

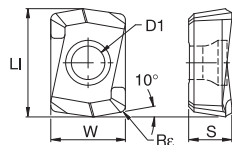
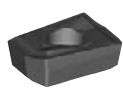


MASTER CATALOG 2018

VOLUME TWO | **ROTATING TOOLS**



HOLEMAKING | TAPPING | SOLID END MILLING | INDEXABLE MILLING

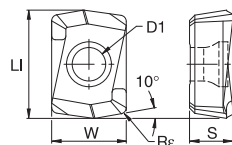
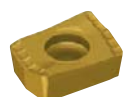


● first choice
○ alternate choice

P	●	●	●	●
M	○	○	○	○
K	●	●	○	○
N	○	○	○	○
S	○	○	●	●
H	○	○	○	○

DFR-GD

catalog number	LI		W		D1		S		Rε		KCPK10	KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in	mm	in				
DFR020204GD	7,12	.280	4,90	.193	2,30	.091	2,79	.110	0,40	.016	●	●	●	●
DFR030204GD	8,71	.343	6,00	.236	2,50	.098	2,88	.113	0,40	.016	●	●	●	●
DFR040304GD	10,76	.424	7,38	.291	2,85	.112	3,79	.149	0,40	.016	●	●	●	●

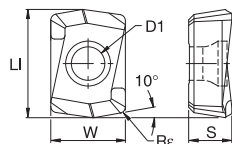
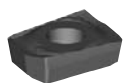


● first choice
○ alternate choice

P	●	●	●	●
M	○	○	○	○
K	○	○	○	○
N	○	○	○	○
S	○	○	●	●
H	○	○	○	○

DFR-MD

catalog number	LI		W		D1		S		Rε		KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in	mm	in			
DFR020204MD	7,12	.280	4,90	.193	2,30	.091	2,79	.110	0,40	.016	●	●	●
DFR030204MD	8,71	.343	6,00	.236	2,50	.098	2,88	.113	0,40	.016	●	●	●
DFR040304D28MD	10,76	.424	7,26	.286	2,85	.112	3,79	.149	0,40	.016	-	-	●
DFR040304MD	10,76	.424	7,38	.291	2,85	.112	3,79	.149	0,40	.016	●	●	●



● first choice
○ alternate choice

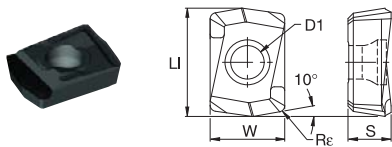
P	○	○	○	○
M	○	○	○	○
K	●	●	○	○
N	○	○	○	○
S	○	○	○	○
H	○	○	○	○

DFR-LD

catalog number	LI		W		D1		S		Rε		KCPK10	KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in	mm	in				
DFR020204LD	7,12	.280	4,90	.193	2,30	.091	2,79	.110	0,40	.016	●	●	●	●
DFR030204LD	8,71	.343	6,00	.236	2,50	.098	2,86	.113	0,40	.016	●	●	●	●
DFR040304LD	10,76	.424	7,38	.291	2,85	.112	3,76	.148	0,40	.016	●	●	●	●

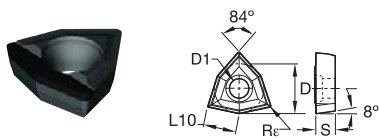
P	Blue
M	Yellow
K	Red
N	Green
S	Orange
H	Grey

- first choice
- alternate choice



DFR • PCD • Single-Tipped

catalog number	LI		W		D1		S		Rε		KD1425
	mm	in	mm	in	mm	in	mm	in	mm	in	
DFR040304ST	10,50	.413	7,40	.291	2,85	.112	3,18	.125	0,40	.015	●



DFT • PCD • Single-Tipped

catalog number	L10		D		D1		S		Rε		KD1425
	mm	in	mm	in	mm	in	mm	in	mm	in	
DFT05T308ST	5,19	.205	8,00	.315	3,40	.134	3,75	.148	0,80	.031	●
DFT06T308ST	6,52	.257	10,00	.394	4,40	.173	3,75	.148	0,80	.031	●
DFT070408ST	7,84	.309	12,00	.472	4,40	.173	4,75	.187	0,80	.031	●
DFT090508ST	9,83	.387	15,00	.591	5,50	.217	5,19	.204	0,80	.031	●
DFT110508ST	11,53	.454	17,60	.693	5,85	.230	4,81	.189	0,80	.031	●

