BY VISIONARY RAHUL H. BISHNOI



Ferronova was established in **2025** to cater to the evolving needs of industries worldwide.



Brings **8-9 years** of hands-on experience in engineering & fabrication.



Driven by a vision to deliver precision, performance and long-term value.



OUR MISSION

To deliver high-quality steel products and engineering solutions with precision, reliability and integrity, creating value for our customers and contributing to the progress of industries worldwide.



OUR VISION

To be a globally recognized engineering company known for excellence, innovation and customer satisfaction.

OUR CORE STRENGTHS



EXPERIENCED LEADERSHIP

Guided by decades of industry expertise and next-gen vision.



QUALITY ASSURANCE

Adherence to international standards.



ADVANCED MANUFACTURING

Well-equipped facility with modern machinery.



INDUSTRY-FOCUSED SOLUTIONS

Tailored products for critical industrial applications.



CUSTOMIZED FABRICATION

Customer-centric approach with flexible solutions.



GLOBAL SUPPLY CAPABILITY

Ready to serve domestic and international markets.

INDUSTRIES WE SERVE



OIL & GAS



PETROCHEMICAL



EPC



AEROSPACE



MARINE



SUGAR
INDUSTRY



POWER
PLANTS



INFRASTRUCTURE
& HEAVY
ENGINEERING

DRIVEN BY PURPOSE. COMMITTED TO EXCELLENCE.

At Ferronova, we don't just supply products – we build lasting partnerships through quality, reliability and trust. Our vision, mission and values shape everything we do.



OUR VISION



To be a globally recognized engineering solutions provider, delivering superior quality products and excellence that empower industries to build a stronger future.



OUR MISSION



To provide high quality, reliable and innovative piping, flanges, fittings and fabrication solutions that exceed customer expectations through continuous improvement, ethical practices and on-time delivery.



WHY CHOOSE FERRONOVA?



PREMIUM QUALITY

We deliver products that meet international standards and ensure long-lasting performance.



INDUSTRY EXPERTISE

Years of experience and technical expertise across diverse industries and applications.



WIDE PRODUCT RANGE

Comprehensive range of piping products, fittings, flanges, forgings and fabrication solutions.



ON-TIME DELIVERY

Strong supply chain and efficient processes to ensure timely delivery, every time.



CUSTOMER FOCUS

We build long-term partnerships by understanding customer needs and delivering solutions that add value.



RELIABLE SUPPORT

Dedicated support from inquiry to after-sales – we are with you at every step.

OUR VALUES



INTEGRITY



TEAMWORK



INNOVATION



EXCELLENCE



RESPONSIBILITY





QUALITY ASSURANCE



At Ferronova, quality is not just a commitment — it is the foundation of everything we do. We follow stringent quality control processes at every stage of manufacturing to ensure that our products meet international standards and exceed customer expectations.

OUR QUALITY MANAGEMENT APPROACH



QUALITY PLANNING

We define quality objectives, standards, and control plans aligned with customer and international requirements.



MATERIAL CONTROL

All incoming raw materials are verified through chemical analysis, mechanical testing, and MTC validation.



IN-PROCESS CONTROL

In-process inspections and dimensional checks are performed at critical stages to ensure consistency and accuracy.



FINAL INSPECTION

Every product undergoes stringent inspection, testing, and verification before packing and dispatch.



TRACEABILITY & DOCUMENTATION

Complete traceability of materials, processes, and tests with full documentation is maintained for every order.

TESTING & INSPECTION

- ✓ Chemical Composition Analysis
- ✓ Mechanical Testing (Tensile, Impact, Hardness)
- ✓ Dimensional Inspection
- ✓ Non-Destructive Testing (UT, PT, MT, RT)
- ✓ Hydrostatic Testing
- ✓ PMI Testing
- ✓ Surface Finish & Visual Inspection



CHEMICAL ANALYSIS



TENSILE TESTING



DIMENSIONAL INSPECTION



ULTRASONIC TESTING

CERTIFICATIONS



Our Quality Management System is **ISO 9001:2015** certified, ensuring continuous improvement, consistency, and customer satisfaction.

STANDARDS WE FOLLOW



ASME
B16.5 / B16.47



ASTM
Standards



ANSI
Standards



DIN
Standards



ISO
Standards



OUR COMMITMENT TO QUALITY

We are committed to delivering products that meet the highest quality standards through robust processes, advanced testing, skilled personnel, and a culture of continuous improvement.



ALUMINIUM PRODUCTS

ENGINEERED FOR AEROSPACE. BUILT FOR EXCELLENCE.

Premium quality aluminium products in aerospace grades, supplied in a wide range of forms to meet the most demanding performance, precision and lightweight requirements.



PRODUCT RANGE

ROUND BAR



High strength round bars in aerospace grades for critical structural and machined components.

PIPE / TUBE



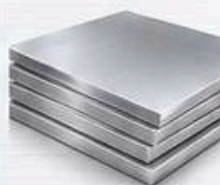
Seamless and welded pipes for high performance applications with excellent corrosion resistance.

FLAT BAR



Precision flat bars for structural, machined and fabricated aerospace applications.

SHEET



High quality aluminium sheets with superior surface finish, formability and strength.

PLATE



Heavy gauge plates for high strength aerospace structures and critical applications.

EXTRUSIONS



Custom and standard extrusions for lightweight and complex aerospace assemblies.

AEROSPACE GRADES

- 7075-T6 - High strength, excellent fatigue resistance, used in aerospace structural components.
- 6061-T6 - Good mechanical properties, corrosion resistance and weldability for aerospace applications.
- 2024-T3 - High strength with excellent fatigue and damage tolerance.
- 5052-H32 - Good corrosion resistance and formability.
- 7050-T7451 - High strength with stress corrosion cracking resistance.
- Other Grades - 2014, 5083, 7075-T651, 7055, 6063, 6082 (on request)



CHEMICAL COMPOSITION (TYPICAL %)

Grade	Si	Fe	Cu	Mn	Mg	Zn	Cr	Others	Al
7075-T6	0.40	0.50	1.2-2.0	0.30	2.1-2.9	5.1-6.1	0.18-0.28	0.15	Balance
6061-T6	0.40-0.8	0.70	0.15-0.40	0.15	0.8-1.2	0.25	0.04-0.35	0.15	Balance
2024-T3	0.50	0.50	3.8-4.9	0.30-0.9	1.2-1.8	0.25	0.10	0.15	Balance

MECHANICAL PROPERTIES (TYPICAL)

Grade	Temper	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (HB)
7075	T6	570	505	11	150
6061	T6	310	275	12	95
2024	T3	470	325	20	120

Note: Properties are typical and may vary with size and product form.

STANDARDS

- ASTM B209 / B210 (Sheet / Plate)
- ASTM B221 (Extrusions)
- ASTM B211 (Seamless Pipe & Tube)
- ASTM B308 (Bar, Rod & Wire)
- AMS QQ-A-250/11 (7075-T6 Plate)
- AMS QQ-A-200/8 (2024-T3 Plate)
- AMS QQ-A-225/8 (6061-T6)
- EN 573 / EN 485
- ISO 209 / ISO 6362
- ASME SB209 / SB210



APPLICATIONS



AIRFRAME STRUCTURES



ENGINE COMPONENTS



LANDING GEAR SYSTEMS



SPACECRAFT STRUCTURES



SATELLITES



HELICOPTER COMPONENTS



INTERIOR STRUCTURES



JIGS & FIXTURES & TOOLING

AVAILABLE FORMS



ROUND BAR



PIPE / TUBE



FLAT BAR



SHEET



PLATE



EXTRUSIONS



CUSTOM CUT SIZES



HIGH STRENGTH & LIGHTWEIGHT



EXCELLENT CORROSION RESISTANCE



PRECISION MACHINABILITY



AEROSPACE CERTIFIED GRADES



GLOBAL SUPPLY & ON-TIME DELIVERY



CUSTOM SOLUTIONS & SUPPORT

NICKEL ALLOY PRODUCTS

ENGINEERED FOR EXTREME CONDITIONS. BUILT TO LAST.

