

# Timken® 9Cr and 13Cr Steel Tubes and Bars

**TIMKEN**  
Where You Turn

The Timken Company has been manufacturing and improving alloy steel for more than 90 years. We continually seek ways to meet customer needs through a variety of enhancements in product development, expanded manufacturing capabilities and value-added services. Advancements in our manufacturing process have allowed us to produce 9Cr and 13Cr steel. Timken can now produce 9Cr and 13Cr steel to meet a variety of customers' needs for quenched and tempered applications. Our ability to manufacture 9Cr and 13Cr steel will make these types of materials more readily available and helps our global customers reduce lead times.

## Tube Size Capabilities (Hot Finished)

Sizes		Annealed		Quenched and Tempered*	
		in.	mm	in.	mm
O.D.	Max.	9.00	<b>228.6</b>	9.00	<b>228.6</b>
	Min.	4.50	<b>114.3</b>	4.50	<b>114.3</b>
Wall	Max.	2.00	<b>50.8</b>	1.50	<b>38.1</b>
	Min.	0.50	<b>12.7</b>	0.50	<b>12.7</b>
O.D. : Wall	Max.	9:1	<b>9:1</b>	9:1	<b>9:1</b>



### \*Quenched and Tempered Properties (L-80):

- Yield: 80,000 - 95,000 psi
- Tensile: 95,000 psi minimum
- Quad Hardness: 22 HRC maximum (through wall) or as specified
- Elongation: 15% minimum in either 1.40 inches (35.6 mm) or 2.00 inches (50.8 mm)
- CVN Impacts: per API 5CT

### Tube Notes:

- 9Cr and 13Cr (420M) grades only
- ASTM A-519 tolerances apply to Hot Rolled and Annealed tubing
- Timken tolerances apply for Quenched and Tempered tubing
- Cold Drawn tubing is not available at this time
- Minimum order quantity: 16,000 lbs. (7.3 metric tonnes)
- Please inquire for additional sizes and other Quenched and Tempered properties

## Bar Size Capabilities (Rough Turned or Peeled)

Grades	Size	Annealed		Quenched and Tempered*	
		in.	mm	in.	mm
9Cr, 410	O.D. Max.	11.00	279.4	8.00	203.2
13Cr (420M)	O.D. Max.	11.00	279.4	6.50	165.1
9Cr, 410, 13Cr (420M)	O.D. Min.	3.00	76.2	3.00	76.2

### \*Quenched and Tempered Properties (L-80):

- Yield: 80,000 - 95,000 psi
- Tensile: 95,000 psi minimum
- Hardness: 22 HRC maximum
- Elongation: 15% minimum

### Bar Notes:

- 9Cr, 410 and 13Cr (420M) grades only
- All sizes are provided rough turned or peeled
- Minimum order quantity: 20,000 lbs. (9 metric tonnes)
- Sound centers are not guaranteed on hot rolled bar sizes greater than 8.00 inches (203.2 mm) O.D.
- Please inquire for additional sizes and other Quenched and Tempered properties

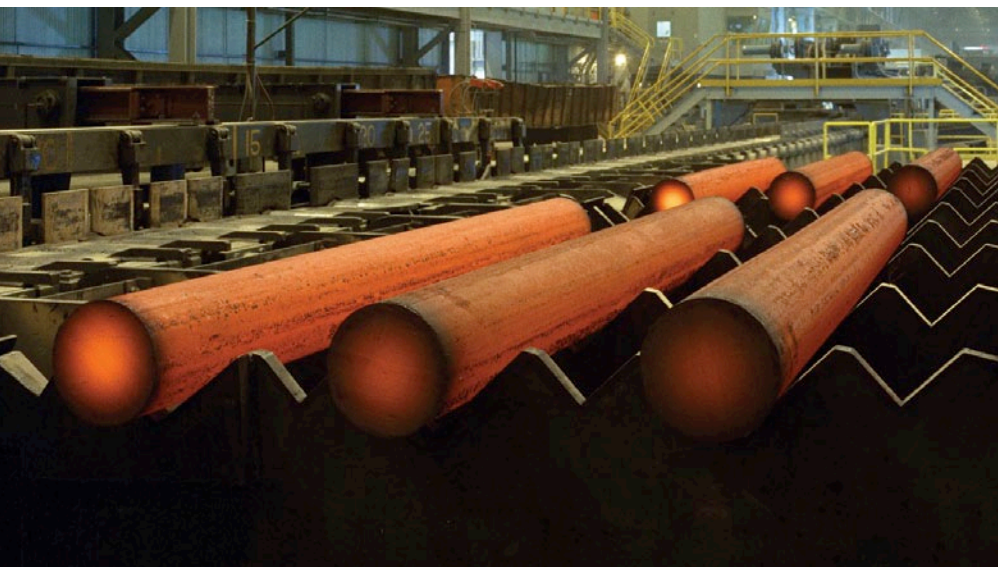
### General Information – Tube and Bar Product:

- Customers will be advised of lengths and lead times at time of inquiry.

Timken can now provide value-added services through Timken Boring Specialties (TBS). We can link the mill to the customer through TBS, an operation focused on hole-making, hole-finishing and turning of bars and tubes up to 54 feet (16 m) long.

Timken is Where You Turn™ for innovation, quality and value-added options to help your products perform more effectively and improve performance.

For more information on Timken® steel and other value-added services, call (+1) 866-284-6536 (U.S.A.), (+44) 1455 826320 (international), fax (+1) 330-471-4118 or visit our web site, [www.timken.com/products/alloysteel](http://www.timken.com/products/alloysteel).



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