

Manufacturers & Stockists of Nickel Alloy, Titanium Alloys, Special Metals & Stainless Steel Products

BOLTS

Jade Special Metals is a trusted manufacturer of premium hex bolts, serving industries like oil & gas, construction, power generation, and aerospace. We produce hex bolts in carbon steel, alloy steel, stainless steel, and specialty metals like Inconel, Hastelloy, and Titanium, adhering to ASTM, ASME, DIN, and ISO standards. Our products undergo strict quality checks, ensuring durability and performance in demanding environments. We offer custom-engineered hex bolts based on client specifications, providing tailored fastening solutions. With expert technical support, on-time delivery, and global supply capabilities, Jade Special Metals is your reliable partner for high-performance hex bolt solutions.



SPECIFICATIONS

- **Bolt Type:** Hex Bolt, Heavy Hex Bolt, Square Head Bolt, Hex Flange Bolt, Square Head Bolt
- **Stud Bolt Type:** Full Threaded Stud, Double End Threaded Stud
- **Special Bolt Type:** Allen Head Cap Screw, Socket Head Cap Screw, Low Socket Head Cap Screw, Shoulder Bolt, Carriage Bolt, Countersunk Bolt, Eye Bolts, U-Bolts.
- **Forming:** Hot Forged or Cold Forged
- **Metric Size:** M2 to M100
- **Inch Size:** 1/8" to 4"
- **Threads:** UNC, UNF, BSW, ISO, ACME
- **Standards:** ASTM, ASME, BS, ISO, DIN, DIN-EN, UNI
- **Heat Treatments:** Annealing, Stress Relieving, Case Hardening, Quenching & Tempering
- **Surface Coatings:** Xylan, Xylar, PTFE, Zinc Plating, Phosphating, Galvanizing, Hot Dip Galvanizing (HDG), Nickel Plating, Zn-Ni Plating, Chrome Plating, Cadmium Plating, Zinc Flake Coating

HEX BOLTS

A **hex bolt** is a six-sided fastener with a threaded body, designed for securely fastening materials in construction, machinery, automotive, and industrial applications. Its hexagonal head allows easy tightening using standard tools like wrenches or spanners, ensuring a strong and reliable connection. Hex bolts come in various sizes, materials such as carbon steel, stainless steel, and alloy steel, and feature different finishes like zinc plating, galvanization, and black oxide for corrosion resistance. They are available in both fully and partially threaded designs to suit specific application needs.



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HEAVY HEX BOLTS

Heavy Hex Bolts are large, high-strength fasteners with a hexagonal head, designed for heavy-duty applications that require enhanced load-bearing capacity and durability. Commonly used in construction, machinery, infrastructure, and industrial sectors, they provide secure fastening in demanding environments. Made from materials like carbon steel, alloy steel, or stainless steel, heavy hex bolts are ideal for withstanding extreme forces. Their larger heads allow for better torque application, and they are often coated with corrosion-resistant finishes like zinc plating. Manufactured to meet standards such as ASTM A325 and A490, these bolts are reliable for securing critical structures and machinery.



STUD BOLTS – FULL THREADED

Stud bolts are fully threaded fasteners with no head, designed for use in flanged connections, piping systems, and structural applications. They are typically paired with two heavy hex nuts for secure assembly. Available in various sizes, lengths, and materials, including carbon steel, stainless steel, and high-performance alloys, stud bolts offer exceptional tensile strength, durability, and corrosion resistance. Common standards include ASTM A193, A320, and ASME B16.5, ensuring compatibility with industry requirements. Stud bolts are ideal for high-pressure and high-temperature environments, making them essential in industries such as oil & gas, petrochemicals, and power generation. Custom lengths and coatings are also available.



DOUBLE END THREADED STUD BOLTS

Double-end threaded stud bolts have threads on both ends with an unthreaded shank in the middle, offering secure fastening for a variety of industrial applications. They are commonly used in flanged connections, machinery, and structural assemblies requiring high strength and precision. Manufactured from materials like carbon steel, stainless steel, and specialty alloys, they provide excellent tensile strength, durability, and corrosion resistance. Conforming to standards such as ASTM A193, A320, and ASME B16.5, these bolts are suitable for high-pressure, high-temperature environments in industries like oil & gas, petrochemicals, and power plants. Custom lengths, coatings, and finishes are available to meet specific project requirements.



