

NEW!

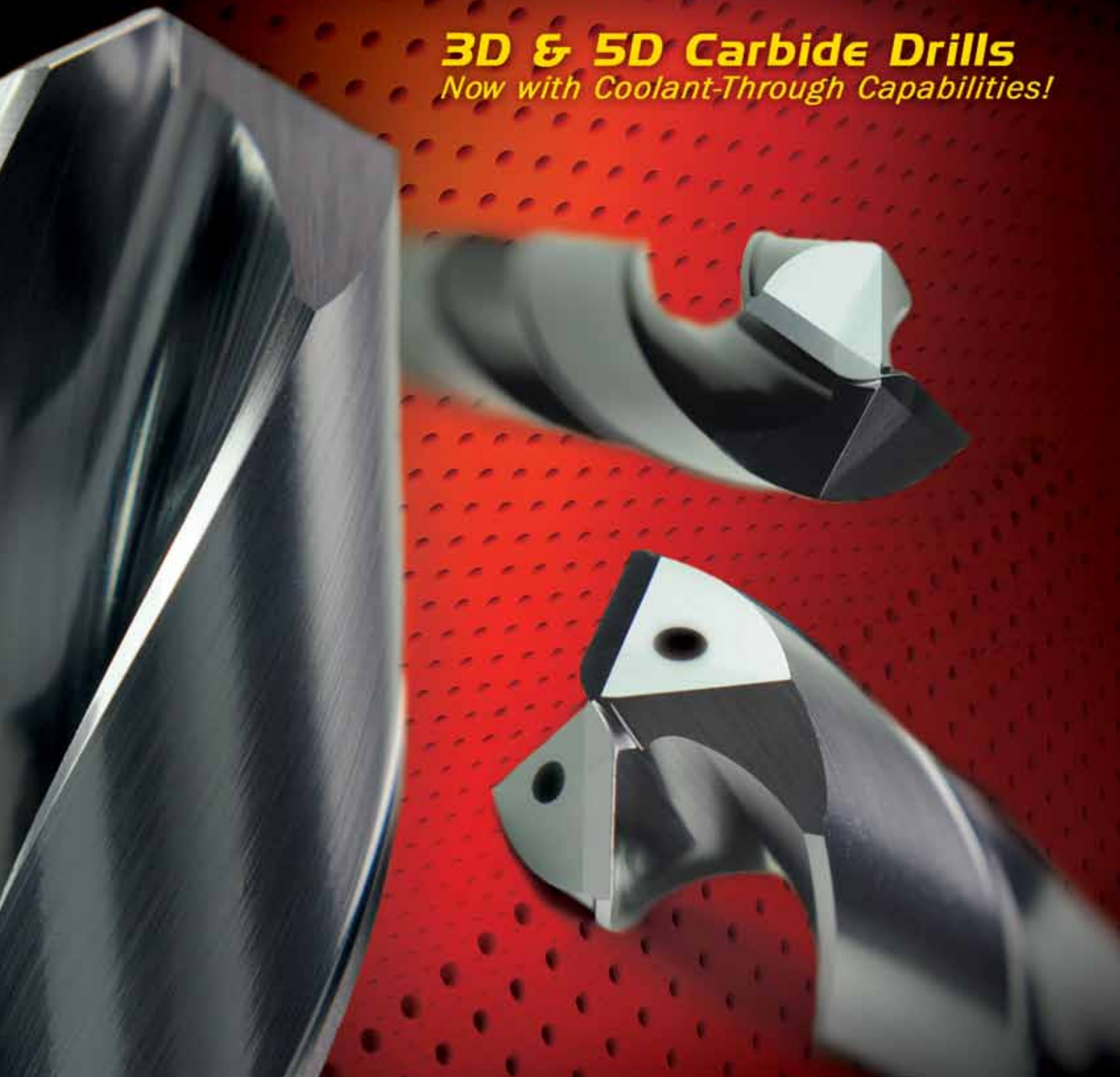
Vol. 3



OSG
CANADA, LTD.

HY-PRO[®] CARB
Drills

3D & 5D Carbide Drills
Now with Coolant-Through Capabilities!

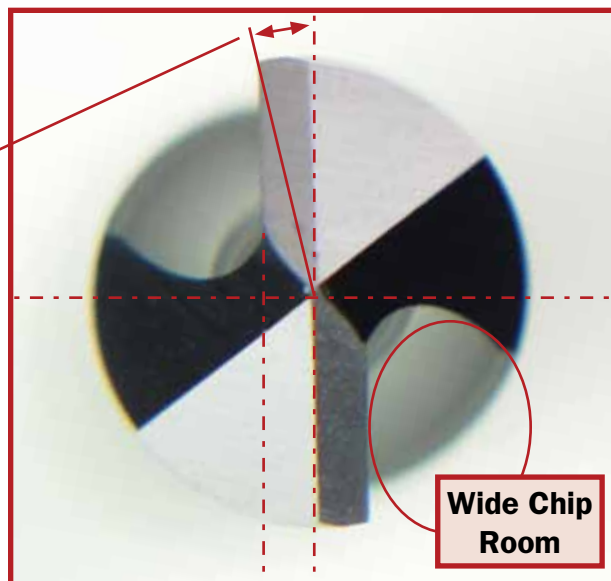


3D & 5D Carbide Drills

Large Negative Radial Rake

Stronger Cutting Edge

Small Honing Amount



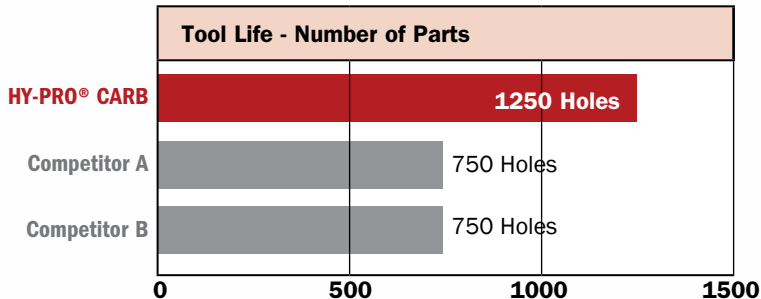
GOOD CHIP EVACUATION
"Small Chips!"



New Design Reduces Thrust Forces and Chip Size

The HY-PRO® CARB's unique flute geometry reduces thrust forces and chip size, enabling it to achieve 1.6 times the durability versus the competitors.

HY-PRO® CARB Drill Performance:	
Tool Ø:	3 mm
Material:	1050 Carbon Steel
Speed:	330 SFM
Feed:	0.0035 IPR
Depth:	12 mm (Through)

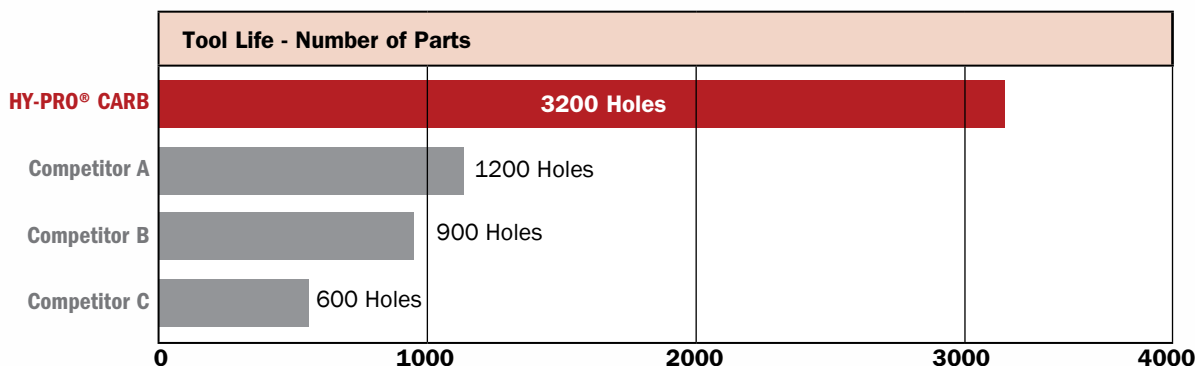
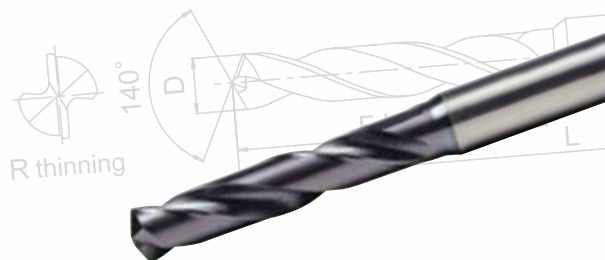


	Tool Life	Tool Cost Per Hole	# of Holes Per Unit	Tool Cost Per Unit	Cost Ratio
OSG	1250	\$0.025	4	\$0.10	100%
Competitor A	750	\$0.030	4	\$0.12	120%
Competitor B	750	\$0.031	4	\$0.12	120%

Multi-Layered TiAlN Coating Resists Thermo-Cracking from Heat

The HY-PRO® CARB's multi-layered TiAlN coating resists thermo-cracking from heat, enabling it to achieve more than 5 times the tool life versus its competition.

