CLYDE FASTENERS

stress conversion table

tonf/in^2	kgf/mm^2	N/mm^2	p.s.i	tonf/in^2	kgf/mm^2	N/mm^2	p.s.i
20	31.5	308.9	44800	66	103.9	1019	147840
21	33.1	324.3	47040	67	105.5	1034	150080
22	34.6	339.8	49280	68	107.1	1050	152320
23	36.2	355.2	51520	69	108.7	1066	154560
24	37.8	370.7	53760	70	110.2	1081	156800
25	39.4	386.1	56000	71	111.8	1097	159040
26	40.9	401.6	58240	72	113.4	1112	161280
27	42.5	417.0	60480	73	115.0	1127	163520
28	44.1	432.4	62720	74	116.5	1143	165760
29	45.7	447.9	64960	75	118.1	1158	168000
30	47.2	463.3	67200	76	119.7	1174	170240
31	48.8	478.8	69440	77	121.3	1189	172480
32	50.4	494.2	71680	78	122.8	1205	174720
33	52.0	509.7	73920	79	124.4	1220	176960
34	53.5	525.1	76160	80	126.0	1236	179200
35	55.1	540.5	78400	81	127.6	1251	181440
36	56.7	556.0	80640	82	129.1	1266	183680
37	58.3	571.4	82880	83	130.7	1282	185920
38	59.8	586.9	85120	84	132.3	1297	188160
39	61.4	602.3	87360	85	133.9	1313	190400
40	63.0	617.8	89600	86	135.4	1328	192640
41	64.6	633.2	91840	87	137.0	1344	194880
42	66.1	648.7	94080	88	138.6	1359	197120
43	67.7	664.1	96320	89	140.2	1375	199360
44	69.3	679.5	98560	90	141.7	1390	201600
45	70.9	695.0	100800	91	143.3	1405	203840
46	72.4	710.4	103040	92	144.9	1421	206080
47	74.0	725.9	105280	93	146.5	1436	208320
48	75.6	741.3	107520	94	148.0	1452	210560
49	77.2	756.8	109760	95	149.6	1467	212800
50	78.7	772.2	112000	96	151.2	1483	215040
51	80.3	787.7	114240	97	152.8	1498	217280
52	81.9	803.1	116480	98	154.3	1514	219520
53	83.5	818.5	118720	99	155.9	1529	221760
54	85.0	834.0	120960	100	157.5	1544	224000
55	86.6	849.4	123200	101	159.1	1560	226240
56	88.2	864.9	125440	102	160.6	1575	228480
57	89.8	880.3	127680	103	162.2	1591	230720
58	91.3	895.7	129920	104	163.8	1606	232960
59	92.9	911.2	132160	105	165.4	1622	235200
60	94.5	926.7	134400	106	166.9	1637	237440
61	96.1	942.1	136640	107	168.5	1653	239680
62	97.6	957.5	138880	108	170.1	1668	241920
63	99.2	973.0	141120	109	171.7	1683	244160
64	100.8	988.4	143360	110	173.2	1699	246400
65	102.4	1004	145600				

CLYDE FASTENERS

tensile values

Brinell hardness numbers and tensile strength equivalents with corresponding hv and hrc numbers

Brinell dia. of impression mm	Brinell hardness number HB	Vickers hardness number HV	Rockwell C. scale hardness number HRC	Equiv. R_m t/in^2	Equiv. R_m kg/mm^2	Equiv. R_m N/mm^2
2.50	(601)	640	57	-	-	-
2.55	(578)	615	56	-	-	-
2.60	(555)	591	54.5	-	-	-
2.65	(534)	569	53.5	-	-	-
2.70	(514)	547	52	-	-	-
2.75	(495)	528	51	-	-	-
2.80	(477)	508	49.5	-	-	-
2.85	(461)	491	48.5	101	160	1569
2.90	444	474	47	98	155	1520
2.95	429	455	45.5	95	150	1471
3.00	415	440	44.5	92	145	1422
3.05	401	425	43	88	139	1363
3.10	388	410	42	85	134	1314
3.15	375	396	40.5	82	129	1265
3.20	363	383	39	80	126	1236
3.25	352	372	38	77	121	1187
3.30	341	360	36.5	75	118	1157
3.35	331	350	35.5	73	114	1118
3.40	321	339	34.5	71	111	1089
3.45	311	328	33	68	107	1049
3.50	302	319	32	66	104	1020
3.55	293	309	31	64	101	990
3.60	285	301	30	63	99	971
3.65	277	292	29	61	96	941
3.70	269	284	27.5	59	93	912
3.75	262	276	26.5	58	91	892
3.80	255	269	25.5	56	89	873
3.85	248	261	24	55	87	853
3.90	241	253	23	53	84	824
3.95	235	247	22	51	81	794
4.00	229	241	20.5	50	79	775
4.05	223	235	-	49	77	755
4.10	217	228	-	48	76	745
4.15	212	223	-	46	73	716
4.20	207	218	-	45	71	696
4.30	197	208	-	43	68	667
4.40	187	197	-	41	65	637
4.50	179	189	-	39	62	608
4.60	170	179	-	36	57	559
4.70	163	172	-	35	55	539
4.80	156	165	-	34	54	530
4.90	149	157	-	32	51	500
5.00	143	150	-	31	49	481
5.10	137	144	-	31	49	481
5.20	131	138	-	30	47	461
5.30	126	133	-	29	46	451
5.40	121	127	-	28	44	431
5.50	116	122	-	27	43	422
5.60	111	117	-	26	41	402
5.70	107	113	-	25	39	382
5.80	103	108	-	24	38	373

The figures in parenthesis require a 'modified' Brinell test, i.e. a tungsten carbide ball is required where the BH exceeds 450. HB to HV and HRC conversions are based on A.S.T.M E.140.

Hawbank Road, College Milton, East Kilbride G74 5ET, Scotland
Tel: **+44 (0)1355 225451** | Fax: **+44 (0)1355 263191**
Email: **info@clydefasteners.com** | Web: **www.clydefasteners.com**