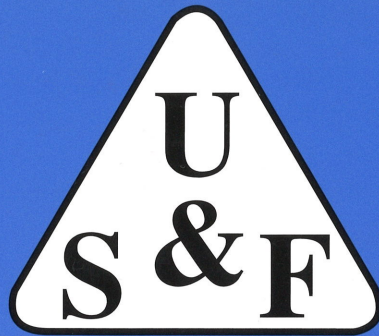
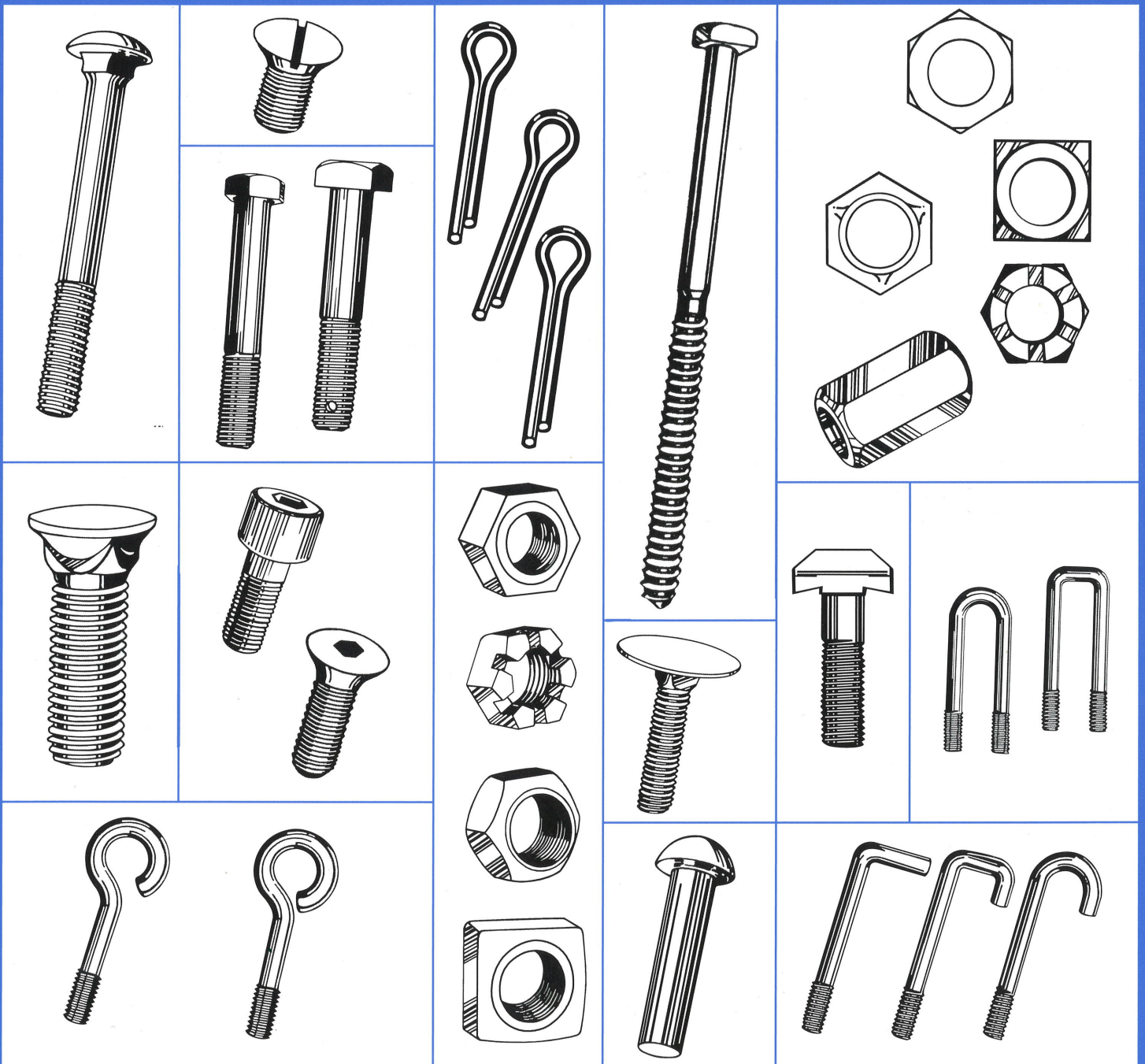