Ferronova offers premium quality Nickel Alloy products in a wide range of forms to deliver outstanding performance in high temperature, corrosive and high stress environments across critical industries.



TYPES OF PRODUCTS

ROUND BAR



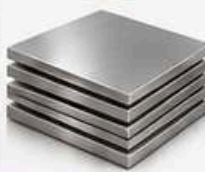
High strength and corrosion resistant round bars for critical engineering and high temperature applications.

PIPE / TUBE



Seamless & welded pipes and tubes with excellent resistance to oxidation, carburization and corrosive media.

SHEET



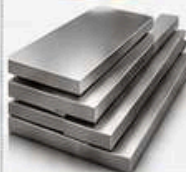
Precision rolled sheets with superior surface finish and high creep rupture strength.

PLATE



Heavy gauge plates suitable for pressure vessels, heat exchangers and structural applications.

FLAT BAR



Durable flat bars for fabrication, machining and high stress structural applications.

FORGED FITTINGS



High performance forged fittings for high pressure and high temperature piping systems.

FLANGES



ANSI / ASME standard flanges in nickel alloys for superior corrosion resistance and reliability.

NICKEL ALLOY GRADES

- ✓ **NICKEL 200 / 201** – Excellent resistance to caustic and reducing environments.
- ✓ **NICKEL 400** – Excellent resistance to many chemical environments and seawater.
- ✓ **NICKEL 600** – Excellent resistance to oxidation and corrosion in high temperature applications.
- ✓ **NICKEL 625** – High strength with excellent resistance to pitting and stress corrosion cracking.
- ✓ **NICKEL 718** – High strength, age-hardenable alloy for high temperature and pressure applications.
- ✓ **NICKEL 800 / 800H / 800HT** – Excellent resistance to oxidation and carburization at elevated temperatures.
- ✓ **Other Grades** – C-276, C-22, 20, 904L, 904, 254 SMO, 17-4PH (on request)

CHEMICAL COMPOSITION (TYPICAL %)

Grade	Ni	Cr	Mo	Fe	C	Mn	Si	Others
NICKEL 200 / 201	99.0 min	–	–	0.40 max 0.005 Ti max	0.15 max	0.35 max	0.35 max	Cu
NICKEL 400	63.0+	–	–	2.5 max	0.30 max	2.0 max	0.50 max	Cu
NICKEL 600	72.0	14.0-17.0	–	6.0-10.0	0.15 max	1.0 max	0.50 max	Cu, Ti
NICKEL 625	58.0	20.0-23.0	8.0-10.0	5.0 max	0.10 max	0.50 max	0.50 max	Nb, Ti, Al
NICKEL 718	50.0-55.0	17.0-21.0	2.8-3.3	Bal.	0.08 max	0.35 max	0.35 max	Nb, Ti, Al
NICKEL 800	30.0-35.0	19.0-23.0	–	39.5 min	0.10 max	0.75 max	1.00 max	Ti, Al
NICKEL 800H	30.0-35.0	19.0-23.0	–	39.5 min	0.05-0.10	0.75 max	1.00 max	Ti, Al
NICKEL 800HT	30.0-35.0	19.0-23.0	–	39.5 min	0.06-0.10	0.75 max	1.00 max	Ti, Al

MECHANICAL PROPERTIES (TYPICAL)

Grade	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (HB)
NICKEL 200 / 201	380	105	40	≤ 100
NICKEL 400	480	170	35	≤ 120
NICKEL 600	550	240	35	≤ 150
NICKEL 625	930	550	30	≤ 200
NICKEL 718	1280	1030	25	≤ 250
NICKEL 800 / 800H / 800HT	520	210	30	≤ 200

Note: Properties are typical and may vary with size, form and heat treatment.