HY-PRO® CARB Drill Performance:	
Tool Ø:	3 mm
Material:	4140 Alloy Steel (30 HRC)
Speed:	230 SFM
Feed:	0.0035 IPR
Depth:	12 mm (Through)

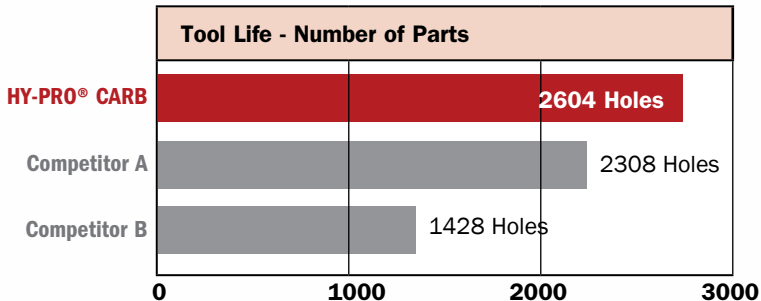


	Tool Life	Tool Cost Per Hole	# of Holes Per Unit	Tool Cost Per Unit	Cost Ratio
OSG	3200	\$0.01	4	\$0.04	100%
Competitor A	1200	\$0.02	4	\$0.08	200%
Competitor B	900	\$0.06	4	\$0.24	600%
Competitor C	600	\$0.04	4	\$0.16	400%

Excels in 1050 Carbon Steel

Due to its low resistance edge form, the HY-PRO® CARB is able to achieve 1.8 times the performance versus its competition.

HY-PRO® CARB Drill Performance:	
Tool Ø:	6 mm
Material:	1050 Carbon Steel
Speed:	330 SFM
Feed:	0.007 IPR
Depth:	20 mm (Through)

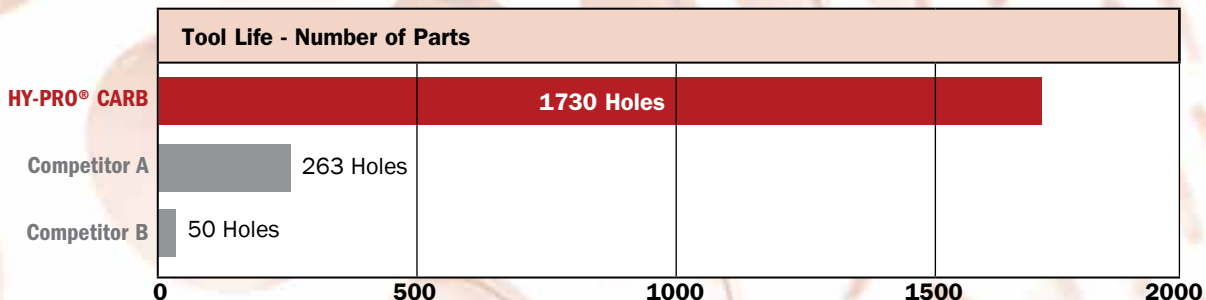


	Tool Life	Tool Cost Per Hole	# of Holes Per Unit	Tool Cost Per Unit	Cost Ratio
OSG	2604	\$0.01	3	\$0.03	100%
Competitor A	2308	\$0.02	3	\$0.06	200%
Competitor B	1428	\$0.04	3	\$0.12	400%

Excellent Performance and Durability Even in 30 HRC!

HY-PRO® CARB Drill Performance:	
Tool Ø:	10 mm
Material:	4140 Alloy Steel (30 HRC)
Speed:	230 SFM
Feed:	0.001 IPR
Depth:	20 mm (Through)

Even in 4140 Alloy Steel (30 HRC), the HY-PRO® CARB is able to achieve superior performance, more than 30 times the durability versus its competition!

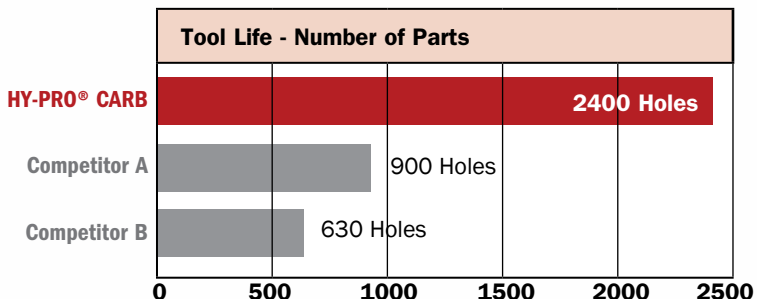


	Tool Life	Tool Cost Per Hole	# of Holes Per Unit	Tool Cost Per Unit	Cost Ratio
OSG	1730	\$0.05	3	\$0.15	100%
Competitor A	263	\$0.39	3	\$1.17	780%
Competitor B	50	\$2.17	3	\$6.51	4340%

New Point and Flute Geometry Improves Performance

The HY-PRO® CARB's tool cost per hole is 5.6 times lower than the competition.

HY-PRO® CARB Drill Performance:	
Tool Ø:	10 mm
Material:	1050 Carbon Steel
Speed:	330 SFM
Feed:	0.001 IPR
Depth:	20 mm (Through)

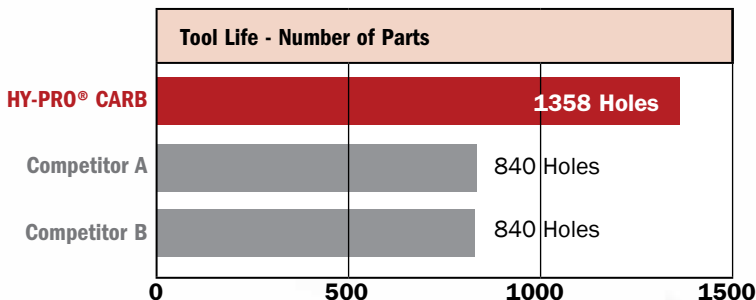


	Tool Life	Tool Cost Per Hole	# of Holes Per Unit	Tool Cost Per Unit	Cost Ratio
OSG	2400	\$0.03	4	\$0.12	100%
Competitor A	900	\$0.11	4	\$0.44	367%
Competitor B	630	\$0.17	4	\$0.68	567%

Stable Performance and Long Tool Life

The HY-PRO® CARB's new flute design and multi-layered coating enable stable performance and long tool life.

HY-PRO® CARB Drill Performance:	
Tool Ø:	6 mm
Material:	4140 Alloy Steel
Speed:	230 SFM
Feed:	0.007 IPR
Depth:	20 mm (Through)

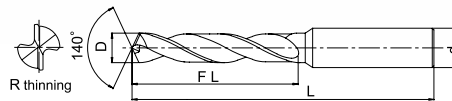


	Tool Life	Tool Cost Per Hole	# of Holes Per Unit	Tool Cost Per Unit	Cost Ratio
OSG	1358	\$0.03	2	\$0.06	100%
Competitor A	840	\$0.05	2	\$0.10	167%
Competitor B	840	\$0.06	2	\$0.12	200%

3D & 5D Carbide Drills
Now with Coolant-Through Capabilities!

List HP243

3D, Solid Carbide



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP243-1181	1/8	20		3.00	0.1181	20	62	6
HP243-1220				3.10	0.1220	20	62	6
HP243-1248				3.17	0.1248	20	62	6
HP243-1260				3.20	0.1260	20	62	6
HP243-1299				3.30	0.1299	20	62	6
HP243-1339				3.40	0.1339	20	62	6
HP243-1378				3.50	0.1378	20	62	6
HP243-1417				3.60	0.1417	20	62	6
HP243-1457	5/32	20		3.70	0.1457	20	62	6
HP243-1496				3.80	0.1496	24	66	6
HP243-1535				3.90	0.1535	24	66	6
HP243-1563				3.97	0.1563	24	66	6
HP243-1575				4.00	0.1575	24	66	6
HP243-1610				4.09	0.1610	24	66	6
HP243-1614				4.10	0.1614	24	66	6
HP243-1654				4.20	0.1654	24	66	6
HP243-1693	11/64	20		4.30	0.1693	24	66	6
HP243-1720				4.37	0.1720	24	66	6
HP243-1732				4.40	0.1732	24	66	6
HP243-1772				4.50	0.1772	24	66	6
HP243-1811				4.60	0.1811	24	66	6
HP243-1850				4.70	0.1850	24	66	6
HP243-1874				4.76	0.1874	28	66	6
HP243-1890				4.80	0.1890	28	66	6
HP243-1929	3/16	20		4.90	0.1929	28	66	6
HP243-1969				5.00	0.1969	28	66	6
HP243-2008				5.10	0.2008	28	66	6
HP243-2031				5.16	0.2031	28	66	6
HP243-2047				5.20	0.2047	28	66	6
HP243-2087				5.30	0.2087	28	66	6
HP243-2126				5.40	0.2126	28	66	6
HP243-2130				5.41	0.2130	28	66	6
HP243-2165	7/32	3		5.50	0.2165	28	66	6
HP243-2189				5.56	0.2189	28	66	6
HP243-2205				5.60	0.2205	28	66	6
HP243-2244				5.70	0.2244	28	66	6
HP243-2283				5.80	0.2283	28	66	6
HP243-2323				5.90	0.2323	28	66	6
HP243-2343				5.95	0.2343	28	66	6
HP243-2362				6.00	0.2362	28	66	6
HP243-2402	15/64			6.10	0.2402	34	79	8
HP243-2441				6.20	0.2441	34	79	8
HP243-2480				6.30	0.2480	34	79	8
HP243-2500				6.35	0.2500	34	79	8
HP243-2520				6.40	0.2520	34	79	8
HP243-2559				6.50	0.2559	34	79	8
HP243-2571				6.53	0.2571	34	79	8
HP243-2598				6.60	0.2598	34	79	8
HP243-2638	17/64			6.70	0.2638	34	79	8
HP243-2657				6.75	0.2657	34	79	8
HP243-2677				6.80	0.2677	34	79	8
HP243-2717				6.90	0.2717	34	79	8
HP243-2756				7.00	0.2756	34	79	8
HP243-2795				7.10	0.2795	41	79	8
HP243-2811				7.14	0.2811	41	79	8
HP243-2835				7.20	0.2835	41	79	8
HP243-2874	9/32			7.30	0.2874	41	79	8
HP243-2913				7.40	0.2913	41	79	8
HP243-2953				7.50	0.2953	41	79	8
HP243-2969				7.54	0.2969	41	79	8
HP243-2992				7.60	0.2992	41	79	8
HP243-3031				7.70	0.3031	41	79	8
HP243-3071				7.80	0.3071	41	79	8
HP243-3110				7.90	0.3110	41	79	8