Indexable Drills

DFR™ • PCD • Metric

Metric										
Material Group	Condition	Pocket Seat	Geometry	Grade	Cutting Speed – vc			Recommended Feed Rate (fz) by Diameter		
					Range – m/min			Ø	DFR04 20,50–24,00mm	
					min	Starting Value	max			
N	1	S	O	ST	396	720	841	mm/r	0,06–0,08	
			I	ST						KD1425
	2	S	O	ST	369	670	782	mm/r	0,12–0,18	
			I	ST						KD1425
	3	S	O	ST	341	619	723	mm/r	0,12–0,18	
			I	ST						KD1425
	4	S	O	ST	475	720	841	mm/r	0,12–0,18	
			I	ST						KD1425
	5	S	O	ST	480	720	864	mm/r	0,06–0,08	
			I	ST						KD1425



Indexable Drills

DFR™ • PCD • Inch

Inch										
Material Group	Condition	Pocket Seat	Geometry	Grade	Cutting Speed – vc			Recommended Feed Rate (fz) by Diameter		
					Range – SFM			Ø	DFR04 .813–1.00"	
					min	Starting Value	max			
N	1	S	O	ST	1300	2362	2760	IPR	.002–.003	
			I	ST						KD1425
	2	S	O	ST	1209	2197	2567	IPR	.005–.007	
			I	ST						KD1425
	3	S	O	ST	1118	2032	2374	IPR	.005–.007	
			I	ST						KD1425
	4	S	O	ST	1560	2362	2760	IPR	.005–.007	
			I	ST						KD1425
	5	S	O	ST	1575	2362	2834	IPR	.002–.003	
			I	ST						KD1425

■ DFT™ • PCD • Metric

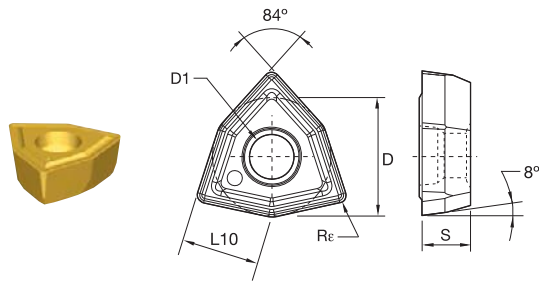
Metric															
Material Group	Condition	Pocket Seat	Geometry	Grade	Cutting Speed – vc			Recommended Feed Rate (f) by Diameter							
					Range – m/min			Ø	DFT03 16–24,00mm	DFT05 25–32,00mm	DFT06 33–40,00mm	DFT07 41–48,00mm	DFT09 49–68,00mm	DFT11 69–82,00mm	
					min	Starting Value	max								
N	1	S	O	ST/C	KD1425	480	720	864	mm/r	0,05–0,07	0,07–0,09	0,10–0,14	0,12–0,16	0,14–0,18	0,14–0,18
			I	ST/C	KD1425										
	2	S	O	ST/C	KD1425	447	670	804	mm/r	0,05–0,07	0,07–0,09	0,10–0,14	0,12–0,16	0,14–0,18	0,14–0,18
			I	ST/C	KD1425										
	3	S	O	ST/C	KD1425	413	619	743	mm/r	0,05–0,07	0,07–0,09	0,10–0,14	0,12–0,16	0,14–0,18	0,14–0,18
			I	ST/C	KD1425										
	4	S	O	ST/C	KD1425	447	670	804	mm/r	0,05–0,07	0,07–0,09	0,10–0,14	0,12–0,16	0,14–0,18	0,14–0,18
			I	ST/C	KD1425										
	5	S	O	ST/C	KD1425	480	720	864	mm/r	0,05–0,07	0,07–0,09	0,10–0,14	0,12–0,16	0,14–0,18	0,14–0,18
			I	ST/C	KD1425										



Indexable Drills

■ DFT™ • PCD • Inch

Inch															
Material Group	Condition	Pocket Seat	Geometry	Grade	Cutting Speed – vc			Recommended Feed Rate (f) by Diameter							
					Range – SFM			Ø	DFT03 .625–.969"	DFT05 .984–1.250"	DFT06 1.313–1.563"	DFT07 1.625–1.875"	DFT09 1.938–2.125"	DFT11 2.750–3.250"	
					min	Starting Value	max								
N	1	S	O	ST/C	KD1425	1575	2362	2834	IPR	.002–.003	.003–.004	.004–.006	.005–.006	.006–.007	.006–.007
			I	ST/C	KD1425										
	2	S	O	ST/C	KD1425	1465	2197	2636	IPR	.002–.003	.003–.004	.004–.006	.005–.006	.006–.007	.006–.007
			I	ST/C	KD1425										
	3	S	O	ST/C	KD1425	1355	2032	2438	IPR	.002–.003	.003–.004	.004–.006	.005–.006	.006–.007	.006–.007
			I	ST/C	KD1425										
	4	S	O	ST/C	KD1425	1465	2197	2636	IPR	.002–.003	.003–.004	.004–.006	.005–.006	.006–.007	.006–.007
			I	ST/C	KD1425										
	5	S	O	ST/C	KD1425	1575	2362	2834	IPR	.002–.003	.003–.004	.004–.006	.005–.006	.006–.007	.006–.007
			I	ST/C	KD1425										

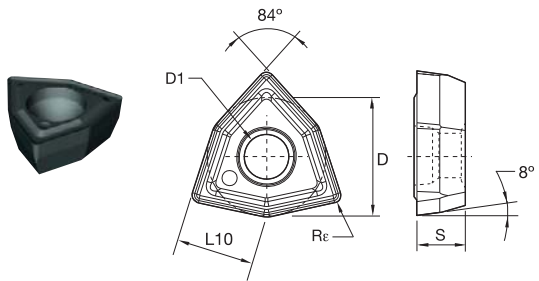


DFT-GD

● first choice
○ alternate choice

P	●	●	●	●	●
M	○	○	○	○	○
K	●	●	●	○	○
N	○	○	○	○	○
S	○	○	○	○	○
H	○	○	○	○	○

catalog number	L10		D		D1		S		Rε		KCPK10	KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in	mm	in				
DFT030204GD	3,97	.156	6,00	.236	2,25	.089	2,45	.096	0,40	.016	●	●	●	○
DFT030304GD	3,97	.156	6,00	.236	2,65	.104	2,95	.116	0,40	.016	●	●	●	○
DFT05T308GD	5,29	.208	8,00	.315	3,40	.134	3,75	.148	0,80	.031	●	●	●	○
DFT06T308GD	6,62	.260	10,00	.394	4,40	.173	3,75	.148	0,80	.031	●	●	●	○
DFT070408GD	7,94	.313	12,00	.472	4,40	.173	4,75	.187	0,80	.031	●	●	●	○
DFT090508GD	9,92	.391	15,00	.591	5,50	.217	5,25	.207	0,85	.034	●	●	●	○

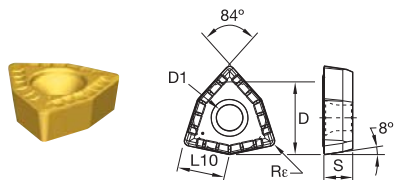


DFT-HP

● first choice
○ alternate choice

P	●	●	●	●	●
M	○	○	○	○	○
K	●	●	●	○	○
N	○	○	○	○	○
S	○	○	○	○	○
H	○	○	○	○	○

catalog number	L10		D		D1		S		Rε		KCPK10	KCU25	KCU40	KC7140	KMF
	mm	in	mm	in	mm	in	mm	in	mm	in					
DFTX20204HP	3,31	.130	5,00	.197	2,25	.089	2,45	.097	0,40	.015	-	●	●	○	-
DFT030204HP	3,97	.156	6,00	.236	2,25	.089	2,45	.096	0,40	.016	●	●	●	○	○
DFT030304HP	3,97	.156	6,00	.236	2,65	.104	2,95	.116	0,40	.016	●	●	●	○	○
DFT05T308HP	5,29	.208	8,00	.315	3,50	.137	3,75	.148	0,80	.031	●	●	●	○	○
DFT06T308HP	6,62	.260	10,00	.394	4,40	.173	3,75	.148	0,80	.031	●	●	●	○	○
DFT070408HP	7,94	.313	12,00	.472	4,40	.173	4,75	.187	0,80	.031	●	●	●	○	○
DFT090508HP	9,92	.391	15,00	.591	5,50	.217	5,25	.207	0,85	.033	●	●	●	○	○