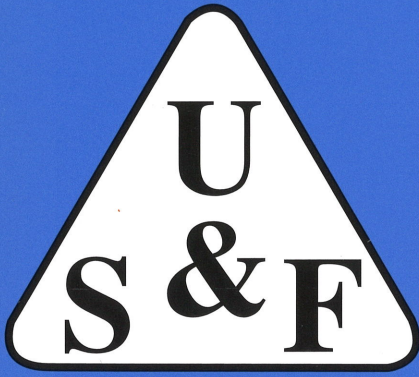
ISO 9001-2000 CERTIFIED
AAR M1003 CERTIFIED



United Steel & Fasteners

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•Phone: (630) 250-0900 •Fax: (630) 250-0220
e-mail: us_f@msn.com
Website: www.unitedsteelandfasteners.com





United Steel & Fasteners is capable of manufacturing all types and sizes of fasteners ranging from $\frac{3}{8}$ " in diameter through $4\frac{1}{4}$ " in diameter.

All fasteners are manufactured in accordance to ASTM and IFI dimensional specifications as well as specials, and ASTM and SAE material specifications including, but not limited to grades 2, 5, 8, A-325 and A-490.

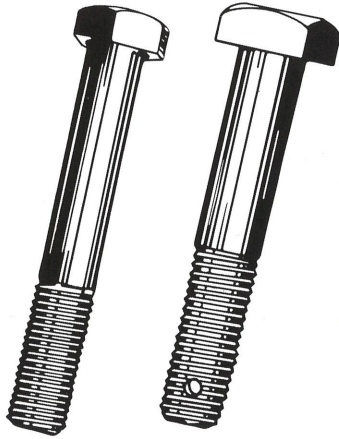
Our modern and up to date quality control department and trained staff will insure the best quality of product through our precise SPC, OPC, destructive testing and other methods of quality assurance.

Our laboratory is fully NVLAP accredited, ISO 9001-2000 certified, and AAR M-1003 certified.

Our computerized inventory control system and huge inventory will guarantee on time deliveries.

BOLTS

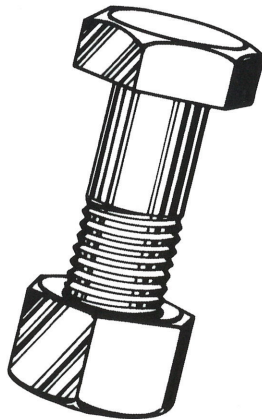
Hex Head and Square Head Bolts



Tensile Strength Chart		
Grade 2	Grade 5	Grade 8
$\frac{1}{4}$ " thru $\frac{3}{4}$ "	$\frac{1}{4}$ " thru 1"	$\frac{1}{4}$ " thru $1\frac{1}{2}$ "
74,000PSI	120,000 PSI	150,000 PSI
$\frac{1}{2}$ " thru $1\frac{1}{2}$ "	1" thru $1\frac{1}{2}$ "	
85,000 PSI	110,000 PSI	

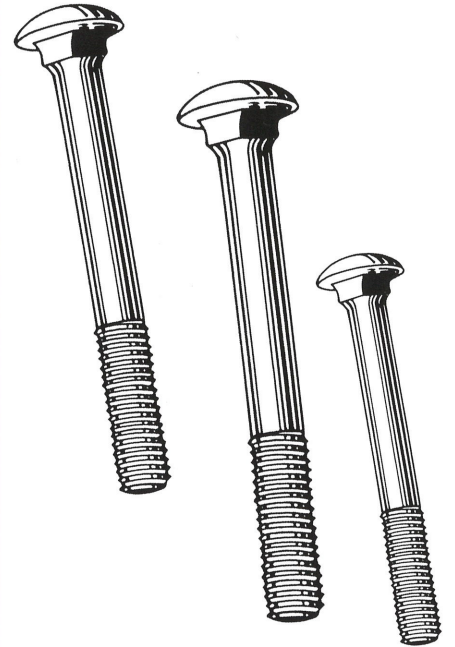
Hex and square bolts are manufactured from $\frac{3}{8}$ " through $4\frac{1}{4}$ " in diameter in grade 2, 5, 8, A-325 and A-490.

A-325 and A-490 Structural Bolts



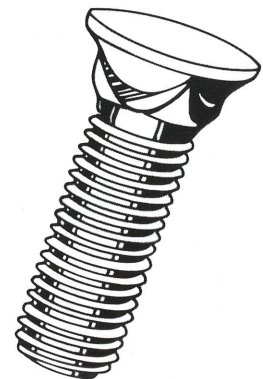
High strength structural bolts 120,000 PSI tensile through 1" diameter and 110,000 tensile 1" through $1\frac{1}{2}$ " diameter. These bolts are supplied with Heavy Hex Nuts and are generally used in bridges, cars and structural works. Above bolts are also available in alloy steel heat treated to meet A.S.T.M. A-490 requirements. Used with 2H Nuts in the areas where rigid fastening is required.

Carriage Bolts



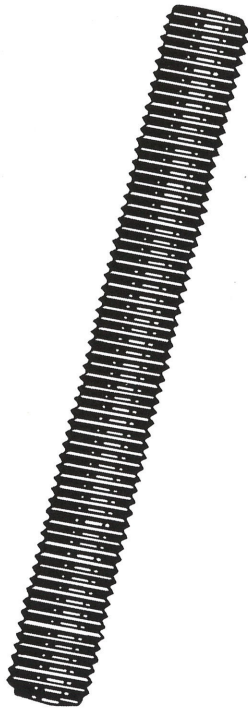
United Steel & Fasteners furnishes a variety of carriage bolts. Manufactured as A.S.T.M. A-307 and A.S.T.M. A-325 specification. Available from $\frac{1}{4}$ " diameter through $1\frac{1}{2}$ " diameter in styles. Round Head Square Neck, Round Head Fin Neck, and Round Head Short Neck. Also available in grades 303, 304, and 316 stainless steel.

Plow Bolts

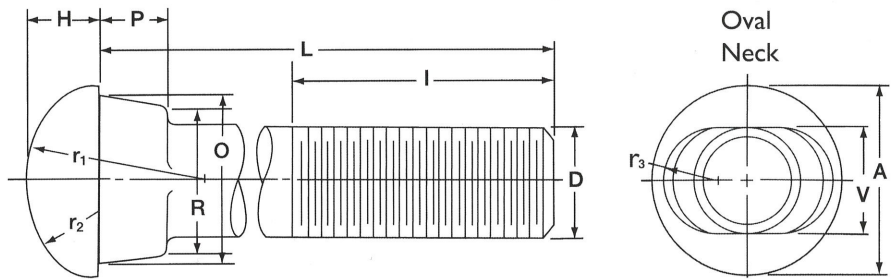


Plow bolts are furnished in number 3, 4, 6, and 7 heads and are manufactured to A.S.T.M. A-307, grade 5 with minimum 110,000 PSI tensile and grade 8 with minimum 150,000 PSI tensiles. Available from $\frac{1}{2}$ " to $1\frac{1}{2}$ " diameter, Special sizes are available upon request.

Stud Bolts



United Steel & Fasteners manufactures three types of studs: low carbon steel, medium carbon heat treated, and heat treated alloy steel studs. Above studs are manufactured either with cut threads or rolled threads, or manufactured to customer specifications. Supplied with nuts upon request.