Packed: 1 pc. Available TiAIN coating only.



List HP243 (continued)

3D, Solid Carbide



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP243-3126	5/16			7.94	0.3126	41	79	8
HP243-3150				8.00	0.3150	41	79	8
HP243-3189				8.10	0.3189	47	89	10
HP243-3228				8.20	0.3228	47	89	10
HP243-3268				8.30	0.3268	47	89	10
HP243-3280	21/64			8.33	0.3280	47	89	10
HP243-3307				8.40	0.3307	47	89	10
HP243-3319			Q	8.43	0.3319	47	89	10
HP243-3346				8.50	0.3346	47	89	10
HP243-3386				8.60	0.3386	47	89	10
HP243-3425				8.70	0.3425	47	89	10
HP243-3437	11/32			8.73	0.3437	47	89	10
HP243-3465				8.80	0.3465	47	89	10
HP243-3504				8.90	0.3504	47	89	10
HP243-3543				9.00	0.3543	47	89	10
HP243-3583				9.10	0.3583	47	89	10
HP243-3594	23/64			9.13	0.3594	47	89	10
HP243-3622				9.20	0.3622	47	89	10
HP243-3661				9.30	0.3661	47	89	10
HP243-3701				9.40	0.3701	47	89	10
HP243-3740				9.50	0.3740	47	89	10
HP243-3748	3/8			9.52	0.3748	47	89	10
HP243-3780				9.60	0.3780	47	89	10
HP243-3819				9.70	0.3819	47	89	10
HP243-3858				9.80	0.3858	47	89	10
HP243-3898				9.90	0.3898	47	89	10
HP243-3906	25/64			9.92	0.3906	47	89	10
HP243-3937				10.00	0.3937	47	89	10
HP243-3976				10.10	0.3976	55	102	12
HP243-4016				10.20	0.4016	55	102	12
HP243-4055				10.30	0.4055	55	102	12
HP243-4063	13/32			10.32	0.4063	55	102	12
HP243-4094				10.40	0.4094	55	102	12
HP243-4134				10.50	0.4134	55	102	12
HP243-4173				10.60	0.4173	55	102	12
HP243-4213				10.70	0.4213	55	102	12
HP243-4220	27/64			10.72	0.4220	55	102	12
HP243-4252				10.80	0.4252	55	102	12
HP243-4291				10.90	0.4291	55	102	12
HP243-4331				11.00	0.4331	55	102	12
HP243-4370				11.10	0.4370	55	102	12
HP243-4374	7/16			11.11	0.4374	55	102	12
HP243-4409				11.20	0.4409	55	102	12
HP243-4449				11.30	0.4449	55	102	12
HP243-4488				11.40	0.4488	55	102	12
HP243-4528				11.50	0.4528	55	102	12
HP243-4531	29/64			11.51	0.4531	55	102	12
HP243-4567				11.60	0.4567	55	102	12
HP243-4606				11.70	0.4606	55	102	12
HP243-4646				11.80	0.4646	55	102	12
HP243-4685				11.90	0.4685	55	102	12
HP243-4689	15/32			11.91	0.4689	55	102	12
HP243-4724				12.00	0.4724	55	102	12
HP243-4764				12.10	0.4764	60	107	14
HP243-4803				12.20	0.4803	60	107	14
HP243-4843	31/64			12.30	0.4843	60	107	14
HP243-4882				12.40	0.4882	60	107	14
HP243-4921				12.50	0.4921	60	107	14

Packed: 1 pc. Available TiAIN coating only.

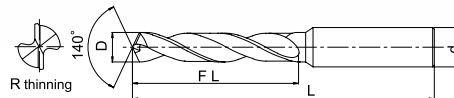
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Work Material																	
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels		
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC	45-50 HRC
HP243		○	⊙	⊙	⊙	⊙	⊙	⊙							⊙	○	

○ good ○ best

List HP243 (continued)

3D, Solid Carbide



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP243-4961	1/2			12.60	0.4961	60	107	14
HP243-5000				12.70	0.5000	60	107	14
HP243-5039				12.80	0.5039	60	107	14
HP243-5079				12.90	0.5079	60	107	14
HP243-5118				13.00	0.5118	60	107	14
HP243-5157	33/64			13.10	0.5157	60	107	14
HP243-5197				13.20	0.5197	60	107	14
HP243-5236				13.30	0.5236	60	107	14
HP243-5276				13.40	0.5276	60	107	14
HP243-5311				13.49	0.5311	60	107	14
HP243-5315	17/32			13.50	0.5315	60	107	14
HP243-5512				14.00	0.5512	60	107	14
HP243-5626				14.29	0.5626	65	115	16
HP243-5709				14.50	0.5709	65	115	16
HP243-5780	37/64			14.68	0.5780	65	115	16
HP243-5906				15.00	0.5906	65	115	16
HP243-5937				15.08	0.5937	65	115	16
HP243-6102				15.50	0.6102	65	115	16
HP243-6248				15.87	0.6248	65	115	16
HP243-6299	5/8			16.00	0.6299	65	115	16
HP243-6496				16.50	0.6496	73	123	18
HP243-6563				16.67	0.6563	73	123	18
HP243-6693				17.00	0.6693	73	123	18
HP243-6890				17.50	0.6890	73	123	18
HP243-7087	21/32			18.00	0.7087	73	123	18
HP243-7283				18.50	0.7283	79	131	20
HP243-7480				19.00	0.7480	79	131	20
HP243-7500				19.05	0.7500	79	131	20
HP243-7677				19.50	0.7677	79	131	20
HP243-7874	3/4			20.00	0.7874	79	131	20

Packed: 1 pc. Available TiAIN coating only.



Work Material																
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels	
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC
HP243		○	○	○	○	○	○	○							○	

○ good ○ best

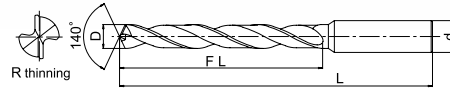


List HP245

5D, Solid Carbide



m7 Cutting Diameter Tolerance



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP245-1181	1/8	20		3.00	0.1181	28	66	6
HP245-1220				3.10	0.1220	28	66	6
HP245-1248				3.17	0.1248	28	66	6
HP245-1260				3.20	0.1260	28	66	6
HP245-1299				3.30	0.1299	28	66	6
HP245-1339				3.40	0.1339	28	66	6
HP245-1378	5/32	20		3.50	0.1378	28	66	6
HP245-1417				3.60	0.1417	28	66	6
HP245-1457				3.70	0.1457	28	66	6
HP245-1496				3.80	0.1496	36	74	6
HP245-1535				3.90	0.1535	36	74	6
HP245-1563				3.97	0.1563	36	74	6
HP245-1575	11/64	3		4.00	0.1575	36	74	6
HP245-1610				4.09	0.1610	36	74	6
HP245-1614				4.10	0.1614	36	74	6
HP245-1654				4.20	0.1654	36	74	6
HP245-1693				4.30	0.1693	36	74	6
HP245-1720				4.37	0.1720	36	74	6
HP245-1732	3/16	3		4.40	0.1732	36	74	6
HP245-1772				4.50	0.1772	36	74	6
HP245-1811				4.60	0.1811	36	74	6
HP245-1850				4.70	0.1850	36	74	6
HP245-1874				4.76	0.1874	44	82	6
HP245-1890				4.80	0.1890	44	82	6
HP245-1929	13/64	3		4.90	0.1929	44	82	6
HP245-1969				5.00	0.1969	44	82	6
HP245-2008				5.10	0.2008	44	82	6
HP245-2031				5.16	0.2031	44	82	6
HP245-2047				5.20	0.2047	44	82	6
HP245-2087				5.30	0.2087	44	82	6
HP245-2126	7/32	3		5.40	0.2126	44	82	6
HP245-2130				5.41	0.2130	44	82	6
HP245-2165				5.50	0.2165	44	82	6
HP245-2189				5.56	0.2189	44	82	6
HP245-2205				5.60	0.2205	44	82	6
HP245-2244				5.70	0.2244	44	82	6
HP245-2283	15/64	3		5.80	0.2283	44	82	6
HP245-2323				5.90	0.2323	44	82	6
HP245-2343				5.95	0.2343	44	82	6
HP245-2362				6.00	0.2362	44	82	6
HP245-2402				6.10	0.2402	53	91	8
HP245-2441				6.20	0.2441	53	91	8
HP245-2480	1/4	3		6.30	0.2480	53	91	8
HP245-2500				6.35	0.2500	53	91	8
HP245-2520				6.40	0.2520	53	91	8
HP245-2559				6.50	0.2559	53	91	8
HP245-2571				6.53	0.2571	53	91	8
HP245-2598				6.60	0.2598	53	91	8
HP245-2638	17/64	3		6.70	0.2638	53	91	8
HP245-2657				6.75	0.2657	53	91	8
HP245-2677				6.80	0.2677	53	91	8
HP245-2717				6.90	0.2717	53	91	8
HP245-2756				7.00	0.2756	53	91	8

Packed: 1 pc. Available TiAIN coating only.

