

Cold Drawn Rounds

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**Union Drawn
Steel II LP**



Hot rolled (HR) bars: surface scale, wide diameter tolerances, problematic straightness.

Cold Drawn (CD) bars will resolve all these issues!

Material is shot-blasted to remove scale and any rust, drawn through carbide dies to precision finish and straightened. Cold drawing also improves the machinability and mechanical properties of both Carbon and Alloy steels.

GRADES of STEEL

Low Carbon	1018 / 12L14 / 1215	3/8" through 4-1/2"
Medium Carbon	1045 / 1050 / 1541	3/8" through 3-1/2"
Alloy	8620 / 4140 / 5120	3/8" through 3-1/2"

All hot roll grades can be cold finished (CF)

MECHANICAL PROPERTIES

Typical properties for 1" Dia. Bar:

	1018	1045
Tensile (UTS)	75,000 PSI (518 MPA)	115,000 PSI (792 MPA)
Yield Strength	85,000 PSI (586 MPA)	100,000 PSI (690 MPA)
Elongation	14%	10%
Reduction in Area	50%	30%
Hardness	165 HB	220 HB

Mechanical properties upon request only.

TYPICAL APPLICATIONS

Machined Parts: Tighter diameter and straightness tolerances and improved machinability provides consistent feedstock and a stable part cycle time.

Spindles / Threaded Bolts: Increased strength of CD bar can eliminate the need for additional processing. Diameter control ideal for roll threaded bolts.

Conveyor Rolls: Special straightness and tight dimensional tolerances are perfect for conveyor rolls. Strengthened cold drawn bars are ideal for transporting heavy products.

CAPABILITIES

All tolerances are negative

Ordered diameter is the maximum tolerance.

Size (inches)	Tolerance (inches)	
	Low Carbon	Med. Carbon
3/8 – 1-1/2	-0.002	-0.003
Over 1-1/2 – 2-1/2	-0.003	-0.004
Over 2-1/2 – 4	-0.004	-0.005
Over 4 – 4-1/2	-0.005	-0.006

Additional (-0.001") for Annealing after Draw.

Additional (-0.001") for Alloyed Steel grades.

Length: 10 ft min. to 26 ft max.
(+2" / -0")

Straightness: 1/8" per 10 ft section (typical)
This will vary with size and length of bar.

Stock Removal: 1.6% of bar Diameter
Recommended for surface critical application.