

Screw / Bolt Metallurgy

Part	Spec. as per IS	Class	Size	Ten. strength Min Nm2	Hardness (Non Mandetary)			State HT/NHT	RM preference	Elong. EL %	Max depth of Decarb E (mm)
					Vickers		Rockwell - Min				
					HV	HRb	HRc				
Cr Pan HD screws	1367 :P3	4.6		400	120	67		NHT	1010 - 1015	22	--
		4.8		420	130	71			10B21 - 1541	14	--
Hex Bolt	1367 :P3	6.8		600	190	89		HT	10B21 - 1541	8	--
Flange Bolt		8.8	d <_16	800	250		22		10B21 - 1541	12	1/2 Ht
		10.9	d <_16	830	255		23		15B41 - 4140	9	2/3 Ht
Allen Screw	1367 : P3	12.9		1220	385		39	4135 - 4140	8	3/4 Ht	

  

Part	Spec. as per IS	Class	Code No.	Dia mm	C C depth min in mm	Torsional Strength in Nm	Hardness			State NH /NHT	RM preference	Elong.EL %	Max depth of Decarb E (mm)
							Vickers		Rockwell - Min				
							HV	HRb	HRc				
Self Tapping Screws	1367 :P3	4.8	4	2.9	0.05	--	450	67	--	NHT	1010 - 1015	22	--
		CC	10	4.8	0.10	--							
	7178	8.8	6	3.5	0.05	2.7		--	28	HT	1018 - 1020	12	--
		CC	12	5.5	0.10	10							

Ht : Height of thread as per pitch

\* NHT- Non hardened & Tempered, HT- Hardened & Tempered, C.C.- Case Carburised

\* G- Complete Decarb not allowed more than 0.015 mm.

\* As per IS 1367 Pt 6- minimum hardness shall not be the cause for rejection For non-heat treated Nuts if they satisfy the proof load test.