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Work Material																
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels	
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC
HP245		○	○	○	○	○	○	○							○	○

○ good ○ best



List HP245 (continued)

5D, Solid Carbide



m7 Cutting Diameter Tolerance



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP245-2795	9/32			7.10	0.2795	53	91	8
HP245-2811				7.14	0.2811	53	91	8
HP245-2835				7.20	0.2835	53	91	8
HP245-2874				7.30	0.2874	53	91	8
HP245-2913				7.40	0.2913	53	91	8
HP245-2953	19/64			7.50	0.2953	53	91	8
HP245-2969				7.54	0.2969	53	91	8
HP245-2992				7.60	0.2992	53	91	8
HP245-3031				7.70	0.3031	53	91	8
HP245-3071				7.80	0.3071	53	91	8
HP245-3110	5/16			7.90	0.3110	53	91	8
HP245-3126				7.94	0.3126	53	91	8
HP245-3150				8.00	0.3150	53	91	8
HP245-3189				8.10	0.3189	61	103	10
HP245-3228				8.20	0.3228	61	103	10
HP245-3268	21/64			8.30	0.3268	61	103	10
HP245-3280				8.33	0.3280	61	103	10
HP245-3307				8.40	0.3307	61	103	10
HP245-3319				8.43	0.3319	61	103	10
HP245-3346				8.50	0.3346	61	103	10
HP245-3386	11/32		Q	8.60	0.3386	61	103	10
HP245-3425				8.70	0.3425	61	103	10
HP245-3437				8.73	0.3437	61	103	10
HP245-3465				8.80	0.3465	61	103	10
HP245-3504				8.90	0.3504	61	103	10
HP245-3543	23/64			9.00	0.3543	61	103	10
HP245-3583				9.10	0.3583	61	103	10
HP245-3594				9.13	0.3594	61	103	10
HP245-3622				9.20	0.3622	61	103	10
HP245-3661				9.30	0.3661	61	103	10
HP245-3701	3/8			9.40	0.3701	61	103	10
HP245-3740				9.50	0.3740	61	103	10
HP245-3748				9.52	0.3748	61	103	10
HP245-3780				9.60	0.3780	61	103	10
HP245-3819				9.70	0.3819	61	103	10
HP245-3858	25/64			9.80	0.3858	61	103	10
HP245-3898				9.90	0.3898	61	103	10
HP245-3906				9.92	0.3906	61	103	10
HP245-3937				10.00	0.3937	61	103	10
HP245-3976				10.10	0.3976	71	118	12
HP245-4016	13/32			10.20	0.4016	71	118	12
HP245-4055				10.30	0.4055	71	118	12
HP245-4063				10.32	0.4063	71	118	12
HP245-4094				10.40	0.4094	71	118	12
HP245-4134				10.50	0.4134	71	118	12
HP245-4173	27/64			10.60	0.4173	71	118	12
HP245-4213				10.70	0.4213	71	118	12
HP245-4220				10.72	0.4220	71	118	12
HP245-4252				10.80	0.4252	71	118	12
HP245-4291				10.90	0.4291	71	118	12
HP245-4331	7/16			11.00	0.4331	71	118	12
HP245-4370				11.10	0.4370	71	118	12
HP245-4374				11.11	0.4374	71	118	12
HP245-4409				11.20	0.4409	71	118	12
HP245-4449				11.30	0.4449	71	118	12
HP245-4488	29/64			11.40	0.4488	71	118	12
HP245-4528				11.50	0.4528	71	118	12
HP245-4531				11.51	0.4531	71	118	12
HP245-4567				11.60	0.4567	71	118	12
HP245-4606				11.70	0.4606	71	118	12
HP245-4646				11.80	0.4646	71	118	12
HP245-4685				11.90	0.4685	71	118	12

Packed: 1 pc. Available TiAlN coating only.



List HP245 (continued)

5D, Solid Carbide



m7 Cutting Diameter Tolerance

EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP245-4689	15/32			11.91	0.4689	71	118	12
HP245-4724				12.00	0.4724	71	118	12
HP245-4764				12.10	0.4764	77	124	14
HP245-4803				12.20	0.4803	77	124	14
HP245-4843	31/64			12.30	0.4843	77	124	14
HP245-4882				12.40	0.4882	77	124	14
HP245-4921				12.50	0.4921	77	124	14
HP245-4961				12.60	0.4961	77	124	14
HP245-5000	1/2			12.70	0.5000	77	124	14
HP245-5039				12.80	0.5039	77	124	14
HP245-5079				12.90	0.5079	77	124	14
HP245-5118				13.00	0.5118	77	124	14
HP245-5157	33/64			13.10	0.5157	77	124	14
HP245-5197				13.20	0.5197	77	124	14
HP245-5236				13.30	0.5236	77	124	14
HP245-5276				13.40	0.5276	77	124	14
HP245-5311	17/32			13.49	0.5311	77	124	14
HP245-5315				13.50	0.5315	77	124	14
HP245-5512				14.00	0.5512	77	124	14
HP245-5626	9/16			14.29	0.5626	83	133	16
HP245-5709				14.50	0.5709	83	133	16
HP245-5780	37/64			14.68	0.5780	83	133	16
HP245-5906				15.00	0.5906	83	133	16
HP245-5937	19/32			15.08	0.5937	83	133	16
HP245-6102				15.50	0.6102	83	133	16
HP245-6248	5/8			15.87	0.6248	83	133	16
HP245-6299				16.00	0.6299	83	133	16
HP245-6496				16.50	0.6496	93	143	18
HP245-6563	21/32			16.67	0.6563	93	143	18
HP245-6693				17.00	0.6693	93	143	18
HP245-6890				17.50	0.6890	93	143	18
HP245-7087				18.00	0.7087	93	143	18
HP245-7283				18.50	0.7283	101	153	20
HP245-7480				19.00	0.7480	101	153	20
HP245-7500	3/4			19.05	0.7500	101	153	20
HP245-7677				19.50	0.7677	101	153	20
HP245-7874				20.00	0.7874	101	153	20

Packed: 1 pc. Available TiAlN coating only.



Work Material																	
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels		
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC	45-50 HRC
HP245		○	⊗	⊗	⊗	⊗	⊗	⊗							⊗	○	

○ good ○ best



HY-PRO® CARB

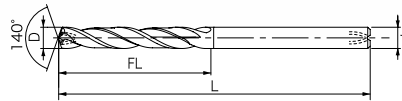
Sub-Micrograin Carbide Coolant-Through Drills

List HP253 **NEW!**

3D, Coolant-Through, Solid Carbide



m7 Cutting Diameter Tolerance



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP253-1181	—	—	—	3.00	0.1181	20	62	6
HP253-1220	—	—	—	3.10	0.1220	20	62	6
HP253-1248	—	—	—	3.17	0.1248	20	62	6
HP253-1260	—	—	—	3.20	0.1260	20	62	6
HP253-1299	—	—	—	3.30	0.1299	20	62	6
HP253-1339	—	—	—	3.40	0.1339	20	62	6
HP253-1378	—	—	—	3.50	0.1378	20	62	6
HP253-1406	—	—	—	3.57	0.1406	20	62	6
HP253-1417	—	—	—	3.60	0.1417	20	62	6
HP253-1457	—	—	—	3.70	0.1457	20	62	6
HP253-1496	—	25	—	3.80	0.1496	24	66	6
HP253-1535	—	—	—	3.90	0.1535	24	66	6
HP253-1563	5/32	—	—	3.97	0.1563	24	66	6
HP253-1575	—	—	—	4.00	0.1575	24	66	6
HP253-1614	—	—	—	4.10	0.1614	24	66	6
HP253-1654	—	—	—	4.20	0.1654	24	66	6
HP253-1693	—	—	—	4.30	0.1693	24	66	6
HP253-1720	11/64	—	—	4.37	0.1720	24	66	6
HP253-1732	—	—	—	4.40	0.1732	24	66	6
HP253-1772	—	16	—	4.50	0.1772	24	66	6
HP253-1811	—	—	—	4.60	0.1811	24	66	6
HP253-1831	—	—	—	4.65	0.1831	24	66	6
HP253-1850	—	13	—	4.70	0.1850	24	66	6
HP253-1874	3/16	—	—	4.76	0.1874	28	66	6
HP253-1890	—	12	—	4.80	0.1890	28	66	6
HP253-1929	—	—	—	4.90	0.1929	28	66	6
HP253-1969	—	—	—	5.00	0.1969	28	66	6
HP253-2008	—	—	—	5.10	0.2008	28	66	6
HP253-2031	13/64	—	—	5.16	0.2031	28	66	6
HP253-2047	—	—	—	5.20	0.2047	28	66	6
HP253-2087	—	—	—	5.30	0.2087	28	66	6
HP253-2126	—	—	—	5.40	0.2126	28	66	6
HP253-2165	—	—	—	5.50	0.2165	28	66	6
HP253-2189	7/32	—	—	5.56	0.2189	28	66	6
HP253-2205	—	—	—	5.60	0.2205	28	66	6
HP253-2244	—	—	—	5.70	0.2244	28	66	6
HP253-2283	—	—	—	5.80	0.2283	28	66	6
HP253-2323	—	—	—	5.90	0.2323	28	66	6
HP253-2343	15/64	—	—	5.95	0.2343	28	66	6
HP253-2362	—	—	—	6.00	0.2362	28	66	6
HP253-2402	—	—	—	6.10	0.2402	34	79	8
HP253-2441	—	—	—	6.20	0.2441	34	79	8
HP253-2480	—	—	—	6.30	0.2480	34	79	8
HP253-2500	1/4	—	E	6.35	0.2500	34	79	8
HP253-2520	—	—	—	6.40	0.2520	34	79	8
HP253-2559	—	—	—	6.50	0.2559	34	79	8
HP253-2598	—	—	—	6.60	0.2598	34	79	8
HP253-2638	—	—	—	6.70	0.2638	34	79	8
HP253-2657	17/64	—	—	6.75	0.2657	34	79	8
HP253-2677	—	—	—	6.80	0.2677	34	79	8
HP253-2717	—	—	I	6.90	0.2717	34	79	8
HP253-2756	—	—	—	7.00	0.2756	34	79	8
HP253-2795	—	—	—	7.10	0.2795	41	79	8
HP253-2811	9/32	—	—	7.14	0.2811	41	79	8
HP253-2835	—	—	—	7.20	0.2835	41	79	8
HP253-2874	—	—	—	7.30	0.2874	41	79	8
HP253-2913	—	—	—	7.40	0.2913	41	79	8
HP253-2953	—	—	—	7.50	0.2953	41	79	8
HP253-2969	19/64	—	—	7.54	0.2969	41	79	8
HP253-2992	—	—	—	7.60	0.2992	41	79	8
HP253-3031	—	—	—	7.70	0.3031	41	79	8
HP253-3071	—	—	—	7.80	0.3071	41	79	8
HP253-3110	—	—	—	7.90	0.3110	41	79	8

Packed: 1 pc. Available TiAIN coating only.



List HP253 (continued) **NEW!**

3D, Coolant-Through, Solid Carbide



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP253-3126	5/16	—	—	7.94	0.3126	41	79	8
HP253-3150	—	—	—	8.00	0.3150	41	79	8
HP253-3189	—	—	—	8.10	0.3189	47	89	10
HP253-3228	—	—	P	8.20	0.3228	47	89	10
HP253-3268	—	—	—	8.30	0.3268	47	89	10
HP253-3280	21/64	—	—	8.33	0.3280	47	89	10
HP253-3307	—	—	—	8.40	0.3307	47	89	10
HP253-3346	—	—	—	8.50	0.3346	47	89	10
HP253-3386	—	—	—	8.60	0.3386	47	89	10
HP253-3425	—	—	—	8.70	0.3425	47	89	10
HP253-3437	11/32	—	—	8.73	0.3437	47	89	10
HP253-3465	—	—	—	8.80	0.3465	47	89	10
HP253-3504	—	—	—	8.90	0.3504	47	89	10
HP253-3543	—	—	—	9.00	0.3543	47	89	10
HP253-3583	—	—	—	9.10	0.3583	47	89	10
HP253-3594	23/64	—	—	9.13	0.3594	47	89	10
HP253-3622	—	—	—	9.20	0.3622	47	89	10
HP253-3642	—	—	—	9.25	0.3642	47	89	10
HP253-3661	—	—	—	9.30	0.3661	47	89	10
HP253-3701	—	—	—	9.40	0.3701	47	89	10
HP253-3740	—	—	—	9.50	0.3740	47	89	10
HP253-3748	—	—	—	9.52	0.3748	47	89	10
HP253-3780	—	—	—	9.60	0.3780	47	89	10
HP253-3819	—	—	—	9.70	0.3819	47	89	10
HP253-3858	—	—	W	9.80	0.3858	47	89	10
HP253-3898	—	—	—	9.90	0.3898	47	89	10
HP253-3906	25/64	—	—	9.92	0.3906	47	89	10
HP253-3937	—	—	—	10.00	0.3937	47	89	10
HP253-3976	—	—	—	10.10	0.3976	55	102	12
HP253-4016	—	—	—	10.20	0.4016	55	102	12
HP253-4055	—	—	—	10.30	0.4055	55	102	12
HP253-4063	13/32	—	—	10.32	0.4063	55	102	12
HP253-4094	—	—	—	10.40	0.4094	55	102	12
HP253-4134	—	—	—	10.50	0.4134	55	102	12
HP253-4173	—	—	—	10.60	0.4173	55	102	12
HP253-4213	—	—	—	10.70	0.4213	55	102	12
HP253-4252	—	—	—	10.80	0.4252	55	102	12
HP253-4291	—	—	—	10.90	0.4291	55	102	12
HP253-4331	—	—	—	11.00	0.4331	55	102	12
HP253-4370	—	—	—	11.10	0.4370	55	102	12
HP253-4374	7/16	—	—	11.11	0.4374	55	102	12
HP253-4409	—	—	—	11.20	0.4409	55	102	12
HP253-4449	—	—	—	11.30	0.4449	55	102	12
HP253-4488	—	—	—	11.40	0.4488	55	102	12
HP253-4528	—	—	—	11.50	0.4528	55	102	12
HP253-4567	—	—	—	11.60	0.4567	55	102	12
HP253-4606	—	—	—	11.70	0.4606	55	102	12
HP253-4646	—	—	—	11.80	0.4646	55	102	12
HP253-4685	—	—	—	11.90	0.4685	55	102	12
HP253-4689	15/32	—	—	11.91	0.4689	55	102	12
HP253-4724	—	—	—	12.00	0.4724	55	102	12
HP253-4921	—	—	—	12.50	0.4921	60	107	14
HP253-5000	1/2	—	—	12.70	0.5000	60	107	14
HP253-5118	—	—	—	13.00	0.5118	60	107	14
HP253-5315	—	—	—	13.50	0.5315	60	107	14
HP253-5394	—	—	—	13.70	0.5394	60	107	14
HP253-5512	—	—	—	14.00	0.5512	60	107	14
HP253-5626	—	—	—	14.29	0.5626	65	115	16

Packed: 1 pc. Available TiAIN coating only.

continued on next page **HPC**

Work Material																
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels	
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC
HP253		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

○ good ○ best

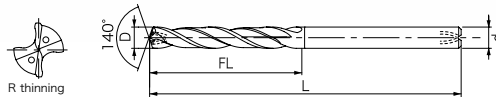


HY-PRO® CARB

Sub-Micrograin Carbide Coolant-Through Drills

List HP253 (continued) **NEW!**

3D, Coolant-Through, Solid Carbide



m7 Cutting Diameter Tolerance

EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP253-5709	—	—	—	14.50	0.5709	65	115	16
HP253-5787	—	—	—	14.70	0.5787	65	115	16
HP253-5906	—	—	—	15.00	0.5906	65	115	16
HP253-6102	—	—	—	15.50	0.6102	65	115	16
HP253-6181	—	—	—	15.70	0.6181	65	115	16
HP253-6248	—	—	—	15.87	0.6248	65	115	16
HP253-6299	—	—	—	16.00	0.6299	65	115	16
HP253-6496	—	—	—	16.50	0.6496	73	123	18
HP253-6693	—	—	—	17.00	0.6693	73	123	18
HP253-6890	—	—	—	17.50	0.6890	73	123	18
HP253-7087	—	—	—	18.00	0.7087	73	123	18
HP253-7283	—	—	—	18.50	0.7283	79	131	20
HP253-7480	—	—	—	19.00	0.7480	79	131	20
HP253-7500	3/4	—	—	19.05	0.7500	79	131	20
HP253-7677	—	—	—	19.50	0.7677	79	131	20
HP253-7874	—	—	—	20.00	0.7874	79	131	20

Packed: 1 pc. Available TiAlN coating only.



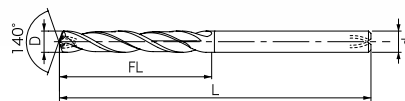
Work Material																	
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels		
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6A14V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC	45-50 HRC
HP253		○	⊗	⊗	⊗	⊗	⊗	⊗	○	○	○	○	○	○	⊗	○	

○ good ◎ best



List HP255 **NEW!**

5D, Coolant-Through, Solid Carbide



EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP255-1181	—	—	—	3.00	0.1181	28	66	6
HP255-1220	—	—	—	3.10	0.1220	28	66	6
HP255-1248	1/8	—	—	3.17	0.1248	28	66	6
HP255-1260	—	—	—	3.20	0.1260	28	66	6
HP255-1299	—	—	—	3.30	0.1299	28	66	6
HP255-1339	—	—	—	3.40	0.1339	28	66	6
HP255-1378	—	—	—	3.50	0.1378	28	66	6
HP255-1406	9/64	—	—	3.57	0.1406	28	66	6
HP255-1417	—	—	—	3.60	0.1417	28	66	6
HP255-1457	—	—	—	3.70	0.1457	28	66	6
HP255-1496	—	25	—	3.80	0.1496	36	74	6
HP255-1535	—	—	—	3.90	0.1535	36	74	6
HP255-1563	5/32	—	—	3.97	0.1563	36	74	6
HP255-1575	—	—	—	4.00	0.1575	36	74	6
HP255-1614	—	—	—	4.10	0.1614	36	74	6
HP255-1654	—	—	—	4.20	0.1654	36	74	6
HP255-1693	—	—	—	4.30	0.1693	36	74	6
HP255-1720	11/64	—	—	4.37	0.1720	36	74	6
HP255-1732	—	—	—	4.40	0.1732	36	74	6
HP255-1772	—	16	—	4.50	0.1772	36	74	6
HP255-1811	—	—	—	4.60	0.1811	36	74	6
HP255-1831	—	—	—	4.65	0.1831	36	74	6
HP255-1850	—	—	—	4.70	0.1850	36	74	6
HP255-1874	3/16	—	—	4.76	0.1874	44	82	6
HP255-1890	—	—	—	4.80	0.1890	44	82	6
HP255-1929	—	—	—	4.90	0.1929	44	82	6
HP255-1969	—	—	—	5.00	0.1969	44	82	6
HP255-2008	—	—	—	5.10	0.2008	44	82	6
HP255-2031	13/64	—	—	5.16	0.2031	44	82	6
HP255-2047	—	—	—	5.20	0.2047	44	82	6
HP255-2087	—	—	—	5.30	0.2087	44	82	6
HP255-2126	—	—	—	5.40	0.2126	44	82	6
HP255-2165	—	—	—	5.50	0.2165	44	82	6
HP255-2189	7/32	—	—	5.56	0.2189	44	82	6
HP255-2205	—	—	—	5.60	0.2205	44	82	6
HP255-2244	—	—	—	5.70	0.2244	44	82	6
HP255-2283	—	—	—	5.80	0.2283	44	82	6
HP255-2323	—	—	—	5.90	0.2323	44	82	6
HP255-2343	15/64	—	—	5.95	0.2343	44	82	6
HP255-2362	—	—	—	6.00	0.2362	44	82	6
HP255-2402	—	—	—	6.10	0.2402	53	91	8
HP255-2441	—	—	—	6.20	0.2441	53	91	8
HP255-2480	—	—	—	6.30	0.2480	53	91	8
HP255-2500	1/4	—	E	6.35	0.2500	53	91	8
HP255-2520	—	—	—	6.40	0.2520	53	91	8
HP255-2559	—	—	—	6.50	0.2559	53	91	8
HP255-2598	—	—	—	6.60	0.2598	53	91	8
HP255-2638	—	—	—	6.70	0.2638	53	91	8
HP255-2657	17/64	—	—	6.75	0.2657	53	91	8
HP255-2677	—	—	—	6.80	0.2677	53	91	8
HP255-2717	—	—	—	6.90	0.2717	53	91	8
HP255-2756	—	—	—	7.00	0.2756	53	91	8
HP255-2795	—	—	—	7.10	0.2795	53	91	8

Packed: 1 pc. Available TiAlN coating only.

continued on next page



Work Material																
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels	
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC
HP255		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

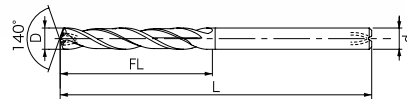
○ good ○ best



List HP255 (continued) **NEW!**



5D, Coolant-Through, Solid Carbide



m7 Cutting Diameter Tolerance

EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP255-2811	9/32	—	—	7.14	0.2811	53	91	8
HP255-2835	—	—	—	7.20	0.2835	53	91	8
HP255-2874	—	—	—	7.30	0.2874	53	91	8
HP255-2913	—	—	—	7.40	0.2913	53	91	8
HP255-2953	—	—	—	7.50	0.2953	53	91	8
HP255-2969	19/64	—	—	7.54	0.2969	53	91	8
HP255-2992	—	—	—	7.60	0.2992	53	91	8
HP255-3031	—	—	—	7.70	0.3031	53	91	8
HP255-3071	—	—	—	7.80	0.3071	53	91	8
HP255-3110	—	—	—	7.90	0.3110	53	91	8
HP255-3126	5/16	—	—	7.94	0.3126	53	91	8
HP255-3150	—	—	—	8.00	0.3150	53	91	8
HP255-3189	—	—	—	8.10	0.3189	61	103	10
HP255-3228	—	—	—	8.20	0.3228	61	103	10
HP255-3268	—	—	—	8.30	0.3268	61	103	10
HP255-3280	21/64	—	—	8.33	0.3280	61	103	10
HP255-3307	—	—	—	8.40	0.3307	61	103	10
HP255-3346	—	—	—	8.50	0.3346	61	103	10
HP255-3386	—	—	—	8.60	0.3386	61	103	10
HP255-3425	—	—	—	8.70	0.3425	61	103	10
HP255-3437	11/32	—	—	8.73	0.3437	61	103	10
HP255-3465	—	—	—	8.80	0.3465	61	103	10
HP255-3504	—	—	—	8.90	0.3504	61	103	10
HP255-3543	—	—	—	9.00	0.3543	61	103	10
HP255-3583	—	—	—	9.10	0.3583	61	103	10
HP255-3594	23/64	—	—	9.13	0.3594	61	103	10
HP255-3622	—	—	—	9.20	0.3622	61	103	10
HP255-3642	—	—	—	9.25	0.3642	61	103	10
HP255-3661	—	—	—	9.30	0.3661	61	103	10
HP255-3701	—	—	—	9.40	0.3701	61	103	10
HP255-3740	—	—	—	9.50	0.3740	61	103	10
HP255-3748	3/8	—	—	9.52	0.3748	61	103	10
HP255-3780	—	—	—	9.60	0.3780	61	103	10
HP255-3819	—	—	—	9.70	0.3819	61	103	10
HP255-3858	—	—	—	9.80	0.3858	61	103	10
HP255-3898	—	—	—	9.90	0.3898	61	103	10
HP255-3906	25/64	—	—	9.92	0.3906	61	103	10
HP255-3937	—	—	—	10.00	0.3937	61	103	10
HP255-3976	—	—	—	10.10	0.3976	71	118	12
HP255-4016	—	—	—	10.20	0.4016	71	118	12
HP255-4055	—	—	—	10.30	0.4055	71	118	12
HP255-4063	13/32	—	—	10.32	0.4063	71	118	12
HP255-4094	—	—	—	10.40	0.4094	71	118	12
HP255-4134	—	—	—	10.50	0.4134	71	118	12
HP255-4173	—	—	—	10.60	0.4173	71	118	12
HP255-4213	—	—	—	10.70	0.4213	71	118	12
HP255-4252	—	—	—	10.80	0.4252	71	118	12
HP255-4291	—	—	—	10.90	0.4291	71	118	12
HP255-4331	—	—	—	11.00	0.4331	71	118	12
HP255-4370	—	—	—	11.10	0.4370	71	118	12
HP255-4374	7/16	—	—	11.11	0.4374	71	118	12
HP255-4409	—	—	—	11.20	0.4409	71	118	12
HP255-4449	—	—	—	11.30	0.4449	71	118	12
HP255-4488	—	—	—	11.40	0.4488	71	118	12
HP255-4528	—	—	—	11.50	0.4528	71	118	12
HP255-4567	—	—	—	11.60	0.4567	71	118	12
HP255-4606	—	—	—	11.70	0.4606	71	118	12
HP255-4646	—	—	—	11.80	0.4646	71	118	12
HP255-4685	—	—	—	11.90	0.4685	71	118	12
HP255-4689	15/32	—	—	11.91	0.4689	71	118	12
HP255-4724	—	—	—	12.00	0.4724	71	118	12
HP255-4921	—	—	—	12.50	0.4921	77	124	14
HP255-5000	1/2	—	—	12.70	0.5000	77	124	14

Packed: 1 pc. Available TiAIN coating only.