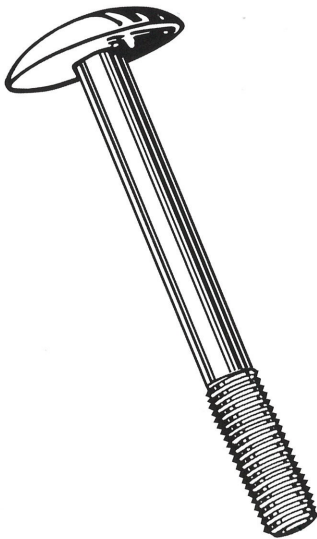
TRACK BOLTS

United Steel & Fasteners manufactures two types of track bolts, button head oval neck and button head elliptical neck track bolts. Above bolts are furnished in grades 2, 5, and 8. From $\frac{3}{8}$ " through $1\frac{5}{8}$ " inches in diameter and from 2" up to 40" in length. Furnished zinc plated and with nuts upon request.

Diam.	Length	Head				Oval Neck			Minimum Thread Length	Threads per inch
		A	H	r ₁	r ₂	O	R	P		
$\frac{3}{8}$	As Specified	$\frac{11}{16}$	$\frac{15}{64}$			$\frac{17}{32}$	$\frac{33}{64}$	$\frac{3}{16}$	$1\frac{1}{16}$	16
$\frac{1}{2}$		$\frac{7}{8}$	$\frac{5}{16}$	$\frac{11}{16}$	$\frac{9}{32}$	$\frac{5}{8}$	$\frac{19}{32}$	$\frac{5}{16}$	$1\frac{1}{8}$	13
$\frac{5}{8}$		$1\frac{1}{64}$	$\frac{25}{64}$	$\frac{59}{64}$	$\frac{23}{64}$	$\frac{13}{16}$	$\frac{25}{32}$	$\frac{3}{8}$	$1\frac{1}{4}$	11
$\frac{3}{4}$		$1\frac{9}{32}$	$\frac{15}{32}$	$1\frac{9}{32}$	$\frac{7}{16}$	$1\frac{1}{16}$	$1\frac{1}{32}$	$\frac{7}{16}$	$1\frac{3}{4}$	10
$\frac{19}{16}$		$1\frac{9}{32}$	$\frac{15}{32}$	$1\frac{9}{32}$	$\frac{7}{16}$	$1\frac{1}{16}$	$1\frac{1}{32}$	$\frac{7}{16}$	$1\frac{7}{8}$	10
$\frac{7}{8}$		$1\frac{31}{64}$	$\frac{35}{64}$	$1\frac{25}{64}$	$\frac{33}{64}$	$1\frac{7}{32}$	$1\frac{9}{16}$	$\frac{1}{2}$	2	9
$\frac{15}{16}$		$1\frac{31}{64}$	$\frac{35}{64}$	$1\frac{25}{64}$	$\frac{33}{64}$	$1\frac{7}{32}$	$1\frac{9}{16}$	$\frac{1}{2}$	$2\frac{1}{8}$	9
1		$1\frac{11}{16}$	$\frac{5}{8}$	$1\frac{9}{16}$	$\frac{19}{32}$	$1\frac{9}{16}$	$1\frac{11}{32}$	$\frac{9}{16}$	$2\frac{1}{4}$	8
$1\frac{1}{16}$		$1\frac{11}{16}$	$\frac{5}{8}$	$1\frac{9}{16}$	$\frac{19}{32}$	$1\frac{9}{16}$	$1\frac{11}{32}$	$\frac{9}{16}$	$2\frac{3}{8}$	8
$1\frac{1}{8}$		$1\frac{57}{64}$	$\frac{45}{64}$	$1\frac{55}{64}$	$\frac{43}{64}$	$1\frac{17}{32}$	$1\frac{1}{2}$	$\frac{5}{8}$	$2\frac{1}{2}$	7

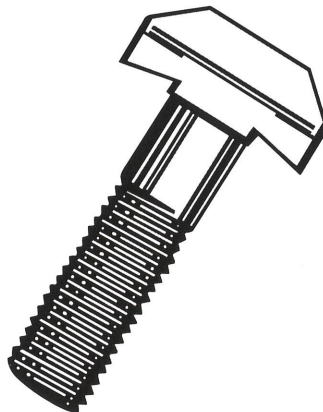
Dimension r₃ equals $\frac{1}{2}$ diameter of bolt. Dimension V equals body diameter of bolt.

Step Bolts



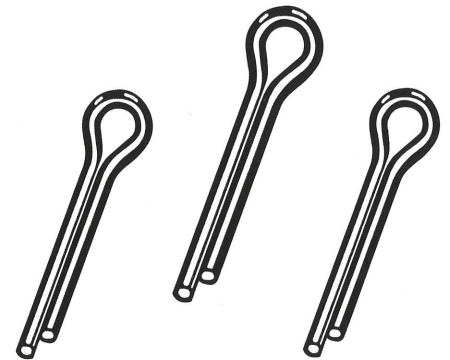
United Steel & Fasteners supplies a variety of Step Bolts. Step Bolts for pole line equipment are made to customer specifications.

T-Head Bolts



United Steel & Fasteners supplies T-head bolts manufactured in various low and medium carbon steel specifications including, but not limited to ASTM A-325 specifications with a minimum tensile of 110,000 PSI.

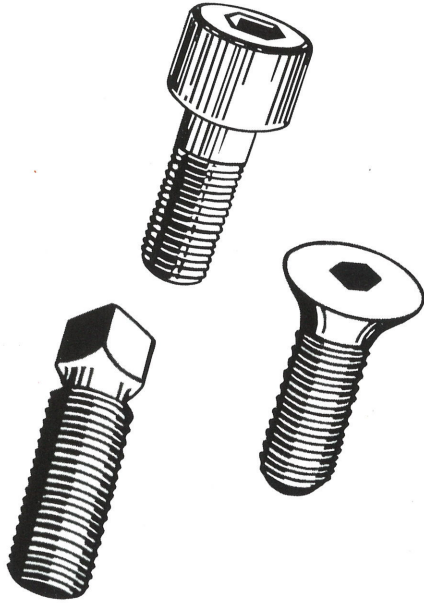
Cotter Pins



United Steel & Fasteners supplies many types of Cotter Pins whether they are extended Prong or Hammerlock or self spreading, we are capable of furnishing them. Available from $\frac{1}{16}$ " thru $\frac{3}{4}$ " diameter in cold drawn steel, stainless steel, or brass.

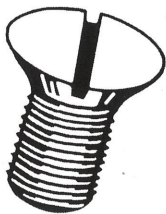
CAP SCREWS

Socket Head Cap Screws & Set Screws



United Steel & Fasteners furnishes a variety of sizes and styles of Cap Screws. Alloy steel heat treated Socket Head Cap Screws are available in sizes of $\frac{1}{8}$ " through $1\frac{3}{4}$ " diameter. Available in spline and hexagon socket Head Cap Screw, hexagon and spline socket counter sunk Head Cap Screws, hexagon and spline button Head Cap Screws as well as hexagon socket head shoulder screws. United Steel & Fasteners also supplies two basic types of set screws, standard heat treated steel set screws, or special square head set screws made to meet customers specifications. Available from $\frac{1}{4}$ " diameter through 2" diameter.

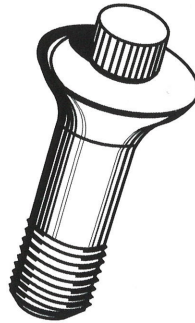
Flat Head Slotted Cap Screws



United Steel & Fasteners supplies three basic types of slotted cap screws. Low carbon cap screws or medium carbon and Alloy steel heat treated cap screws, available $\frac{1}{2}$ " through 2" diameter.