DFT-MD

● first choice
○ alternate choice

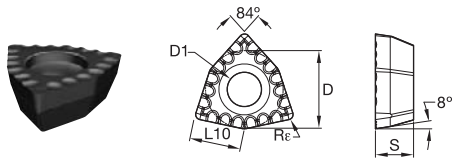
P	●	●	●	●	●
M	○	○	○	○	○
K	●	●	●	○	○
N	○	○	○	○	○
S	○	○	○	○	○
H	○	○	○	○	○

catalog number	L10		D		D1		S		Rε		KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in	mm	in			
DFTX20204MD	3,31	.130	5,00	.197	2,25	.089	2,45	.097	0,40	.015	●	●	○
DFT030204MD	3,97	.156	6,00	.236	2,25	.089	2,45	.096	0,40	.016	●	●	○
DFT030304MD	3,97	.156	6,00	.236	2,65	.104	2,95	.116	0,40	.016	●	●	○
DFT05T308MD	5,29	.208	8,00	.315	3,40	.134	3,75	.148	0,80	.031	●	●	○
DFT06T308MD	6,62	.260	10,00	.394	4,40	.173	3,75	.148	0,80	.031	●	●	○
DFT070408MD	7,94	.313	12,00	.472	4,40	.173	4,75	.187	0,80	.031	●	●	○
DFT090508MD	9,92	.391	15,00	.591	5,50	.217	5,25	.207	0,80	.031	●	●	○
DFT110508MD	11,64	.458	17,60	.693	5,85	.230	4,88	.192	0,80	.031	-	-	○



Indexable Drills

- DS geometry for improved control of chip flow, chip breakage, and chip curling.
- These inserts support drilling in P0 and P1 steel, higher alloyed tool steels, and stainless steels where high feed rates cannot be used to provide short chips.



- first choice
- alternate choice

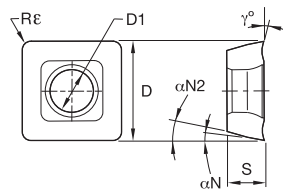
P	●
M	○
K	○
N	○
S	○
H	○

NEW!

DFT • DS

Indexable Drills

catalog number	L10		D		D1		S		Rε		KCU40
	mm	in	mm	in	mm	in	mm	in	mm	in	
DFTX20204DS	3,31	.130	5,00	.197	2,25	.089	2,45	.097	0,40	.016	●
DFT030304DS	3,97	.156	6,00	.236	2,65	.104	2,95	.116	0,40	.016	●
DFT05T308DS	5,29	.208	8,00	.315	3,40	.134	3,75	.148	0,80	.031	●
DFT06T308DS	6,62	.260	10,00	.394	4,40	.173	3,75	.148	0,80	.031	●
DFT070408DS	7,94	.313	12,00	.472	4,40	.173	4,75	.187	0,80	.031	●
DFT090508DS	9,92	.391	15,00	.591	5,50	.217	5,25	.207	0,80	.031	●

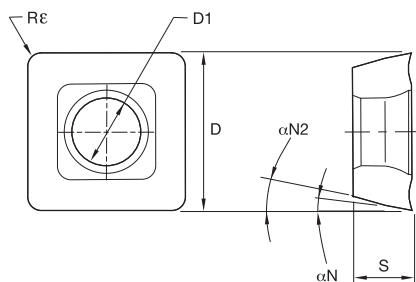
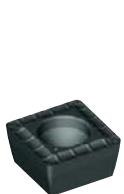


● first choice
○ alternate choice

P	●	●	●	●
M	○	○	○	○
K	●	●	●	○
N	○	○	○	○
S	○	○	○	○
H				

■ SP..X..(R)HP

catalog number	D		D1		S		Rε		γ°	αN	αN2	KCPK10	KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in							
SPGX050204HP	5,56	.219	2,25	.089	2,38	.094	0,40	.016	10	7	11	-	●	●	●
SPGX060304RHP	6,35	.250	2,65	.104	3,18	.125	0,40	.016	10	7	11	-	●	●	●
SPGX070304RHP	7,94	.313	2,85	.112	3,18	.125	0,40	.016	10	7	11	-	●	●	●
SPGX070308HP	7,94	.313	2,85	.112	3,18	.125	0,80	.031	10	7	11	●	●	●	-
SPPX09T308RHP	9,53	.375	3,60	.142	3,97	.156	0,80	.031	10	7	11	-	●	●	●
SPPX09T310HP	9,53	.375	3,60	.142	3,97	.156	1,00	.039	10	7	11	●	●	●	-
SPPX120408RHP	12,70	.500	4,60	.181	4,76	.188	0,80	.031	10	7	11	-	●	●	●
SPPX120412HP	12,70	.500	4,60	.181	4,76	.188	1,20	.047	10	7	11	●	●	●	-
SPPX15T508RHP	15,73	.625	5,50	.234	5,95	.234	0,80	.031	10	7	11	-	●	●	●
SPPX15T512HP	15,73	.625	5,50	.217	5,95	.234	1,20	.047	10	7	11	●	●	●	-

