



**List HP253 - HY-PRO® CARB: 3D Coolant-Through**  
**List HP255 - HY-PRO® CARB: 5D Coolant-Through**  
**List HP258 - HY-PRO® CARB: 8D Coolant-Through**

### 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		310-455 SFM		265-380 SFM		145-220 SFM		285-420 SFM		215-350 SFM		260-450 SFM	
Drill Dia.		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	Inch												
3	-	12,370	0.002-0.005	10,430	0.002-0.005	5,900	0.002-0.004	11,400	0.002-0.005	9,140	0.002-0.005	11,480	0.003-0.005
-	1/8	11,690	0.002-0.005	9,860	0.002-0.005	5,580	0.002-0.004	10,770	0.002-0.005	8,630	0.002-0.005	10,850	0.003-0.005
4	-	9,280	0.003-0.006	7,820	0.003-0.006	4,430	0.003-0.005	8,550	0.003-0.006	6,850	0.003-0.006	8,610	0.004-0.006
-	3/16	7,790	0.004-0.007	6,570	0.004-0.007	3,720	0.004-0.006	7,180	0.004-0.007	5,760	0.004-0.007	7,230	0.005-0.007
6	-	6,190	0.005-0.009	5,220	0.005-0.009	2,950	0.005-0.007	5,700	0.005-0.009	4,570	0.005-0.009	5,740	0.006-0.008
-	1/4	5,840	0.005-0.010	4,930	0.005-0.010	2,790	0.006-0.008	5,390	0.005-0.010	4,320	0.005-0.010	5,420	0.007-0.009
8	-	4,640	0.006-0.011	3,910	0.006-0.011	2,210	0.006-0.009	4,280	0.006-0.011	3,430	0.006-0.011	4,310	0.008-0.010
-	3/8	3,900	0.007-0.011	3,290	0.007-0.011	1,860	0.007-0.009	3,590	0.007-0.011	2,880	0.007-0.011	3,620	0.009-0.011
10	-	3,710	0.008-0.012	3,130	0.008-0.012	1,770	0.008-0.010	3,420	0.008-0.012	2,740	0.008-0.012	3,440	0.011-0.013
-	7/16	3,340	0.008-0.012	2,820	0.008-0.012	1,590	0.008-0.010	3,080	0.008-0.012	2,470	0.008-0.012	3,100	0.012-0.014
12	-	3,090	0.008-0.012	2,610	0.008-0.012	1,480	0.008-0.010	2,850	0.008-0.012	2,280	0.008-0.012	2,870	0.013-0.015
-	1/2	2,920	0.008-0.013	2,460	0.008-0.013	1,390	0.008-0.010	2,690	0.008-0.013	2,160	0.008-0.013	2,710	0.014-0.016
14	-	2,650	0.009-0.014	2,240	0.009-0.014	1,260	0.009-0.011	2,440	0.009-0.014	1,960	0.009-0.014	2,460	0.016-0.018
-	5/8	2,340	0.010-0.014	1,970	0.010-0.014	1,120	0.010-0.012	2,150	0.010-0.014	1,730	0.010-0.014	2,170	0.018-0.020
16	-	2,340	0.010-0.014	1,970	0.010-0.014	1,120	0.010-0.012	2,150	0.010-0.014	1,730	0.010-0.014	2,170	0.018-0.020
18	-	2,060	0.011-0.015	1,740	0.011-0.015	980	0.011-0.013	1,900	0.011-0.015	1,520	0.011-0.015	1,910	0.020-0.022
-	3/4	1,950	0.011-0.015	1,640	0.011-0.015	930	0.011-0.013	1,800	0.011-0.015	1,440	0.011-0.015	1,810	0.021-0.023
20	-	1,860	0.012-0.016	1,560	0.012-0.016	890	0.012-0.014	1,710	0.012-0.016	1,370	0.012-0.016	1,720	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													
Drilling Speed	325- 700 SFM		230-380 SFM		185-295 SFM		130-210 SFM		120-180 SFM		80-110 SFM		
Drill Dia.	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
3	-	16,580	0.004-0.006	9,860	0.003-0.005	7,760	0.002-0.005	5,500	0.002-0.003	4,850	0.002-0.003	3,090	0.001-0.002
-	1/8	15,660	0.004-0.006	9,320	0.003-0.005	7,330	0.002-0.005	5,200	0.002-0.003	4,560	0.002-0.003	2,930	0.001-0.003
4	-	12,430	0.005-0.007	7,400	0.004-0.006	5,820	0.003-0.006	4,120	0.003-0.004	3,640	0.003-0.004	2,320	0.002-0.003
-	3/16	10,440	0.006-0.008	6,210	0.005-0.007	4,890	0.004-0.007	3,460	0.004-0.005	3,040	0.004-0.005	1,950	0.002-0.004
6	-	8,290	0.008-0.010	4,930	0.006-0.008	3,880	0.005-0.009	2,750	0.005-0.006	2,410	0.005-0.006	1,550	0.002-0.004
-	1/4	7,830	0.009-0.011	4,660	0.007-0.009	3,670	0.005-0.010	2,600	0.005-0.007	2,290	0.005-0.007	1,460	0.003-0.005
8	-	6,220	0.012-0.014	3,700	0.008-0.010	2,910	0.006-0.011	2,060	0.006-0.008	1,810	0.006-0.008	1,160	0.003-0.005
-	3/8	5,220	0.013-0.015	3,110	0.009-0.011	2,440	0.007-0.011	1,730	0.007-0.009	1,520	0.007-0.009	980	0.003-0.005
10	-	4,970	0.015-0.017	2,960	0.011-0.013	2,330	0.008-0.012	1,650	0.008-0.010	1,450	0.008-0.010	930	0.004-0.006
-	7/16	4,470	0.016-0.018	2,660	0.012-0.014	2,090	0.008-0.012	1,480	0.008-0.011	1,300	0.008-0.011	840	0.004-0.006
12	-	4,140	0.018-0.020	2,470	0.013-0.015	1,940	0.008-0.012	1,370	0.009-0.012	1,210	0.009-0.012	770	0.005-0.007
-	1/2	3,920	0.019-0.021	2,330	0.014-0.016	1,830	0.008-0.013	1,300	0.010-0.013	1,140	0.010-0.013	730	0.005-0.007
14	-	3,550	0.021-0.023	2,110	0.016-0.018	1,660	0.009-0.014	1,180	0.011-0.014	1,030	0.011-0.014	660	0.006-0.008
-	5/8	3,130	0.022-0.024	1,860	0.018-0.020	1,470	0.010-0.014	1,040	0.012-0.015	900	0.013-0.016	580	0.006-0.008
16	-	3,130	0.022-0.024	1,860	0.018-0.020	1,470	0.010-0.014	1,040	0.012-0.015	900	0.013-0.016	580	0.006-0.008
18	-	2,760	0.026-0.030	1,640	0.020-0.022	1,290	0.011-0.015	920	0.014-0.018	810	0.015-0.018	520	0.007-0.009
-	3/4	2,610	0.027-0.031	1,550	0.021-0.023	1,220	0.011-0.015	870	0.015-0.019	760	0.015-0.019	490	0.007-0.009
20	-	2,490	0.028-0.032	1,480	0.022-0.024	1,160	0.012-0.016	820	0.016-0.020	720	0.016-0.020	460	0.008-0.011