STANDARDS

- ✓ ASTM B160 (Bar)
- ✓ ASTM B163 / B167 (Seamless & Welded Pipe)
- ✓ ASTM B162 (Sheet & Plate)
- ✓ ASTM B564 (Forged Fittings)
- ✓ ASTM B564 (Flanges)
- ✓ ASME SB 160 / SB 161 (Bar)
- ✓ ASME SB 163 / SB 167 (Pipe)
- ✓ ASME SB 162 (Sheet & Plate)
- ✓ ASME B16.5 / B16.47 (Flanges)
- ✓ NACE MR0175 / ISO 15156



APPLICATIONS



AEROSPACE & DEFENCE



OIL & GAS



PETROCHEMICAL INDUSTRY



POWER GENERATION



CHEMICAL PROCESSING



HEAT EXCHANGERS & BOILERS



MARINE & OFFSHORE



DESALINATION PLANTS



PHARMACEUTICAL INDUSTRY

AVAILABLE FORMS



ROUND BAR



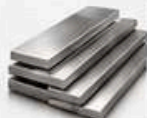
PIPE / TUBE



SHEET



PLATE



FLAT BAR



WIRE



FORGED FITTINGS



FLANGES



CUSTOM CUT SIZES



EXCELLENT CORROSION RESISTANCE



HIGH TEMPERATURE STRENGTH



OUTSTANDING OXIDATION RESISTANCE



SUPERIOR CREEP & RUPTURE STRENGTH



LONG SERVICE LIFE & RELIABILITY



CUSTOM SIZES & FINISHES AVAILABLE

TITANIUM PRODUCTS

LIGHTWEIGHT. STRONGER. CORROSION PROOF. BUILT FOR PERFORMANCE.

Ferronova offers a comprehensive range of high quality Titanium products in various grades and forms, engineered to deliver exceptional strength, low density, and outstanding corrosion resistance for the most demanding industries.



TYPES OF PRODUCTS

ROUND BAR



High strength round bars in various grades for critical structural and engineering applications.

PIPE / TUBE



Seamless & welded pipes and tubes with excellent corrosion resistance and high performance.

SHEET



Precision rolled sheets with superior surface finish and formability.

PLATE



Heavy plates for high stress applications in aerospace, marine and industrial sectors.

FLAT BAR



Flat bars for fabrication, machining and structural applications.

WIRE



Titanium wire for welding, fasteners, springs and special applications.

FORGINGS



Forged components manufactured to exact specifications for critical environments.

TITANIUM GRADES

- ✓ **Grade 1 (CP Ti)**
Excellent corrosion resistance and high ductility.
- ✓ **Grade 2 (CP Ti)**
Higher strength than Grade 1 with excellent formability.
- ✓ **Grade 5 (Ti-6Al-4V)**
High strength, excellent fatigue resistance and weldability.
- ✓ **Grade 7 (Ti-0.15Pd)**
Palladium added for superior corrosion resistance.
- ✓ **Grade 9 (Ti-3Al-2.5V)**
Higher strength with good weldability and formability.
- ✓ **Grade 23 (Ti-6Al-4V ELI)**
Extra low interstitials for critical aerospace and medical applications.

Other Grades Available on Request

CHEMICAL COMPOSITION (TYPICAL %)

Grade	Al	V	Fe	C	N	O	H	Others	Ti
Grade 1	0.20	—	0.20	0.08	0.03	0.18	0.015	—	Balance
Grade 2	0.30	—	0.30	0.08	0.03	0.25	0.015	—	Balance
Grade 5 (Ti-6Al-4V)	5.5 - 6.75	3.5 - 4.5	0.40	0.08	0.05	0.20	0.015	—	Balance
Grade 7	0.12	—	0.25	0.08	0.03	0.18	0.015	0.12-0.25 Pd	Balance
Grade 9 (Ti-3Al-2.5V)	2.5 - 3.5	2.0 - 3.0	0.25	0.08	0.03	0.15	0.015	—	Balance
Grade 23 (Ti-6Al-4V ELI)	5.5 - 6.75	3.5 - 4.5	0.25	0.08	0.03	0.13	0.012	—	Balance

Note: Values are maximum unless otherwise specified.

MECHANICAL PROPERTIES (TYPICAL)

Grade	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (HB)
Grade 1	240	170	24	120
Grade 2	345	275	20	160
Grade 5 (Ti-6Al-4V)	895	830	10	300
Grade 7	345	275	20	160
Grade 9 (Ti-3Al-2.5V)	620	483	18	200
Grade 23 (Ti-6Al-4V ELI)	930	890	10	310

Note: Properties are typical and may vary with product form and heat treatment.

STANDARDS

- ✓ ASTM B348 / B348M (Bar, Rod & Wire)
- ✓ ASTM B861 (Seamless Pipe & Tube)
- ✓ ASTM B862 (Welded Pipe & Tube)
- ✓ ASTM B265 (Sheet & Plate)
- ✓ ASTM F67 / F136 (Medical Applications)
- ✓ AMS 4928 (Sheet, Strip & Plate)
- ✓ AMS 4930 (Bar, Forgings & Billets)
- ✓ AMS 4929 (Seamless Tube)
- ✓ ISO 5832-2 / 3 (Implant Applications)
- ✓ ASME SB348 / SB861 / SB862 / SB265



APPLICATIONS



AEROSPACE & DEFENCE



MARINE & OFFSHORE



CHEMICAL PROCESSING



MEDICAL & BIOMEDICAL



POWER GENERATION & ENERGY



AUTOMOTIVE & MOTORSPORT



OIL & GAS INDUSTRY



SPORTING GOODS & RECREATION

AVAILABLE FORMS



ROUND BAR



PIPE / TUBE



SHEET



PLATE



FLAT BAR



WIRE



FORGINGS



CUSTOM CUT SIZES

STAINLESS STEEL ROUND BAR

STRENGTH. CORROSION RESISTANCE. RELIABILITY.

Ferronova offers premium quality Stainless Steel Round Bars in a wide range of grades and sizes. Manufactured to meet international standards, our round bars deliver excellent corrosion resistance, high strength and superior finish for demanding industrial and engineering applications.



PRODUCT HIGHLIGHTS



EXCELLENT CORROSION RESISTANCE

Ideal for harsh and corrosive environments.



HIGH STRENGTH & DURABILITY

Delivers superior mechanical properties and long service life.



PRECISION MANUFACTURING

Tight tolerances and smooth finish.



WIDE RANGE OF GRADES & SIZES

Available in multiple grades and diameters to suit diverse applications.



MEETS INTERNATIONAL STANDARDS

Manufactured as per ASTM, AISI, EN, JIS and other relevant standards.

AVAILABLE GRADES

- ✓ **304 / 304L**
General purpose, excellent corrosion resistance and formability.
- ✓ **316 / 316L**
Superior corrosion resistance, ideal for marine and chemical applications.
- ✓ **321**
Stabilized grade with excellent resistance to intergranular corrosion.
- ✓ **310 / 310S**
High temperature strength and oxidation resistance.
- ✓ **410**
Martensitic grade with good strength and wear resistance.
- ✓ **420**
High strength and hardness, suitable for cutting and tooling applications.
- ✓ **630 / 17-4 PH**
Precipitation hardening grade with high strength and corrosion resistance.
- ✓ **Duplex (2205)**
High strength with excellent resistance to stress corrosion cracking.