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SOCKET HEAD CAP SCREW

Socket head cap screws are high-strength fasteners with a cylindrical head and internal hexagonal drive, providing a secure, flush fit. Commonly used in machinery, automotive, and aerospace applications, they enable precision assembly in tight spaces. Made from materials like alloy steel, stainless steel, and exotic alloys, they offer superior tensile strength, corrosion resistance, and wear durability. These screws conform to international standards such as ASTM, ISO, and DIN, ensuring consistent performance and compatibility. Available in various sizes, thread types, and finishes, socket head cap screws are ideal for critical applications where strength, reliability, and a clean, professional appearance are essential.



ALLEN HEAD CAP SCREW

Allen head cap screws are precision-engineered fasteners featuring a hexagonal recessed drive, allowing installation with an Allen wrench for a secure, flush fit. Known for their high tensile strength and durability, they are widely used in automotive, machinery, and industrial applications requiring a clean, professional appearance. Manufactured from materials like alloy steel, stainless steel, and specialty alloys, these screws offer excellent corrosion resistance and load-bearing capacity. They comply with industry standards such as ASTM, ISO, and DIN for reliability and quality assurance. Available in various sizes, threads, and finishes, Allen head cap screws are ideal for tight spaces and precision assemblies.



Countersunk Bolts

Countersunk screws are precision fasteners designed with a flat, conical head that sits flush with the surface when installed, creating a smooth, seamless finish. Commonly used in applications requiring a clean appearance, such as furniture, electronics, and machinery, they provide secure fastening while reducing snagging or obstruction risks. Available in materials like carbon steel, stainless steel, and specialty alloys, they offer excellent strength, corrosion resistance, and durability. Countersunk screws come in various head styles, including Phillips, slotted, and hex drives, conforming to international standards such as ASTM, ISO, and DIN. They ensure reliable performance in structural and decorative applications alike.



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SHOULDER BOLT

Shoulder bolts, also known as stripper bolts, feature a cylindrical, smooth shaft (shoulder) between the head and threaded portion. This design allows precise alignment and controlled movement in mechanical assemblies. Commonly used in automotive, aerospace, and industrial machinery, shoulder bolts are ideal for rotating or sliding applications such as pulleys, gears, and linkages. They are manufactured from materials like stainless steel, alloy steel, and high-performance alloys for superior strength, wear resistance, and corrosion protection. Conforming to standards like ASTM, ISO, and DIN, they are available in various sizes, shoulder lengths, and thread types, ensuring reliable performance in precision engineering and heavy-duty applications.



SQUARE HEAD BOLTS

Square head bolts are sturdy fasteners with a four-sided head, providing a large gripping surface for secure tightening with wrenches or pliers. Their simple, robust design makes them ideal for heavy-duty applications in construction, woodworking, and industrial machinery. The square head prevents slippage during installation and allows easy tool access in tight spaces. Manufactured from materials like carbon steel, stainless steel, and alloy steel, they offer excellent strength, durability, and corrosion resistance. Square head bolts conform to standards such as ASTM, ISO, and DIN, ensuring precise dimensions and performance reliability. Custom sizes, thread types, and coatings are also available for specialized applications.



CONCRETE WEDGE ANCHOR BOLT

Concrete wedge anchor bolts are heavy-duty mechanical fasteners designed for securing objects to concrete surfaces. They feature a threaded bolt, an expansion clip, a nut, and a washer. During installation, the anchor is inserted into a pre-drilled hole, and tightening the nut causes the expansion clip to wedge against the concrete, creating a strong, permanent hold. Made from materials like carbon steel, stainless steel, and zinc-plated steel, they offer excellent tensile strength, corrosion resistance, and durability. Commonly used in construction, structural reinforcement, and industrial installations, they comply with standards such as ASTM and ISO. Various sizes and finishes are available for specific load requirements.