List HP255 (continued) **NEW!**

5D, Coolant-Through, Solid Carbide



m7 Cutting Diameter Tolerance

EDP Number	Size					Flute Length	Overall Length	Shank Diameter
	Fractional Size	Wire Gauge	Letter Size	mm	Inch	FL	L	d
HP255-5118	—	—	—	13.00	0.5118	77	124	14
HP255-5315	—	—	—	13.50	0.5315	77	124	14
HP255-5394	—	—	—	13.70	0.5394	77	124	14
HP255-5512	—	—	—	14.00	0.5512	77	124	14
HP255-5626	9/16	—	—	14.29	0.5626	83	133	16
HP255-5709	—	—	—	14.50	0.5709	83	133	16
HP255-5787	—	—	—	14.70	0.5787	83	133	16
HP255-5906	—	—	—	15.00	0.5906	83	133	16
HP255-6102	—	—	—	15.50	0.6102	83	133	16
HP255-6181	—	—	—	15.70	0.6181	83	133	16
HP255-6248	5/8	—	—	15.87	0.6248	83	133	16
HP255-6299	—	—	—	16.00	0.6299	83	133	16
HP255-6496	—	—	—	16.50	0.6496	93	143	18
HP255-6890	—	—	—	17.50	0.6890	93	143	18
HP255-7087	—	—	—	18.00	0.7087	93	143	18
HP255-7283	—	—	—	18.50	0.7283	101	153	20
HP255-7480	—	—	—	19.00	0.7480	101	153	20
HP255-7500	3/4	—	—	19.05	0.7500	101	153	20
HP255-7677	—	—	—	19.50	0.7677	101	153	20
HP255-7874	—	—	—	20.00	0.7874	101	153	20

Packed: 1 pc. Available TiAlN coating only.



Work Material																
List No.	Aluminum		Cast Iron	Low Carbon Steel	Med. Carbon Steel	High Carbon Steel	Alloy Steels	Die Steels	Titanium	High Nickel Alloy		Stainless Steels			Hardened Steels	
	6061 7075	Casting		1010 1018	1035 1045	1065	4140 4340	20 HRC	6Al4V (30 HRC)	Inconel	Kovar	300	400	17-4PH	~35 HRC	35-45 HRC
HP255		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

○ good ○ best



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

Work Material	Carbon Steels, Mild Steel 1010, 1050, 12L14		Alloy Steels 4140, 4130		Special Alloy Steels, Hardened Steels							
					26-30 HRC		30-34 HRC		34-43 HRC		43-53 HRC	
Drilling Speed	240-350 SFM		230-325 SFM		160-240 SFM		110-185 SFM		100-150 SFM		75-100 SFM	
Drill Dia. (mm)	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
3	9,541	0.002 - 0.005	8,959	0.002 - 0.005	6,469	0.002 - 0.005	4,754	0.002 - 0.003	4,043	0.002 - 0.003	2,814	0.001 - 0.002
4	7,156	0.003 - 0.006	6,719	0.003 - 0.006	4,851	0.003 - 0.006	3,566	0.003 - 0.004	3,032	0.003 - 0.004	2,110	0.002 - 0.003
5	5,725	0.004 - 0.008	5,375	0.004 - 0.008	3,881	0.004 - 0.008	2,853	0.004 - 0.005	2,426	0.004 - 0.005	1,688	0.002 - 0.003
6	4,771	0.005 - 0.009	4,479	0.005 - 0.009	3,234	0.005 - 0.009	2,377	0.005 - 0.006	2,021	0.005 - 0.006	1,407	0.002 - 0.004
7	4,089	0.006 - 0.010	3,840	0.006 - 0.010	2,772	0.006 - 0.010	2,038	0.006 - 0.007	1,733	0.006 - 0.007	1,206	0.003 - 0.005
8	3,578	0.006 - 0.011	3,360	0.006 - 0.011	2,426	0.006 - 0.011	1,783	0.006 - 0.008	1,516	0.006 - 0.008	1,055	0.003 - 0.005
9	3,180	0.007 - 0.012	2,986	0.007 - 0.012	2,156	0.007 - 0.012	1,585	0.007 - 0.009	1,348	0.007 - 0.009	938	0.004 - 0.006
10	2,862	0.008 - 0.012	2,688	0.008 - 0.012	1,941	0.008 - 0.012	1,426	0.008 - 0.010	1,213	0.008 - 0.010	844	0.004 - 0.006
11	2,602	0.008 - 0.012	2,443	0.008 - 0.012	1,764	0.008 - 0.012	1,297	0.009 - 0.011	1,103	0.009 - 0.011	767	0.004 - 0.006
12	2,385	0.008 - 0.012	2,240	0.008 - 0.012	1,617	0.008 - 0.012	1,189	0.009 - 0.012	1,011	0.009 - 0.012	703	0.005 - 0.007
13	2,202	0.008 - 0.012	2,067	0.008 - 0.012	1,493	0.008 - 0.012	1,097	0.010 - 0.013	933	0.010 - 0.013	649	0.005 - 0.007
14	2,045	0.009 - 0.014	1,920	0.009 - 0.014	1,386	0.009 - 0.014	1,019	0.011 - 0.014	866	0.011 - 0.014	603	0.006 - 0.008
16	1,789	0.010 - 0.014	1,680	0.010 - 0.014	1,213	0.010 - 0.014	891	0.013 - 0.016	758	0.013 - 0.016	528	0.006 - 0.008
18	1,590	0.011 - 0.015	1,493	0.011 - 0.015	1,078	0.011 - 0.015	792	0.014 - 0.018	674	0.015 - 0.018	469	0.007 - 0.009
20	1,431	0.012 - 0.016	1,344	0.012 - 0.016	970	0.012 - 0.016	713	0.016 - 0.020	606	0.016 - 0.020	422	0.008 - 0.011

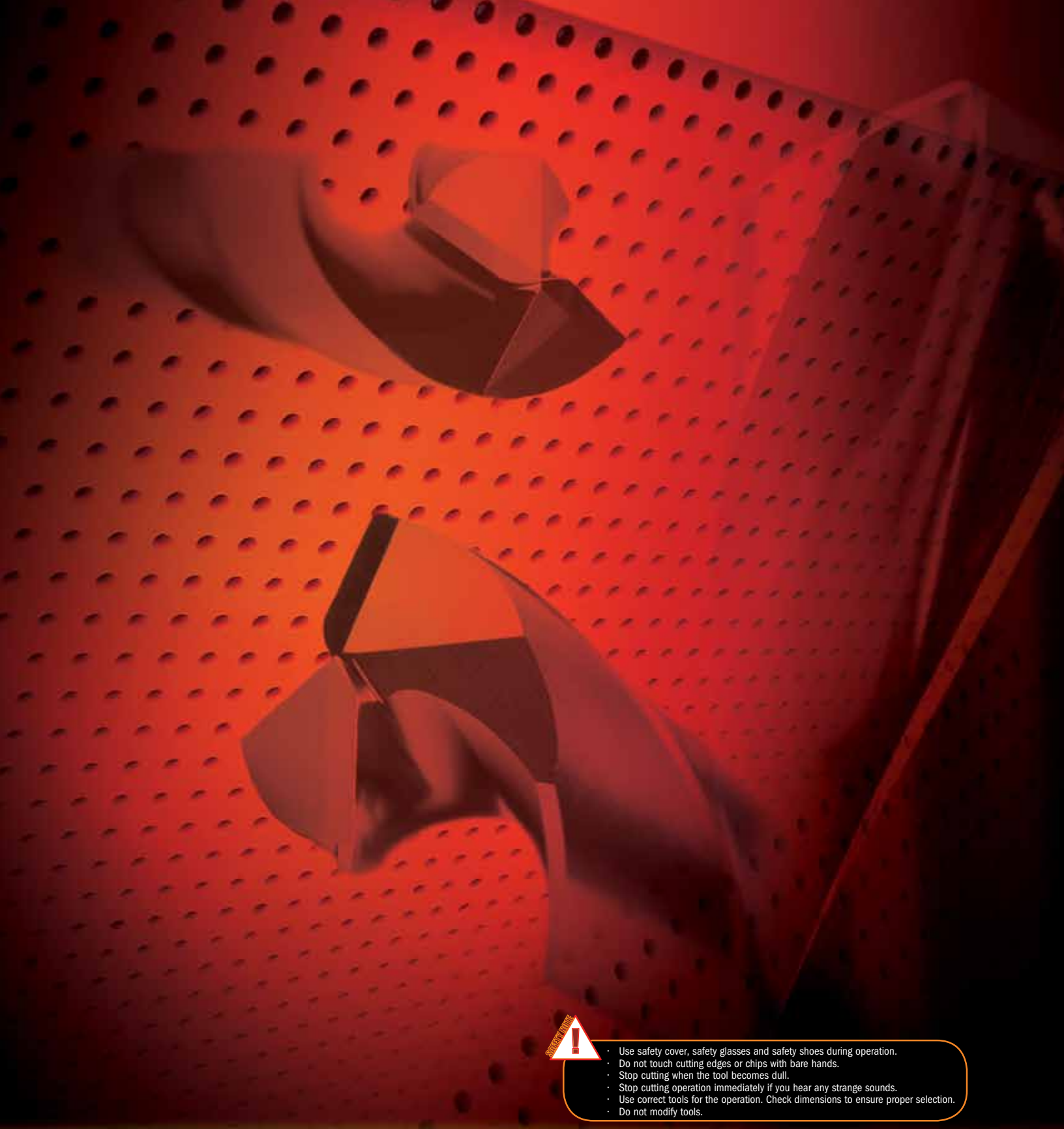
Work Material	Cast Iron		Ductile Cast Iron		Stainless Steels 400SS, 17-4PH		Cast Aluminum	
Drilling Speed	240-385 SFM		175-300 SFM		82-131 SFM		260-640 SFM	
Drill Dia. (mm)	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
3	10,091	0.002 - 0.005	7,698	0.002 - 0.005	3,400	0.002 - 0.004	14,554	0.004 - 0.006
4	7,568	0.003 - 0.006	5,773	0.003 - 0.006	2,550	0.003 - 0.005	10,916	0.005 - 0.007
5	6,055	0.004 - 0.008	4,619	0.004 - 0.008	2,040	0.004 - 0.006	8,733	0.007 - 0.009
6	5,045	0.005 - 0.009	3,849	0.005 - 0.009	1,700	0.005 - 0.007	7,277	0.008 - 0.010
7	4,325	0.006 - 0.010	3,299	0.006 - 0.010	1,456	0.006 - 0.008	6,238	0.010 - 0.012
8	3,784	0.006 - 0.011	2,887	0.006 - 0.011	1,274	0.006 - 0.009	5,458	0.012 - 0.014
9	3,364	0.007 - 0.012	2,566	0.007 - 0.012	1,130	0.007 - 0.010	4,851	0.013 - 0.015
10	3,027	0.008 - 0.012	2,309	0.008 - 0.012	1,020	0.008 - 0.010	4,366	0.015 - 0.017
11	2,752	0.008 - 0.012	2,099	0.008 - 0.012	930	0.008 - 0.010	3,969	0.016 - 0.018
12	2,523	0.008 - 0.012	1,924	0.008 - 0.012	850	0.008 - 0.010	3,639	0.018 - 0.020
13	2,329	0.008 - 0.012	1,776	0.008 - 0.012	785	0.008 - 0.010	3,359	0.019 - 0.021
14	2,162	0.009 - 0.014	1,649	0.009 - 0.014	730	0.009 - 0.011	3,119	0.021 - 0.023
16	1,892	0.010 - 0.014	1,443	0.010 - 0.014	640	0.010 - 0.012	2,729	0.024 - 0.026
18	1,682	0.011 - 0.015	1,283	0.011 - 0.015	565	0.011 - 0.013	2,426	0.026 - 0.030
20	1,514	0.012 - 0.016	1,155	0.012 - 0.016	510	0.012 - 0.014	2,183	0.028 - 0.032