Other Grades Available on Request



CHEMICAL COMPOSITION (TYPICAL %)

Grade	C	Si	Mn	P	S	Cr	Ni	Mo	Others
304	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	18.0-20.0	8.0-10.5	-	-
304L	≤0.03	≤1.00	≤2.00	≤0.045	≤0.030	18.0-20.0	8.0-12.0	-	-
316	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	16.0-18.0	10.0-14.0	2.0-3.0	-
316L	≤0.03	≤1.00	≤2.00	≤0.045	≤0.030	16.0-18.0	10.0-14.0	2.0-3.0	-
321	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	17.0-19.0	9.0-12.0	-	Ti 6x Cmin -0.8 max
310 / 310S	≤0.08	≤1.50	≤2.00	≤0.045	≤0.030	24.0-26.0	19.0-22.0	-	-
410	≤0.15	≤1.00	≤1.00	≤0.040	≤0.030	11.5-13.5	≤0.60	-	-
420	0.16-0.25	≤1.00	≤1.00	≤0.040	≤0.030	12.0-14.0	≤0.75	-	-
630 / 17-4 PH	≤0.07	≤1.00	≤1.00	≤0.040	≤0.030	15.5-17.5	3.0-5.0	-	Cu 3.0-5.0 Nb + Ta 0.15-0.45

MECHANICAL PROPERTIES (TYPICAL)

Grade	Condition	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (HB)
304 / 304L	Annealed	515	205	40	≤ 201
316 / 316L	Annealed	515	205	40	≤ 201
321	Annealed	515	205	40	≤ 201
310S	Annealed	620	310	35	≤ 217
410	Annealed	450	275	20	≤ 223
420	Annealed	700	440	15	≤ 241
630 / 17-4 PH	H900	1310	1170	10	≤ 363

Note: Mechanical properties are typical values and may vary with size and heat treatment.

STANDARD & SPECIFICATIONS

- ✓ ASTM A276 / A479
- ✓ ASTM A484
- ✓ ASTM A182
- ✓ ASTM A193
- ✓ AMS 5643
- ✓ EN 10088-3
- ✓ JIS G 4303
- ✓ ASME SA276 / SA479
- ✓ ISO 3506



FINISHES AVAILABLE

- ✓ Bright Annealed
- ✓ Black (Hot Rolled)
- ✓ Pickled
- ✓ Polished (on request)

APPLICATIONS



CHEMICAL
INDUSTRY



PHARMACEUTICAL
INDUSTRY



FOOD & BEVERAGE
INDUSTRY



MARINE
APPLICATIONS



OIL & GAS
INDUSTRY



POWER GENERATION
& ENERGY



AUTOMOTIVE
INDUSTRY



CONSTRUCTION &
INFRASTRUCTURE

AVAILABLE SIZES

DIAMETER (MM)

6 mm to 500 mm

(Custom sizes available on request)



LENGTH

3 Meter to 6 Meter

(Custom cut lengths available)



EXCELLENT
CORROSION RESISTANCE



HIGH STRENGTH
& DURABILITY



PRECISION
MANUFACTURING



WIDE RANGE OF
GRADES & SIZES



RELIABLE SUPPLY
& ON-TIME DELIVERY



CUSTOM CUT SIZES
AVAILABLE

COPPER & BRASS PRODUCTS

CONDUCTIVITY. DURABILITY. RELIABILITY.

Ferronova offers a wide range of Copper & Brass products in multiple forms, grades and sizes to meet the highest standards of quality and performance for electrical, industrial, architectural and engineering applications.



EXCELLENT
ELECTRICAL &
THERMAL
CONDUCTIVITY



SUPERIOR
CORROSION
RESISTANCE

TYPES OF PRODUCTS

ROUND BAR



High conductivity round bars for electrical, engineering and general fabrication applications.

PIPE / TUBE



Seamless & welded copper tubes for plumbing, heat transfer, and industrial applications.

SHEET / PLATE



Smooth finish sheets & plates for fabrication, architectural and chemical applications.

FLAT BAR



High quality flat bars for switchgear, busbars, electrical panels and machine parts.

HEX BAR



Hexagonal bars for precision components, fasteners and industrial use.

WIRE



Copper & Brass wires for electrical, earthing, welding and general industrial use.