Breakoff Bolts

United Steel & Fasteners supplies many types of breakoff bolts for transportation, construction, and other industries.

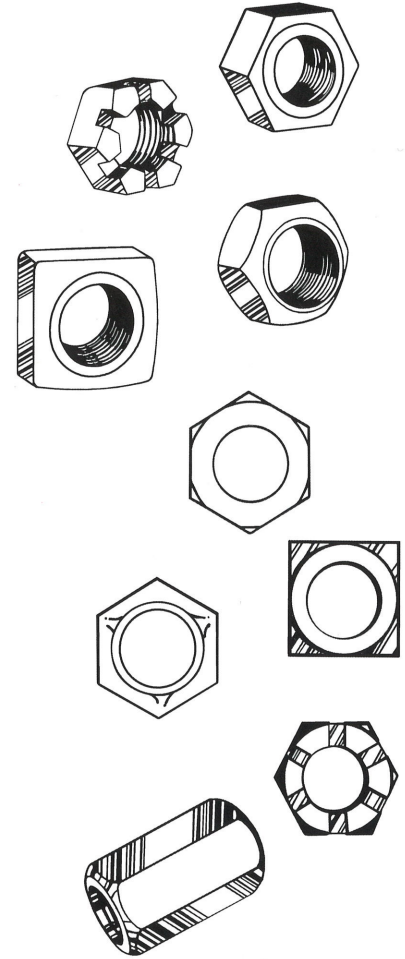


LAG SCREWS



United Steel & Fasteners supplies two basic types of lag screws. Square head and Hex head lag screws. Lag screws are manufactured in accordance to ASTM A-307 and SAE grades 2, 5, and 8 as well as other materials.

NUTS



United Steel & Fasteners supplies various types of Nuts: regular finished square and Hex nuts, and Heavy square and Hex Nuts. These nuts are available in various grades including low carbon, medium carbon, A.S.T.M. A-325, and Grades 2H and grade 8 Alloy steel as well.

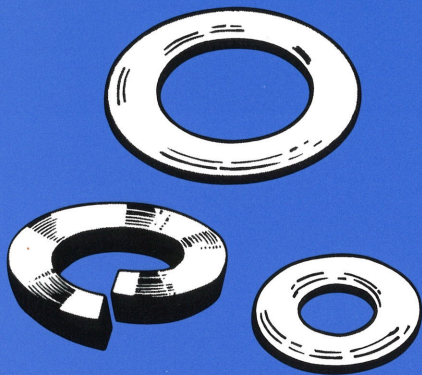
Lock Nuts and Nylon Insert Nuts

United Steel & Fasteners supplies a variety of Lock Nuts. Two way lock nuts, Top Lock nuts, and Nylon Insert Lock Nuts. Above nuts are available from $\frac{1}{4}$ " diameter through $2\frac{1}{2}$ " diameter either in course or fine threads. Also available in low carbon, medium carbon, and Alloy steel heat treated.

Wheel Nuts and Coupling Nuts

United Steel & Fasteners furnishes many types of wheel nuts or coupling nuts. Wheel nuts are used on the axles of off-the-road and on-the-road equipment such as trucks and construction equipment. Coupling nuts are furnished for $\frac{1}{4}$ " through 2" diameter and are available in low carbon, medium carbon, or alloy steel. Heat treated to meet the required specifications. Available in stainless steel, type 304 and 316 as well.

WASHERS



Lockwashers

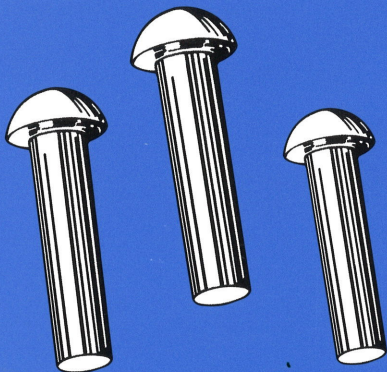
United Steel & Fasteners furnishes many types of lock washers both in medium carbon and alloy heat treated steel. Available from 1/4" through 2" inside diameter. Also available in light, medium, and heavy patterns.

