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PILECO Diesel Hammer D138 Pile Hammer Bearing Chart

This chart is based on the Engineering News Record (ENR) formula for pile bearing capacity and is provided as a convenience only.

Pile bearing (Tons) = $2E/(S + 0.1)/2000$, where E = Hammer energy (given by the Saximeter formula)
 S = Pile set (inch per blow)

Blow per Minute	Ram Stroke (ft)	Hammer Energy (lb.ft)	Pile Set (Blows per inch)											
			1	2	3	4	5	6	7	8	9	10	11	12
35	11.52	350,572	319	584	809	1002	1169	1315	1444	1558	1661	1753	1836	1912
36	10.88	330,866	301	551	764	945	1103	1241	1362	1471	1567	1654	1733	1805
37	10.28	312,736	284	521	722	894	1042	1173	1288	1390	1481	1564	1638	1706
38	9.73	296,019	269	493	683	846	987	1110	1219	1316	1402	1480	1551	1615
39	9.22	280,571	255	468	647	802	935	1052	1155	1247	1329	1403	1470	1530
40	8.75	266,267	242	444	614	761	888	999	1096	1183	1261	1331	1395	1452
41	8.32	252,997	230	422	584	723	843	949	1042	1124	1198	1265	1325	1380
42	7.91	240,664	219	401	555	688	802	902	991	1070	1140	1203	1261	1313
43	7.53	229,181	208	382	529	655	764	859	944	1019	1086	1146	1200	1250
44	7.18	218,472	199	364	504	624	728	819	900	971	1035	1092	1144	1192
45	6.85	208,468	190	347	481	596	695	782	858	927	987	1042	1092	1137
46	6.54	199,111	181	332	459	569	664	747	820	885	943	996	1043	1086
47	6.26	190,344	173	317	439	544	634	714	784	846	902	952	997	1038
48	5.99	182,119	166	304	420	520	607	683	750	809	863	911	954	993
49	5.73	174,393	159	291	402	498	581	654	718	775	826	872	913	951
50	5.49	167,125	152	279	386	478	557	627	688	743	792	836	875	912
51	5.27	160,281	146	267	370	458	534	601	660	712	759	801	840	874
52	5.06	153,828	140	256	355	440	513	577	633	684	729	769	806	839

Caution: Driving at more than 20 blows per inch (set of 0.05 inch per blow) is considered practical refusal.



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PILECO Diesel Hammer D138 Pile Hammer Bearing Chart

This chart is based on the Engineering News Record (ENR) formula for pile bearing capacity and is provided as a convenience only.

Pile bearing (kN) = $100E/(S + 0.254)/6$, where E = Hammer energy (given by the Saximeter formula)
 S = Pile set (cm per blow)

Blows per Minute	Ram Stroke (m)	Hammer Energy (kJ)	Pile Set (Blows per 2cm)											
			5	6	7	8	9	10	11	12	13	14	15	16
35	3.51	476	12122	13498	14689	15730	16647	17462	18191	18846	19438	19977	20468	20918
36	3.32	449	11441	12740	13864	14846	15712	16481	17169	17787	18346	18854	19318	19743
37	3.13	424	10814	12042	13104	14033	14852	15578	16228	16813	17341	17822	18260	18661
38	2.97	402	10237	11399	12404	13283	14058	14746	15361	15915	16415	16869	17284	17664
39	2.81	381	9703	10804	11757	12590	13325	13977	14560	15084	15559	15989	16383	16743
40	2.67	361	9208	10253	11158	11949	12646	13265	13818	14316	14766	15175	15548	15890
41	2.54	343	8750	9743	10602	11354	12016	12604	13130	13603	14030	14419	14773	15098
42	2.41	327	8323	9268	10086	10800	11430	11990	12490	12940	13347	13716	14054	14363
43	2.30	311	7926	8826	9605	10285	10885	11418	11895	12323	12710	13062	13383	13678
44	2.19	297	7556	8414	9156	9805	10377	10885	11339	11748	12117	12452	12758	13039
45	2.09	283	7211	8029	8737	9356	9902	10387	10820	11210	11562	11883	12175	12442
46	2.00	270	6887	7669	8345	8937	9458	9921	10335	10707	11044	11350	11629	11884
47	1.91	258	6584	7331	7978	8544	9042	9484	9880	10236	10558	10850	11117	11361
48	1.83	247	6300	7015	7634	8175	8652	9075	9454	9794	10102	10382	10637	10871
49	1.75	237	6033	6717	7310	7828	8285	8690	9053	9379	9674	9942	10186	10410
50	1.68	227	5782	6438	7006	7502	7940	8328	8676	8988	9271	9528	9762	9977
51	1.61	218	5545	6174	6719	7195	7615	7988	8321	8621	8892	9138	9362	9568
52	1.54	209	5322	5926	6449	6906	7309	7666	7986	8274	8534	8770	8986	9183

Caution: Driving at more than 8 blows per cm (set of 0.125 cm per blow) is considered practical refusal.