



List HP243 - HY-PRO® CARB: 3D List HP245 - HY-PRO® CARB: 5D

General Drilling Operations

Work Material	Carbon Steels, Mild Steels 1010, 1050, 12L14		Alloy Steels 4140, 4130		Stainless Steels 300SS, 400SS, 17-4PH		Cast Iron		Ductile Cast Iron		Aluminum Alloy	
Drilling Speed	240-350 SFM		230-325 SFM		130-200 SFM		240-385 SFM		175-300 SFM		200-380 SFM	
Drill Dia. mm Inch	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
	1 -	25,000	0.001-0.002	25,000	0.001-0.002	16,010	0.001-0.002	25,000	0.001-0.002	23,090	0.001-0.002	25,000
- 1/16	18,030	0.001-0.002	16,930	0.001-0.002	10,080	0.001-0.002	19,620	0.001-0.002	14,550	0.001-0.002	17,720	0.001-0.002
2 -	14,310	0.002-0.003	13,430	0.001-0.003	8,010	0.001-0.003	15,130	0.001-0.003	11,540	0.001-0.003	14,070	0.002-0.003
- 3/32	12,020	0.002-0.004	11,280	0.002-0.004	6,720	0.002-0.003	13,080	0.002-0.004	9,700	0.002-0.004	11,820	0.002-0.004
3 -	9,540	0.002-0.005	8,960	0.002-0.005	5,340	0.002-0.004	10,090	0.002-0.005	7,700	0.002-0.005	9,380	0.003-0.005
- 1/8	9,010	0.003-0.005	8,460	0.003-0.005	5,040	0.003-0.004	9,810	0.002-0.005	7,270	0.003-0.005	8,860	0.004-0.005
4 -	7,160	0.003-0.006	6,720	0.003-0.006	4,000	0.003-0.005	7,560	0.003-0.006	5,770	0.003-0.006	7,040	0.004-0.006
- 3/16	6,010	0.004-0.008	5,640	0.004-0.008	3,360	0.004-0.006	6,540	0.004-0.007	4,850	0.004-0.007	5,910	0.005-0.007
6 -	4,770	0.005-0.009	4,480	0.005-0.009	2,670	0.005-0.007	5,040	0.005-0.009	3,850	0.005-0.009	4,690	0.006-0.008
- 1/4	4,510	0.005-0.010	4,230	0.005-0.010	2,520	0.006-0.008	4,910	0.005-0.010	3,640	0.005-0.010	4,430	0.007-0.009
8 -	3,580	0.006-0.011	3,360	0.006-0.011	2,000	0.006-0.009	3,780	0.006-0.011	2,890	0.006-0.011	3,520	0.008-0.010
- 3/8	3,010	0.007-0.011	2,820	0.007-0.011	1,680	0.007-0.009	3,270	0.007-0.011	2,420	0.007-0.011	2,950	0.009-0.011
10 -	2,860	0.008-0.012	2,680	0.008-0.012	1,600	0.008-0.010	3,030	0.008-0.012	2,310	0.008-0.012	2,810	0.011-0.013
- 7/16	2,580	0.008-0.012	2,420	0.008-0.012	1,440	0.008-0.010	2,800	0.008-0.012	2,080	0.008-0.012	2,530	0.012-0.014
12 -	2,380	0.008-0.012	2,240	0.008-0.012	1,330	0.008-0.010	2,520	0.008-0.012	1,920	0.008-0.012	2,340	0.013-0.015
- 1/2	2,250	0.009-0.013	2,120	0.009-0.013	1,260	0.008-0.011	2,450	0.008-0.013	1,820	0.008-0.013	2,210	0.014-0.016
14 -	2,040	0.009-0.014	1,920	0.009-0.014	1,140	0.009-0.011	2,160	0.009-0.014	1,650	0.009-0.014	2,010	0.016-0.018
- 5/8	1,810	0.010-0.014	1,690	0.010-0.014	1,010	0.010-0.012	1,960	0.010-0.014	1,450	0.010-0.014	1,770	0.018-0.020
16 -	1,810	0.010-0.014	1,690	0.010-0.014	1,010	0.010-0.012	1,960	0.010-0.014	1,450	0.010-0.014	1,770	0.018-0.020
- 15/16	1,590	0.011-0.015	1,490	0.011-0.015	890	0.011-0.013	1,682	0.011-0.015	1,280	0.011-0.015	1,560	0.020-0.022
18 -	1,500	0.012-0.015	1,410	0.012-0.015	840	0.011-0.013	1,580	0.011-0.015	1,210	0.012-0.015	1,480	0.021-0.023
- 3/4	1,430	0.012-0.016	1,340	0.012-0.016	800	0.012-0.014	1,514	0.012-0.016	1,150	0.012-0.016	1,410	0.022-0.024
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General Drilling Operations

Work Material	Cast Aluminum	Copper	Special Alloy Steels, Hardened Steels										
			26-30 HRC		30-34 HRC		34-43 HRC		43-48 HRC				
Hardness	260- 640 SFM		190-320 SFM		160-240 SFM		110-185 SFM		100-150 SFM		75-100 SFM		
Drilling Speed	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	
													mm
1	-	25,000	0.002-0.003	24,740	0.001-0.002	19,400	0.001-0.002	14,260	0.001-0.002	12,130	0.001-0.001	8,440	0.0005-0.001
-	1/16	25,000	0.002-0.003	15,580	0.001-0.002	12,220	0.001-0.002	8,980	0.001-0.002	7,640	0.001-0.002	5,320	0.0005-0.001
2	-	21,831	0.003-0.004	12,370	0.002-0.003	9,700	0.001-0.003	7,130	0.001-0.003	6,060	0.001-0.002	4,220	0.001-0.001
-	3/32	18,336	0.004-0.005	10,390	0.002-0.004	8,150	0.002-0.004	5,990	0.002-0.003	5,090	0.002-0.003	3,540	0.001-0.002
3	-	14,550	0.004-0.006	8,250	0.003-0.005	6,470	0.002-0.005	4,750	0.002-0.003	4,040	0.002-0.003	2,810	0.001-0.002
-	1/8	13,750	0.005-0.006	7,790	0.003-0.005	6,110	0.003-0.005	4,490	0.003-0.004	3,820	0.003-0.004	2,660	0.002-0.003
4	-	10,920	0.005-0.007	6,180	0.004-0.006	4,850	0.003-0.006	3,560	0.003-0.004	3,030	0.003-0.004	2,110	0.002-0.003
-	3/16	9,170	0.006-0.008	5,190	0.005-0.007	4,070	0.004-0.008	2,990	0.004-0.005	2,550	0.004-0.005	1,770	0.002-0.003
6	-	7,270	0.008-0.010	4,120	0.006-0.008	3,230	0.005-0.009	2,380	0.005-0.006	2,020	0.005-0.006	1,410	0.002-0.004
-	1/4	6,870	0.010-0.012	3,890	0.007-0.009	3,050	0.005-0.010	2,240	0.006-0.007	1,910	0.006-0.007	1,330	0.002-0.004
8	-	5,460	0.012-0.014	3,090	0.008-0.010	2,420	0.006-0.011	1,780	0.006-0.008	1,520	0.006-0.008	1,050	0.003-0.005
-	3/8	4,580	0.013-0.015	2,590	0.009-0.011	2,040	0.007-0.011	1,490	0.007-0.009	1,270	0.007-0.009	880	0.003-0.005
10	-	4,360	0.015-0.017	2,470	0.011-0.013	1,940	0.008-0.012	1,420	0.008-0.010	1,210	0.008-0.010	840	0.004-0.006
-	7/16	3,930	0.016-0.018	2,220	0.012-0.014	1,740	0.008-0.012	1,280	0.008-0.011	1,090	0.009-0.011	760	0.004-0.006
12	-	3,640	0.018-0.020	2,060	0.013-0.015	1,620	0.008-0.012	1,190	0.009-0.012	1,010	0.009-0.012	700	0.005-0.007
-	1/2	3,440	0.019-0.021	1,950	0.014-0.016	1,530	0.009-0.013	1,120	0.010-0.013	950	0.010-0.013	660	0.005-0.007
14	-	3,120	0.021-0.023	1,770	0.016-0.018	1,390	0.009-0.014	1,020	0.011-0.014	860	0.011-0.014	600	0.006-0.008
-	5/8	2,750	0.022-0.026	1,560	0.018-0.020	1,220	0.010-0.014	900	0.012-0.016	760	0.013-0.016	530	0.006-0.008
16	-	2,750	0.022-0.026	1,560	0.018-0.020	1,220	0.010-0.014	900	0.012-0.016	760	0.013-0.016	530	0.006-0.008
-		2,420	0.026-0.030	1,370	0.020-0.022	1,080	0.011-0.015	790	0.014-0.018	670	0.015-0.018	470	0.007-0.009
18	-	2,290	0.027-0.031	1,300	0.021-0.023	1,020	0.012-0.015	750	0.015-0.019	640	0.016-0.019	440	0.008-0.010
-	3/4	2,180	0.028-0.032	1,240	0.022-0.024	970	0.012-0.016	710	0.016-0.020	610	0.016-0.020	420	0.008-0.011
20	-	2,180	0.028-0.032	1,240	0.022-0.024	970	0.012-0.016	710	0.016-0.020	610	0.016-0.020	420	0.008-0.011

