

TECHNICAL DATA SHEET

ASTM A193 GR.B8 & B8A - 304 (CL. 1,1A,1D,2)

CHEMICAL COMPOSITION

Elements	C %	Mn %	P %	S %	Si %	Cr %	Mo %	Ni %	B %
Min						18.00	-	8.00	-
Max	0.08	2.00	0.045	0.030	1.00	20.00	-	11.0	-

MECHANICAL PROPERTIES (METRIC PRODUCT)

GRADE	DIAMETER (mm)	TENSILE STRENGTH MPa (Min)	YIELD STRENGTH 0.2% Mpa (Min)	ELONGATION IN % (Min)	REDUCTION AREA% (Min)	HARDNESS HRC/HBW/HRB	HT Tempering Temp °C (Min)
B8 CL.1 & 1D	All Diameters	515	205	30	50	223 HBW or 96 HRB	Carbide Solution Treated
B8 CL.2	M20 & Under	860	690	12	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M20 to M24 incl	795	550	15	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M24 to M30 incl	725	450	20	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M30 to M36 incl	690	345	28	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8 CL.2B	M48 & Under	655	515	25	40	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M48 to M64	620	450	30	40	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M64 to M72	550	380	30	40	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8A CL.1A	All Diameters	515	205	30	50	192 HBW or 90 HRB	Carbide Solution Treated in the Finish Condition

MECHANICAL PROPERTIES (INCH PRODUCT)

GRADE	DIAMETER (mm)	TENSILE STRENGTH Ksi (Min)	YIELD STRENGTH 0.2% Ksi (Min)	ELONGATION IN % (Min)	REDUCTION AREA% (Min)	HARDNESS HRC/HBW/HRB	HT Tempering Temp °C (Min)
B8 CL.1 & 1D	All Diameters	75	30	30	50	223 HBW or 96 HRB	Carbide Solution Treated
B8 CL.2	3/4" & Under	125	100	12	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	3/4" to 1" Incl	115	80	15	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1" to 1 1/4" incl	105	65	20	35	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1 1/4" to 1 1/2" incl	100	50	28	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8 CL.2B	2" & Under	95	75	25	40	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 2" to 2 1/2" incl	90	65	30	40	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 2 1/2" to 3" incl	80	55	30	40	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8A CL.1A	All Diameters	75	30	30	50	192 HBW or 90 HRB	Carbide Solution Treated in the Finish Condition

NOTE:

Material Spec : ASTM A193 GR.B8 & B8A

Dimension STD : As per approved DRG.

Heat Treatment type : Carbide Solution Treated / Carbide Solution Treated & Strain Hardened / Carbide Solution Treated in the Finish Condition

Prepared by:

Approved by: