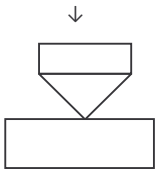
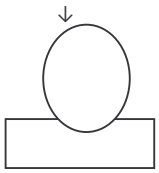
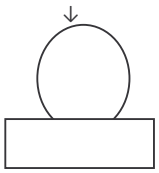
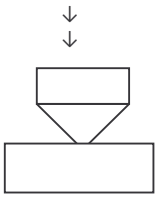
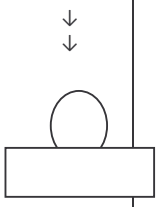
Hardness Comparison Tables for Steel

IS: 58-1967

Vickers Hardness Number, HV	Brinell Hardness Number, HB		Rockwell Hardness Number, HR		Tensile Strength
	3000 kgf 10mm steel ball	3000 kgf 10mm carbide ball	140 kgf (additional load) 10 kgf (preload) Diamond penetiatry steel ball	90 kgf 10 kgf 1.5875 mm	
					
30 kgf	3000 kgf Load (F/D^2=30)	3000 kgf Load	C Scale 150 kgf Load	B Scale 100 kgf Load	Kgf/mm^2
940	___	___	68.0	___	
900	___	___	67.0	___	
860	___	___	65.9	___	
840	___	745	65.3	___	
820	___	733	64.7	___	
780	___	710	63.3	___	
740	___	684	61.8	___	
700	___	656	60.1	___	
660	___	620	58.3	___	
620	___	582	56.3	___	
580	___	545	54.1	___	
550	505	517	52.3	___	
500	465	417	49.1	___	
450	425	425	45.3	___	150
420	397	397	42.7	___	142
390	369	369	39.8	___	132
370	350	350	37.7	___	126
340	322	322	34.4	___	117
320	303	303	32.2	___	110
300	284	284	29.8	___	103
285	270	270	27.8	___	98
265	252	252	24.8	___	90
250	238	238	22.2	___	86
235	223	___	___	99.9	81
225	214	___	___	98.3	78
210	200	___	___	95.7	72
200	190	___	___	93.8	69
190	181	___	___	91.6	65
175	166	___	___	87.9	60
160	152	___	___	83.4	55
145	138	___	___	78.1	50
135	128	___	___	73.9	47
120	114	___	___	66.3	42
120	100	___	___	56.4	37
Application : Can be applied on all materials. Suited specially for testing very hard and very thin materials and also case hardened and nitride steels	Application : Shall be limited to materials having a maximum Brinell Hardness of 400 with steel ball and of 700 with carbide ball.		Application : Used for testing materials having hardness values of HRc between 20 to 67	Application : Used for testing materials having hardness values of HRb between 60 to 90	