List 1100 - EX-SUS-GOLD: Stub
List 1600 - EX-SUS-GOLD: Jobbers

General Drilling Operations

Work Material		Low Carbon Steels Mild Steels 1010, 1018		Stainless Steels								Aluminum 5052, 7075		Cast Aluminum		Copper Copper Alloy	
				Austenitic 304, 316		Martensitic 420, 440		Ferritic 430, 405		15-5PH 17-4PH							
Drilling Speed		100-130 SFM		40-60 SFM		50-65 SFM		50-65 SFM		25-40 SFM		105 - 205 SFM		205-325 SFM		80 - 160 SFM	
Drill Dia.		Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed	Speed	Feed
mm	Inch	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR
1	-	11,150	0.001-0.002	4,800	0.001-0.002	5,550	0.001-0.002	5,550	0.0005-0.001	3,200	0.0005-0.001	15,000	0.001-0.002	25,000	0.001-0.002	11,630	0.0005-0.001
-	1/16	7,020	0.002-0.003	3,000	0.001-0.003	3,600	0.001-0.003	3,600	0.0005-0.001	2,000	0.0005-0.001	9,460	0.001-0.004	16,180	0.002-0.004	7,330	0.001-0.002
2	-	5,570	0.002-0.004	2,400	0.002-0.003	2,850	0.002-0.003	2,850	0.001-0.002	1,600	0.001-0.002	7,510	0.002-0.005	12,840	0.002-0.005	5,820	0.001-0.002
-	3/32	4,680	0.003-0.004	2,000	0.002-0.003	2,400	0.002-0.003	2,400	0.001-0.002	1,350	0.001-0.002	6,310	0.002-0.006	10,790	0.002-0.006	4,890	0.001-0.003
3	-	3,710	0.004-0.005	1,600	0.002-0.004	1,900	0.002-0.004	1,900	0.002-0.003	1,100	0.002-0.003	5,010	0.002-0.007	8,560	0.002-0.007	3,880	0.002-0.004
-	1/8	3,510	0.004-0.005	1,500	0.003-0.004	1,800	0.002-0.004	1,800	0.002-0.003	1,000	0.002-0.003	4,730	0.003-0.007	8,090	0.003-0.007	3,660	0.002-0.004
4	-	2,790	0.004-0.006	1,200	0.003-0.005	1,450	0.003-0.005	1,450	0.002-0.003	800	0.002-0.003	3,760	0.003-0.009	6,420	0.003-0.009	2,910	0.003-0.004
-	3/16	2,340	0.005-0.007	1,000	0.004-0.006	1,200	0.004-0.006	1,200	0.003-0.004	680	0.003-0.004	3,150	0.004-0.011	5,390	0.004-0.011	2,440	0.004-0.005
6	-	1,860	0.005-0.008	800	0.005-0.007	950	0.006-0.007	950	0.004-0.005	550	0.004-0.005	2,500	0.005-0.014	4,280	0.005-0.014	1,940	0.005-0.006
-	1/4	1,750	0.006-0.008	750	0.005-0.007	900	0.006-0.007	900	0.004-0.005	510	0.004-0.005	2,360	0.005-0.015	4,050	0.005-0.015	1,830	0.005-0.007
8	-	1,400	0.007-0.009	600	0.006-0.009	720	0.008-0.009	720	0.005-0.006	400	0.005-0.006	1,880	0.006-0.018	3,210	0.006-0.018	1,450	0.006-0.008
-	3/8	1,170	0.008-0.010	500	0.007-0.010	600	0.009-0.011	600	0.006-0.007	340	0.006-0.007	1,580	0.007-0.021	2,700	0.007-0.021	1,220	0.007-0.009
10	-	1,110	0.008-0.011	480	0.008-0.011	570	0.010-0.012	570	0.006-0.008	320	0.006-0.008	1,500	0.008-0.022	2,570	0.008-0.022	1,160	0.008-0.010
-	7/16	1,000	0.009-0.012	430	0.008-0.012	520	0.011-0.013	520	0.006-0.009	300	0.006-0.009	1,350	0.008-0.024	2,310	0.008-0.024	1,050	0.009-0.011
12	-	930	0.009-0.013	400	0.009-0.013	480	0.012-0.014	480	0.007-0.009	280	0.007-0.009	1,250	0.009-0.026	2,140	0.009-0.026	970	0.009-0.012
-	1/2	880	0.010-0.014	380	0.010-0.014	450	0.013-0.015	450	0.007-0.010	260	0.007-0.010	1,180	0.010-0.027	2,020	0.010-0.027	920	0.010-0.012
14	-	800	0.011-0.015	340	0.011-0.015	410	0.014-0.018	410	0.008-0.012	225	0.008-0.012	1,070	0.011-0.029	1,830	0.011-0.029	830	0.010-0.013
-	5/8	700	0.011-0.016	300	0.012-0.017	360	0.015-0.020	360	0.009-0.012	200	0.009-0.012	950	0.012-0.032	1,620	0.012-0.032	735	0.011-0.014
16	-	695	0.011-0.017	300	0.012-0.017	355	0.015-0.020	355	0.009-0.013	200	0.009-0.013	940	0.012-0.033	1,600	0.012-0.033	725	0.011-0.015
18	-	620	0.013-0.019	265	0.013-0.019	320	0.016-0.021	320	0.010-0.014	175	0.010-0.014	835	0.013-0.037	1,420	0.013-0.037	650	0.011-0.016
-	3/4	585	0.013-0.020	250	0.013-0.019	300	0.016-0.021	300	0.010-0.015	165	0.010-0.015	790	0.013-0.038	1,350	0.013-0.038	610	0.012-0.016
20	-	555	0.013-0.021	240	0.013-0.020	285	0.016-0.022	285	0.010-0.016	160	0.010-0.016	750	0.014-0.039	1,280	0.014-0.039	580	0.012-0.017
22	-	510	0.015-0.022	215	0.014-0.021	260	0.017-0.024	260	0.011-0.017	145	0.011-0.017	680	0.015-0.043	1,170	0.015-0.043	530	0.013-0.019
24	-	465	0.015-0.024	200	0.015-0.022	240	0.017-0.026	240	0.012-0.019	135	0.012-0.019	625	0.016-0.045	1,070	0.016-0.045	480	0.013-0.021
26	-	430	0.016-0.026	185	0.016-0.024	220	0.018-0.028	220	0.013-0.021	120	0.013-0.021	580	0.017-0.048	990	0.017-0.048	450	0.013-0.022
28	-	400	0.017-0.028	170	0.016-0.025	200	0.018-0.029	200	0.013-0.022	115	0.013-0.022	535	0.018-0.051	920	0.018-0.051	410	0.014-0.023
30	-	370	0.018-0.030	160	0.017-0.026	190	0.018-0.031	190	0.014-0.024	105	0.014-0.024	500	0.019-0.053	860	0.019-0.053	390	0.014-0.025
32	-	350	0.019-0.032	150	0.017-0.028	180	0.018-0.032	180	0.015-0.025	100	0.015-0.025	470	0.020-0.056	800	0.020-0.056	360	0.015-0.026