List HP253 – HY-PRO® CARB: 3D Coolant-Through

List HP255 – HY-PRO® CARB: 5D Coolant-Through

Work Material	Carbon Steels, Mild Steel 1010, 1050, 12L14		Alloy Steels 4140, 4130		Special Alloy Steels, Hardened Steels							
					26-30 HRC		30-34 HRC		34-43 HRC		43-56 HRC	
Drilling Speed	310-455 SFM		265-380 SFM		185-295 SFM		130-210 SFM		120-180 SFM		80-110 SFM	
Drill Dia. (mm)	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
3	11,449	0.002-0.005	10,751	0.002-0.005	7,762	0.002-0.005	5,705	0.002 - 0.003	4,851	0.002 - 0.003	3,095	0.001 - 0.002
4	8,587	0.003-0.006	8,063	0.003-0.006	5,822	0.003-0.006	4,279	0.003 - 0.004	3,639	0.003 - 0.004	2,321	0.002 - 0.003
5	6,870	0.004-0.008	6,450	0.004-0.008	4,657	0.004-0.008	3,423	0.004 - 0.005	2,911	0.004 - 0.005	1,857	0.002 - 0.003
6	5,725	0.005-0.009	5,375	0.005-0.009	3,881	0.005-0.009	2,853	0.005 - 0.006	2,426	0.005 - 0.006	1,548	0.002 - 0.004
7	4,907	0.006-0.010	4,607	0.006-0.010	3,327	0.006-0.010	2,445	0.006 - 0.007	2,079	0.006 - 0.007	1,327	0.003 - 0.005
8	4,293	0.006-0.011	4,032	0.006-0.011	2,911	0.006-0.011	2,139	0.006 - 0.008	1,819	0.006 - 0.008	1,161	0.003 - 0.005
9	3,816	0.007-0.012	3,584	0.007-0.012	2,587	0.007-0.012	1,902	0.007 - 0.009	1,617	0.007 - 0.009	1,032	0.004 - 0.006
10	3,435	0.008-0.012	3,225	0.008-0.012	2,329	0.008-0.012	1,712	0.008 - 0.010	1,376	0.008 - 0.010	878	0.004 - 0.006
11	3,123	0.008-0.012	2,932	0.008-0.012	2,117	0.008-0.012	1,556	0.009 - 0.011	1,145	0.009 - 0.011	731	0.004 - 0.006
12	2,862	0.008-0.012	2,688	0.008-0.012	1,941	0.008-0.012	1,426	0.009 - 0.012	914	0.007 - 0.010	583	0.005 - 0.007
13	2,642	0.008-0.012	2,481	0.008-0.012	1,791	0.008-0.012	1,317	0.010 - 0.013	683	0.006 - 0.011	436	0.005 - 0.007
14	2,453	0.009-0.014	2,304	0.009-0.014	1,663	0.009-0.014	1,223	0.011 - 0.014	452	0.006 - 0.012	289	0.006 - 0.008
16	2,147	0.010-0.014	2,016	0.010-0.014	1,455	0.010-0.014	1,070	0.013 - 0.016	221	0.007 - 0.011	141	0.006 - 0.008
18	1,908	0.011-0.015	1,792	0.011-0.015	1,294	0.011-0.015	951	0.014 - 0.018	809	0.015 - 0.018	516	0.007 - 0.009
20	1,717	0.012-0.016	1,613	0.012-0.016	1,164	0.012-0.016	856	0.016 - 0.020	728	0.016 - 0.020	464	0.008 - 0.011

Work Material	Cast Iron		Ductile Cast Iron		Stainless Steels 300SS, 400SS, 17-4PH		Copper		Aluminum Alloy		Cast Aluminum	
Drilling Speed	285-420 SFM		215-350 SFM		145-220 SFM		230-380 SFM		260-450 SFM		325-700 SFM	
Drill Dia. (mm)	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
3	12,614	0.002-0.005	9,622	0.002-0.005	6,137	0.002-0.004	10,722	0.003 - 0.005	13,099	0.003 - 0.005	19,648	0.004 - 0.006
4	9,460	0.003-0.006	7,216	0.003-0.006	4,603	0.003-0.005	7,113	0.004 - 0.006	9,824	0.004 - 0.006	14,736	0.005 - 0.007
5	7,568	0.004-0.008	5,773	0.004-0.008	3,682	0.004-0.006	5,691	0.005 - 0.007	7,859	0.005 - 0.007	11,789	0.007 - 0.009
6	6,307	0.005-0.009	4,811	0.005-0.009	3,069	0.005-0.007	4,742	0.006 - 0.008	6,549	0.006 - 0.008	9,824	0.008 - 0.010
7	5,406	0.006-0.010	4,124	0.006-0.010	2,630	0.006-0.008	4,065	0.007 - 0.009	5,614	0.007 - 0.009	8,421	0.010 - 0.012
8	4,730	0.006-0.011	3,608	0.006-0.011	2,301	0.006-0.009	3,557	0.008 - 0.010	4,912	0.008 - 0.010	7,368	0.012 - 0.014
9	4,205	0.007-0.012	3,207	0.007-0.012	2,046	0.007-0.010	3,161	0.010 - 0.012	4,366	0.010 - 0.012	6,549	0.013 - 0.015
10	3,784	0.008-0.012	2,887	0.008-0.012	1,841	0.008-0.010	2,845	0.011 - 0.013	3,930	0.011 - 0.013	5,894	0.015 - 0.017
11	3,440	0.008-0.012	2,624	0.008-0.012	1,674	0.008-0.010	2,587	0.012 - 0.014	3,572	0.012 - 0.014	5,359	0.016 - 0.018
12	3,153	0.008-0.012	2,405	0.008-0.012	1,534	0.008-0.010	2,371	0.013 - 0.015	3,275	0.013 - 0.015	4,912	0.018 - 0.020
13	2,911	0.008-0.012	2,220	0.008-0.012	1,416	0.008-0.010	2,189	0.014 - 0.016	3,023	0.014 - 0.016	4,534	0.019 - 0.021
14	2,703	0.009-0.014	2,062	0.009-0.014	1,315	0.009-0.011	2,032	0.016 - 0.018	2,807	0.016 - 0.018	4,210	0.021 - 0.023
16	2,365	0.010-0.014	1,804	0.010-0.014	1,151	0.010-0.012	1,778	0.018 - 0.020	2,456	0.018 - 0.020	3,684	0.024 - 0.026
18	2,102	0.011-0.015	1,604	0.011-0.015	1,023	0.011-0.013	1,581	0.020 - 0.022	2,183	0.020 - 0.022	3,275	0.026 - 0.030
20	1,892	0.012-0.016	1,443	0.012-0.016	921	0.012-0.014	1,423	0.022 - 0.024	1,965	0.022 - 0.024	2,947	0.028 - 0.032



- Use safety cover, safety glasses and safety shoes during operation.
- Do not touch cutting edges or chips with bare hands.
- Stop cutting when the tool becomes dull.
- Stop cutting operation immediately if you hear any strange sounds.
- Use correct tools for the operation. Check dimensions to ensure proper selection.
- Do not modify tools.



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