Flat Washers

United Steel & Fasteners supplies many types of standard and special washers. Regular low carbon Flat washers, SAE and A-325 structural washers, as well as A-490 washers used in structural work. Available from 1/4" bolt size through 2" bolt size.

RIVETS

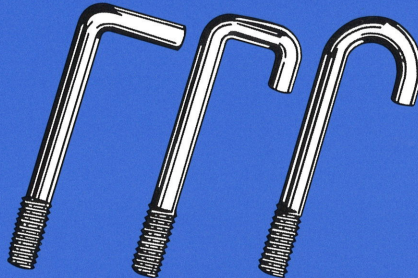
Button Head Solid Rivets



United Steel & Fasteners supplies two basic types of rivets: Solid Button Head and Cone Head Rivets. Above are manufactured to A.S.T.M. A-502 Grade 1 and 2.

ANCHOR BOLTS

United Steel & Fasteners supplies a variety of Anchor Bolts. Manufactured from low carbon steel to meet A.S.T.M. A-307 specifications or medium carbon heat treated to meet A.S.T.M. A-325 specifications. Available from 1/2" through 1 1/2" diameters.



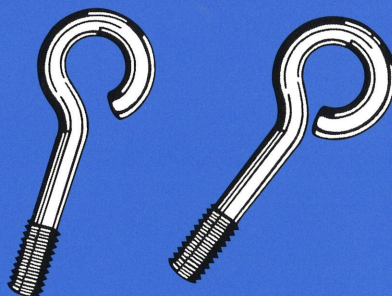
U BOLTS AND BEND BOLTS



United Steel & Fasteners furnishes many types of U Bolts manufactured either as standard U Bolts or custom made to meet customers specifications. Available 1/2" thru 2" diameter.

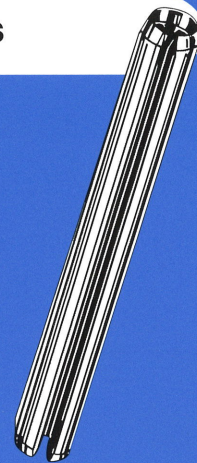
EYE BOLTS

United Steel & Fasteners furnishes two types of Eye Bolts: Forged Eye Bolts and Cold Bend Eye Bolts. Available in low carbon and medium carbon heat treated steel in sizes 1/2" through 2" diameters.



PINS

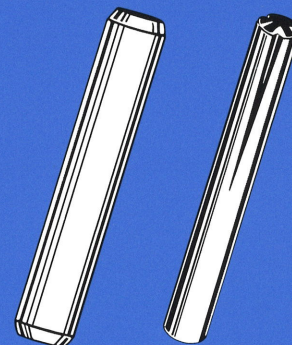
Dowel Pins



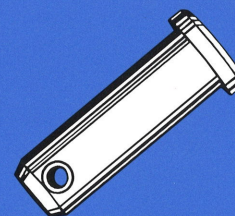
Dowel Pins and Groove Pins are supplied from 3/32" thru 1/2" diameters and are available in low carbon or heat treated steel or 304, 316 stainless steel and brass.

Dowel Pins and Groove Pins

Dowel Pins and Groove Pins are supplied from 3/32" thru 1/2" diameters and are available in low carbon or heat treated steel or 304, 316 stainless steel and brass.



Clevis Pins



There are two basic types of Clevis Pins available: Forged Steel Clevis Pins or Cold Formed Clevis Pins. Clevis Pins are available from 3/16" diameter thru 1 1/2" diameter in low carbon or medium carbon and alloy steel heat treated.

