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# OFFSHORE ENERGY SERVICES, INC

Grade **X-52** Min. Yield **52,000** PSI

## Allowable Blow Count (S) for Diesel Hammers in Blows/ft

Pipe O.D. (In.)	Pipe Wall (In.)	Pipe I.D. (In.)	Pipe X-Sec. (A) (Sq. In.)	Weight Per Ft. (Lbs.)	Pipe Yield (Tons)	Allow. Brg.Load (P) Tons (1.85 Safe F.)	D-12	D-15	D-22	D-30	D-30.02	D-36	D-46	D-62	D-80	D-100			
							Hammer Energy (E) in ft-lbs										22,500	28,488	39,700
14	3/8	13 1/4	16.05	55	417	226	-	-	294.22	129.89	89.28	61.64	44.06	27.21	17.19	12.45			
14	1/2	13	21.21	73	551	298	-	-	-	263.02	154.97	97.51	65.99	38.78	23.81	17.01			
14	5/8	12 3/4	26.26	90	683	369	-	-	-	-	277.31	149.77	94.05	52.03	30.95	21.81			
14	3/4	12 1/2	31.22	107	812	439	-	-	-	-	-	232.93	131.22	67.37	38.68	26.85			
14	1	12	40.84	140	1,062	574	-	-	-	-	-	-	258.92	106.57	56.18	37.72			
16	3/8	15 1/4	18.41	63	479	259	-	-	-	177.10	114.94	76.45	53.41	32.28	20.14	14.50			
16	1/2	15	24.35	84	633	342	-	-	-	-	220.03	127.28	82.48	46.76	28.17	19.95			
16	5/8	14 3/4	30.19	104	785	424	-	-	-	-	-	211.67	122.47	63.96	37.01	25.77			
16	3/4	14 1/2	35.93	124	934	505	-	-	-	-	-	379.20	180.89	84.72	46.79	31.98			
16	1	14	47.12	162	1,225	662	-	-	-	-	-	-	-	142.42	69.85	45.73			
20	3/8	19 1/4	23.12	79	601	325	-	-	-	357.50	191.26	114.73	75.70	43.55	26.43	18.79			
20	1/2	19	30.63	105	796	430	-	-	-	-	-	220.46	126.14	65.40	37.72	26.23			
20	5/8	18 3/4	38.04	131	989	535	-	-	-	-	-	-	210.12	93.57	50.70	34.40			
20	3/4	18 1/2	45.36	156	1,179	637	-	-	-	-	-	-	377.65	131.24	65.80	43.40			
20	1	18	59.69	205	1,552	839	-	-	-	-	-	-	-	263.93	104.74	64.48			
24	3/8	23 1/4	27.83	96	724	391	-	-	-	-	341.03	171.54	104.58	56.61	33.32	23.37			
24	1/2	23	36.91	127	960	519	-	-	-	-	-	-	193.81	88.74	48.59	33.09			
24	5/8	22 3/4	45.90	158	1,193	645	-	-	-	-	-	-	397.02	134.55	67.02	44.11			
24	3/4	22 1/2	54.78	188	1,424	770	-	-	-	-	-	-	-	205.13	89.69	56.68			
24	1	22	72.26	248	1,879	1,016	-	-	-	-	-	-	-	-	155.33	88.02			
26	3/8	25 1/4	30.19	104	785	424	-	-	-	-	-	211.67	122.47	63.96	37.01	25.77			
26	1/2	25	40.06	138	1,041	563	-	-	-	-	-	-	243.82	102.76	54.61	36.77			
26	5/8	24 3/4	49.82	171	1,295	700	-	-	-	-	-	-	-	161.57	76.40	49.43			
26	3/4	24 1/2	59.49	205	1,547	836	-	-	-	-	-	-	-	261.17	104.10	64.16			
26	1	24	78.54	270	2,042	1,104	-	-	-	-	-	-	-	-	190.26	102.19			
26	1 1/4	23 1/2	97.19	334	2,527	1,366	-	-	-	-	-	-	-	-	377.65	158.52			
26	1 1/2	23	115.45	397	3,002	1,623	-	-	-	-	-	-	-	-	-	250.46			
30	1/2	29	46.34	159	1,205	651	-	-	-	-	-	-	-	137.33	68.03	44.69			
30	5/8	28 3/4	57.68	198	1,500	811	-	-	-	-	-	-	-	237.43	98.32	61.20			
30	3/4	28 1/2	68.92	237	1,792	969	-	-	-	-	-	-	-	-	139.80	81.20			
30	1	28	91.11	313	2,369	1,280	-	-	-	-	-	-	-	-	295.72	137.24			
30	1 1/4	27 1/2	112.90	388	2,935	1,587	-	-	-	-	-	-	-	-	-	234.12			
30	1 1/2	27	134.30	462	3,492	1,888	-	-	-	-	-	-	-	-	-	-			
36	5/8	34 3/4	69.46	239	1,806	976	-	-	-	-	-	-	-	-	142.19	82.27			
36	3/4	34 1/2	83.06	286	2,159	1,167	-	-	-	-	-	-	-	-	221.38	113.63			
36	1	34	109.96	378	2,859	1,545	-	-	-	-	-	-	-	-	-	216.97			
36	1 1/4	33 1/2	136.46	469	3,548	1,918	-	-	-	-	-	-	-	-	-	-			
36	1 1/2	33	162.58	559	4,227	2,285	-	-	-	-	-	-	-	-	-	-			
42	3/8	41 1/4	49.04	169	1,275	689	-	-	-	-	-	-	-	155.71	74.45	48.34			
42	1/2	41	65.19	224	1,695	916	-	-	-	-	-	-	-	361.47	124.39	74.09			
42	5/8	40 3/4	81.24	279	2,112	1,142	-	-	-	-	-	-	-	-	208.14	108.89			
42	3/4	40 1/2	97.19	334	2,527	1,366	-	-	-	-	-	-	-	-	377.65	158.52			
42	1	40	128.81	443	3,349	1,810	-	-	-	-	-	-	-	-	-	368.33			
42	1 1/4	39 1/2	160.03	550	4,161	2,249	-	-	-	-	-	-	-	-	-	-			
42	1 1/2	39	190.85	656	4,962	2,682	-	-	-	-	-	-	-	-	-	-			
42	1 3/4	38 1/2	221.29	761	5,753	3,110	-	-	-	-	-	-	-	-	-	-			
48	3/4	46 1/2	111.33	383	2,895	1,565	-	-	-	-	-	-	-	-	-	224.76			
48	1	46	147.66	508	3,839	2,075	-	-	-	-	-	-	-	-	-	-			
48	1 1/4	45 1/2	183.59	631	4,773	2,580	-	-	-	-	-	-	-	-	-	-			
48	1 1/2	45	219.13	753	5,697	3,080	-	-	-	-	-	-	-	-	-	-			
48	1 3/4	44 1/2	254.27	874	6,611	3,574	-	-	-	-	-	-	-	-	-	-			
48	2	44	289.03	994	7,515	4,062	-	-	-	-	-	-	-	-	-	-			
48	2 1/2	43	357.36	1229	9,291	5,022	-	-	-	-	-	-	-	-	-	-			
60	1	58	185.35	637	4,819	2,605	-	-	-	-	-	-	-	-	-	-			
60	1 1/4	57 1/2	230.71	793	5,998	3,242	-	-	-	-	-	-	-	-	-	-			
60	1 1/2	57	275.68	948	7,168	3,874	-	-	-	-	-	-	-	-	-	-			
60	1 3/4	56 1/2	320.25	1101	8,326	4,501	-	-	-	-	-	-	-	-	-	-			
60	2	56	364.43	1253	9,475	5,122	-	-	-	-	-	-	-	-	-	-			
60	2 1/4	55 1/2	408.21	1403	10,614	5,737	-	-	-	-	-	-	-	-	-	-			
60	2 1/2	55	451.61	1553	11,742	6,347	-	-	-	-	-	-	-	-	-	-			
72	1	70	223.05	767	5,799	3,135	-	-	-	-	-	-	-	-	-	-			
72	1 1/2	69	332.22	1142	8,638	4,669	-	-	-	-	-	-	-	-	-	-			
72	2	68	439.82	1512	11,435	6,181	-	-	-	-	-	-	-	-	-	-			
72	2 1/2	67	545.85	1877	14,192	7,671	-	-	-	-	-	-	-	-	-	-			
72	3	66	650.31	2236	16,908	9,140	-	-	-	-	-	-	-	-	-	-			

- 1) - DENOTES THAT BLOW COUNTS IN EXCESS OF 400 BLOWS PER FOOT ARE REQUIRED TO YIELD THE PIPE.
- 2) THE ABOVE CHART IS BASED ON YIELD ONLY AND DOES NOT TAKE INTO ACCOUNT DEFLECTION OR MISALIGNMENT.
- 3) HAMMERS ARE DESIGNED FOR A MAXIMUM BLOW COUNT OF 250 BLOWS PER FOOT. ANY SITUATION REQUIRING MORE THAN 250 BLOWS PER FOOT THE NEXT SIZE HAMMER JOB SHOULD BE USED.
- 4) ALL BLOW COUNTS ARE CALCULATED VALUES BASED ON THE ENGINEERING NEWS FORMULA USING A 1.25 FACTOR.  

$$S = \frac{1}{1.25} \left( \frac{E}{A} \right)^{1/2}$$
 BLOW COUNT (S) IS IN BLOWS PER FOOT, HAMMER ENERGY (E) IS IN FOOT POUNDS, ALLOWABLE BEARING LOAD (P) IS IN POUNDS  

$$P = (A \cdot YIELD \ STRENGTH) / 1.85$$

Hammer Services - Casing Crews - Tubing Tongs - Laydown Units - Fabrication - Whipstocks

1-800-489-6202

