

**TECHNICAL DATA SHEET**
**ASTM A193 GR.B8M, B8MA, B8M2 & B8M3 - 316 ( CL. 1,1A,1D,2)**
**CHEMICAL COMPOSITION**

Elements	C %	Mn %	P %	S %	Si %	Cr %	Mo %	Ni %	B%
Min						16.00	2.00	10.00	-
Max	0.08	2.00	0.045	0.030	1.00	18.00	3.00	14.00	-

**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)
B8M CL.1 & 1D	All Diameters	515	205	30	50	223 HBW or 96 HRB	Carbide Solution Treated
B8M CL.2	M20 & Under	760	655	15	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M20 to M24 incl	690	550	20	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M24 to M30 incl	655	450	25	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M30 to M36 incl	620	345	30	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8M2 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
B8M3 CL.2C	M48 & Under	585	450	30	60	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over M48	585	415	30	60	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8MA 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)
B8M CL.1 & 1D	All Diameters	75	30	30	50	223 HBW or 96 HRB	Carbide Solution Treated
B8M CL.2	3/4" & Under	110	95	15	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	3/4" to 1" Incl	100	80	20	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1" to 1 1/4" incl	95	65	25	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	Over 1 1/4" to 1 1/2" incl	90	50	30	45	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8M2 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
B8M3 CL.2C	2" & Under	85	65	30	60	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
	2" & Over	85	60	30	60	321 HBW or 35 HRC	Carbide Solution Treated & Strain Hardened
B8MA 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. B8M, B8MA, B8M2 &amp; B8M3

Dimension STD : As per approved DRG.

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

Prepared by:

Approved by: