

# SCOT FORGE



## For Exceptional Forging Solutions... We've Got you Covered!

- Open die forgings weighing up to 100,000 lbs.
- Rolled rings up to 252" O.D., 49" height, weights to 60,000 lbs.
- Products include: bars, blanks/disks, hollows, hubs/tooled forgings, rings, semi-closed die, step shafts, torch/profile cut and complex forged shapes
- An extensive inventory of raw material including: carbon, alloy, stainless, tool steel, copper, titanium, aluminum, nickel, and other ferrous and non-ferrous alloys
- Certified to ISO 9001:2008, AS9100C, Nadcap for Nondestructive Testing and Heat Treating, ABS, DNV, Lloyd's Register, and the European Pressure Equipment Directive (PED)
- Breakdown Services available

At Scot Forge, our job is to help you succeed in your most critical initiatives. More than 600 dedicated employee-owners work together to create forged solutions for everything from the world's physical infrastructure, energy, and transportation to manufacturing, mining, and our national defense. With three plants, two joint ventures, and 1.3 million square feet of manufacturing space, we stand committed to the performance of every piece of metal forged, every deadline met, and every challenge achieved -- all to create, deliver, and measure superior value for our customers.

## Approximate Hardness Conversion Table for Non-Austenitic Steels\*

BRINELL		ROCKWELL		VICKERS		KNOOP 1 kg load max		Ultimate Tensile Strength, ksi
Indentation Diameter, mm.	HBW 10/3000	HRC	HRB	HV (HRC range)	HV (HRB range)	HK (HRC range)	HK (HRB range)	
2.45	627	58.6		664		703		346.2
2.50	601	57.3		638		677		328.9
2.55	578	56.1		615		652		313.7
2.60	555	54.8		591		627		298.4
2.65	534	53.5		569		603		287.5
2.70	514	52.2		548		579		274.5
2.75	495	50.9		528		556		263.4
2.80	477	49.6		508		533		251.8
2.85	461	48.3		491		513		241.7
2.90	444	46.9		472		492		230.4
2.95	429	45.7		456		474		219.8
3.00	415	44.4		440		456		211.5
3.05	401	43.1		425		439		201.8
3.10	388	41.8		411		424		192.7
3.15	375	40.5		397		408		184.4
3.20	363	39.3		383		394		177.6
3.25	352	38.1		372		382		170.4
3.30	341	36.8		360		369		164.1
3.35	331	35.7		349		358		158.2
3.40	321	34.4		338		347		153.0
3.45	311	33.0		327		334		149.0
3.50	302	32.0		318		327		146.3
3.55	293	30.8		308		317		140.6
3.60	285	29.7		300		309		137.6
3.65	277	28.6		291		301		134.0
3.70	269	27.4		283		293		130.1
3.75	262	26.3		275		286		127.0
3.80	255	25.2		268		279		123.8
3.85	248	24.1		261		272		119.7
3.90	241	22.9	100	254	241	266	253	116.3
3.95	235	21.8	99	247	235	260	248	114.3
4.00	229	20.8	98	241	229	254	242	110.0
4.05	223	19.7	97	238	223	251	237	105.5
4.10	217		96		217		232	102.3
4.15	212		95		212		227	100.7
4.20	207		95		207		222	98.8
4.25	201		93		201		217	94.8
4.30	197		93		197		213	92.8
4.35	192		92		192		208	90.8
4.40	187		90		187		202	89.4
4.45	183		89		183		198	88.6
4.50	179		89		179		194	87.5
4.55	174		87		174		189	85.0
4.60	170		86		170		185	83.3
4.65	167		85		167		182	82.5
4.70	163		84		163		178	81.3
4.75	159		83		159		173	80.0
4.80	156		82		156		170	77.0
4.85	152		81		152		166	72.7
4.90	149		80		149		163	71.3
4.95	146		79		146		160	69.7
5.00	143		78		143		157	68.7
5.05	140		76		140		152	67.5
5.10	137		75		137		151	66.0
5.15	134		74		134		147	64.7
5.20	131		73		131		144	63.5
5.25	128		71		128		141	62.3
5.30	126		70		126		139	61.5
5.35	123		69		123		137	60.0
5.40	121		68		121		135	59.0
5.45	118		66		118		132	57.5

\*All conversions are based on ASTM E140-12b<sup>e1</sup> and ASTM A370-13