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CARRIAGE BOLT

Carriage bolts are distinctive fasteners with a round, domed head and a square neck beneath them. The square neck locks into place when inserted into a pre-drilled hole, preventing rotation during tightening. This design makes them ideal for wooden and metal structures where a smooth, finished appearance is desired. Common applications include decks, fences, and heavy-duty construction projects. Made from materials like carbon steel, stainless steel, and galvanized steel, they offer excellent strength, corrosion resistance, and long-term durability. Carriage bolts conform to standards such as ASTM, ISO, and DIN. They are available in various sizes, thread types, and finishes for versatile use.



U-BOLT

U-bolts are U-shaped fasteners with threads on both ends, designed for securing pipes, cables, or structural elements to surfaces or other components. The curved shape provides a secure grip around round or cylindrical objects, making them ideal for use in plumbing, automotive, and construction applications. U-bolts are commonly used to attach pipes to brackets, mount machinery, or fasten components to beams or walls. They are typically made from carbon steel, stainless steel, and galvanized steel, offering excellent strength and corrosion resistance. Available in various sizes, thread types, and coatings, U-bolts conform to standards such as ASTM and ISO for reliable performance.



J-BOLT

J-bolts are shaped like the letter "J" and are commonly used for securing or anchoring objects to the surface. One end of the bolt features a hook or loop, while the other end is threaded for secure fastening with nuts or washers. J-bolts are typically used in concrete, masonry, or construction applications to anchor structures such as beams, posts, or equipment to a foundation. Made from materials like carbon steel, stainless steel, or galvanized steel, J-bolts offer strong tensile strength, durability, and corrosion resistance. They are available in various sizes, thread types, and finishes to meet specific project needs and standards.



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EYE-BOLT

Eye bolts are fasteners with a circular loop (or "eye") at one end and a threaded shaft at the other, designed for lifting, securing, or fastening applications. The loop allows for easy attachment of hooks, ropes, or cables, making them ideal for lifting heavy loads, rigging, and securing objects in construction, marine, and industrial applications. Eye bolts come in different configurations, including regular, shoulder, and lifting eye bolts, each suited for specific tasks. Made from materials such as carbon steel, stainless steel, or alloy steel, they offer high tensile strength, corrosion resistance, and durability. Eye bolts conform to standards like ASTM, ISO, and DIN.



DUPLEX & SUPER DUPLEX MATERIAL GRADES

DUPLEX 31803 UNS: S31803 Werkstoff: 1.4462	DUPLEX 32205 UNS: S32205 Werkstoff: 1.4462	SUPER DUPLEX 32750 UNS: S32750 Werkstoff: 1.4410
SUPER DUPLEX 32760 UNS: S32760 Werkstoff: 1.4501	SUPER DUPLEX 2507 UNS: S25007 Werkstoff: 1.4410	

STAINLESS STEEL MATERIAL GRADES

STAINLESS STEEL 304 UNS: S30400 Werkstoff: 1.4301	STAINLESS STEEL 304L UNS: S30403 Werkstoff: 1.4306	STAINLESS STEEL 304H UNS: S30409 Werkstoff: 1.4948
STAINLESS STEEL 316 UNS: S31600 Werkstoff: 1.4401	STAINLESS STEEL 316L UNS: S31603 Werkstoff: 1.4404	STAINLESS STEEL 316H UNS: S31609 Werkstoff: 1.4919
STAINLESS STEEL 309 UNS: S30900 Werkstoff: 1.4828	STAINLESS STEEL 310 UNS: S31000 Werkstoff: 1.4840	STAINLESS STEEL 310S UNS: S31008 Werkstoff: 1.4845
STAINLESS STEEL 317L UNS: S31703 Werkstoff: 1.4438	STAINLESS STEEL 347 UNS: S34700 Werkstoff: 1.4550	STAINLESS STEEL 347H UNS: S34709 Werkstoff: 1.4961
STAINLESS STEEL 409 UNS: S40900 Werkstoff: 1.4512	STAINLESS STEEL 409M UNS: S40977 Werkstoff: 1.4513	STAINLESS STEEL 410M UNS: S41008 Werkstoff: 1.4000
STAINLESS STEEL 446 UNS: S44600 Werkstoff: 1.4749	STAINLESS STEEL 904L UNS: N08904 Werkstoff: 1.4539	

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NICKEL ALLOYS MATERIAL GRADES