FORGINGS & FITTINGS



Forged parts and fittings for plumbing, gas, hydraulics and industrial applications.

COPPER GRADES

- ETP (C110) — Electrolytic Tough Pitch, high conductivity.
- OF (C102) — Oxygen Free, high conductivity & ductility.
- DHP (C122) — Deoxidized High Phosphorus, tough & high strength.
- CuCrZr (C18150) Chromium Zirconium, high strength & softening resistance.
- CuNi (C70600) Copper Nickel, excellent corrosion resistance.
- CuBe (C17200) Beryllium Copper, high strength, wear resistance & non-sparking.



COPPER – CHEMICAL COMPOSITION (TYPICAL %)

Grade	Cu	P	Ag	O	Other
ETP (C110)	99.90 min	0.015-0.040	0.002 max	0.040 max	—
OF (C102)	99.95 min	0.001 max	0.005 max	0.020 max	—
DHP (C122)	99.90 min	0.015-0.040	0.002 max	0.040 max	—
CuCrZr (C18150)	98.40 min	—	—	—	Cr 0.50-1.10 Zr 0.05-0.20
CuNi (C70600)	Ball.	—	—	—	Ni 9.0-11.0
CuBe (C17200)	Ball.	—	—	—	Be 1.80-2.10

COPPER – MECHANICAL PROPERTIES (TYPICAL)

Grade	Temper	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (Hb)
ETP (C110)	Annealed	200	50	35	45
DHP (C122)	Hard	290	210	8	90
CuCrZr (C18150)	AT	620	480	10	150
CuNi (C70600)	Annealed	310	120	40	80
CuBe (C17200)	Heat Treated	1100	965	2	330

BRASS GRADES

- CZ101 (C36000) Free Cutting Brass
- CZ102 (C37700) Free Cutting Brass
- C26000 Cartridge Brass
- C27000 Yellow Brass
- C44300 Naval Brass
- C68700 Aluminium Brass
- C69300 Silicon Brass

TYPES / DESIGNATIONS

- PB (Leaded Brass)
- AB (Admiralty Brass)
- LB (Leaded Brass)
- HM (High Leaded Brass)
- Muntz Metal (60/40 Cu/Zn)
- Red Brass (High Copper Brass)

BRASS – CHEMICAL COMPOSITION (TYPICAL %)

Grade	Cu	Zn	Pb	Fe	Other
CZ101	57.0-61.0	Remainder	2.5-3.7	0.35 max	—
CZ102	59.0-63.0	Remainder	1.5-2.5	0.35 max	—
C26000	68.5-71.5	Remainder	—	0.05 max	—
C27000	62.0-65.0	Remainder	—	0.05 max	—
C44300 (A8)	60.0-63.0	Remainder	—	0.10 max	Sn 0.20 max
C68700	Al 1.0-1.7	Remainder	—	0.10 max	Fe 0.50 max
C69300	60.0-64.0	Remainder	—	0.10 max	Si 1.0-3.0



APPLICATIONS



ELECTRICAL &
ELECTRONICS



POWER
DISTRIBUTION



PLUMBING &
PIPING



AUTOMOTIVE
INDUSTRY



MARINE
APPLICATIONS



HVAC & HEAT
EXCHANGERS



ARCHITECTURAL
HARDWARE



GENERAL
ENGINEERING



CHEMICAL
INDUSTRY

AVAILABLE FORMS



ROUND BAR



PIPE / TUBE



SHEET / PLATE



FLAT BAR



HEX BAR



WIRE



FORGINGS
& FITTINGS



CUSTOM CUT
SIZES



HIGH ELECTRICAL &
THERMAL CONDUCTIVITY



EXCELLENT CORROSION
RESISTANCE



EASY MACHINABILITY
& FABRICATION



WIDE RANGE OF GRADES
& FORMS



RELIABLE QUALITY &
TIMELY DELIVERY



CUSTOM SIZES &
FINISHES AVAILABLE

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