HASTELLOY C22 UNS: N06022 Werkstoff: 2.4602	HASTELLOY C276 UNS: N10276 Werkstoff: 2.4819	HASTELLOY B2 UNS: N10665 Werkstoff: 2.4617
NICKEL 200 UNS: N02200 Werkstoff: 2.4060	NICKEL 201 UNS: N02201 Werkstoff: 2.4068	
MONEL 400 UNS: N04400 Werkstoff: 2.4360	MONEL K500 UNS: N05500 Werkstoff: 2.4375	
INCONEL 600 UNS: N06600 Werkstoff: 2.4816	INCONEL 601 UNS: N06601 Werkstoff: 2.4851	INCONEL 625 UNS: N06625 Werkstoff: 2.4856
INCONEL 718 UNS: N07718 Werkstoff: 2.4668	INCONEL 800 UNS: N08800 Werkstoff: 1.4876	INCONEL 800H UNS: N08810 Werkstoff: 1.4958
INCONEL 617 UNS: N06617 Werkstoff: 2.4663	INCONEL X-750 UNS: N07750 Werkstoff: 2.4669	INCONEL 800HT UNS: N08811 Werkstoff: 1.4959
INCONEL 825 UNS: N08825 Werkstoff: 2.4858	ALLOY 20 UNS: N08020 Werkstoff: 2.4660	
TITANIUM GRADE 2 UNS: R50400 Werkstoff: 3.7025	TITANIUM GRADE 5 UNS: R56400 Werkstoff: 3.7165	TITANIUM GRADE 7 UNS: R52400 Werkstoff: 3.7235

ASTM / ASME MATERIAL GRADES

A193 GRADE B5	A193 GRADE B6	A193 GRADE B6X
A193 GRADE B7	A193 GRADE B7M	A193 GRADE B16
A193 GRADE B8 CL.1	A193 GRADE B8 CL.2	A193 GRADE B8A
A193 GRADE B8M CL.1	A193 GRADE B8M CL.2	A193 GRADE B8MA
A193 GRADE B8C CL.1	A193 GRADE B8C CL.2	A193 GRADE B8CA
A193 GRADE B8MLCuN CL.1	A193 GRADE B8MLCuN CL.2	A193 GRADE B8MLCuNA
A193 GRADE B8T CL.1	A193 GRADE B8T CL.2	A193 GRADE B8TA
A193 GRADE B8R	A193 GRADE B8S	
A320 GRADE L7	A320 GRADE L7M	A320 GRADE L43
A320 GRADE B8 CL.1	A320 GRADE B8 CL.2	A320 GRADE B8A
A320 GRADE B8M CL.1	A320 GRADE B8M CL.2	A320 GRADE B8MA

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A320 GRADE B8C CL.1	A320 GRADE B8C CL.2	A320 GRADE B8CA
A320 GRADE B8TCL.1	A320 GRADE B8T CL.2	A320 GRADE B8TA
A320 GRADE B8F CL.1	A320 GRADE B8F CL.2	A320 GRADE B8FA
A320 GRADE B8C CL.1	A320 GRADE B8C CL.2	A320 GRADE B8CA
ASTM F3125 A325 TYPE 1	ASTM F3125 A325 TYPE 3	
ASTM F3125 A325M TYPE 1	ASTM F3125 A325M TYPE 3	
ASTM F3125 A490 TYPE 1	ASTM F3125 A490 TYPE 3	
ASTM F3125 A490M TYPE 1	ASTM F3125 A490M TYPE 3	
ASTM A307 GRADE A	ASTM A307 GRADE B	
ASTM A354 GRADE BD	ASTM A354 GRADE BC	
ASTM A453 GRADE 660A	ASTM A453 GRADE 660B	ASTM A453 GRADE 660C
ASTM F593A	ASTM F593B	ASTM F593C
ASTM F593D	ASTM F593E	ASTM F593F
ASTM F593G	ASTM F593H	ASTM F593J
ASTM F593K	ASTM F593L	ASTM F593M
ASTM F593X	ASTM F593N	ASTM F593V
ASTM F593W	ASTM F593P	ASTM F593R
ASTM F593S	ASTM F593T	ASTM F593U



We offer a wide range of Material Grades as per SAE / EN / DIN Etc. At best Market prices in India. To know more about complete product details please feel free to contact us on sales@jadealloys.com or call us on +91 9987685906