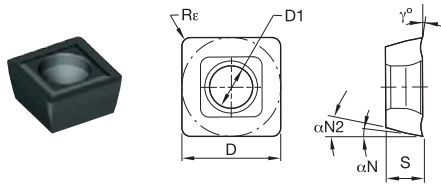


■ SP..X..MD

catalog number	D		D1		S		Rε		γ°	αN	αN2	KCPK10	KCU25	KCU40	KC7140
	mm	in	mm	in	mm	in	mm	in							
SPGX050204MD	5,56	.219	2,25	.089	2,38	.094	0,40	.016	16	7	11	-	●	●	●
SPGX060304MD	6,35	.250	2,65	.104	3,18	.125	0,40	.016	20	7	11	●	●	●	●
SPGX070304MD	7,94	.313	2,85	.112	3,18	.125	0,40	.016	16	7	11	●	●	●	●
SPGX070308MD	7,94	.313	2,85	.112	3,18	.125	0,80	.031	16	7	11	●	●	●	-
SPPX09T308MD	9,53	.375	3,60	.142	3,97	.156	0,80	.031	16	7	11	-	●	●	●
SPPX09T310MD	9,53	.375	3,60	.142	3,97	.156	1,00	.039	16	7	11	●	●	●	-
SPPX120408MD	12,70	.500	4,60	.181	4,76	.188	0,80	.031	16	7	11	-	●	●	●
SPPX120412MD	12,70	.500	4,60	.181	4,76	.188	1,20	.047	16	7	11	●	●	●	-
SPPX15T508MD	15,73	.625	5,50	.234	5,95	.234	0,80	.031	16	7	11	-	●	●	●
SPPX15T512MD	15,73	.625	5,50	.217	5,95	.234	1,20	.047	16	7	11	●	●	●	-



Indexable Drills



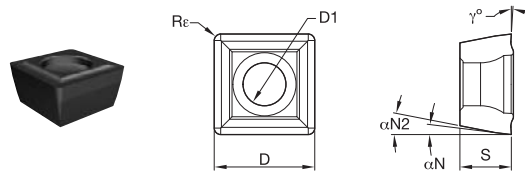
● first choice
○ alternate choice

P	●	●	●
M	○	○	○
K	●	●	●
N	○	○	○
S	○	○	○
H			

■ SP..X..FP

catalog number	D		D1		S		Re		γ°	αN	$\alpha N2$	KCPK10	KCU25	KCU40
	mm	in	mm	in	mm	in	mm	in						
SPGX060304FP	6,35	.250	2,85	.112	3,18	.125	0,40	.016	6	7	11	●	●	●
SPGX070304FP	7,94	.313	2,85	.112	3,18	.125	0,40	.016	6	7	11	●	●	●
SPGX070308FP	7,94	.313	2,85	.112	3,18	.125	0,80	.031	6	7	11	●	●	●
SPPX09T308FP	9,53	.375	3,60	.142	3,97	.156	0,80	.031	6	7	11	●	●	●
SPPX09T310FP	9,53	.375	3,60	.142	3,97	.156	1,00	.039	6	7	11	●	●	●
SPPX120408FP	12,70	.500	4,60	.181	4,76	.188	0,80	.031	6	7	11	●	●	●
SPPX120412FP	12,70	.500	4,60	.181	4,76	.188	1,20	.047	6	7	11	●	●	●
SPPX15T508FP	15,73	.625	5,50	.234	5,95	.234	0,80	.031	6	7	11	●	●	●
SPPX15T512FP	15,73	.625	5,50	.217	5,95	.234	1,20	.047	6	7	11	●	●	●

- LP geometry for improved control of chip flow, chip breakage, and chip curling.
- These inserts support drilling in P0 and P1 steel, higher alloyed tool steels, and stainless steels where high feed rates cannot be used to provide short chips.



● first choice
○ alternate choice

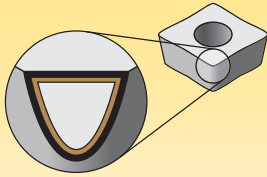
P	●
M	○
K	○
N	○
S	○
H	

■ SP..X..LP

catalog number	D		D1		S		Re		γ°	αN	$\alpha N2$	KCU40
	mm	in	mm	in	mm	in	mm	in				
SPGX050204LP	5,42	.213	2,25	.089	2,38	.094	0,40	.016	4	7	11	●
SPGX060304LP	6,35	.250	2,65	.104	3,18	.125	0,40	.016	4	7	11	●
SPPX070304LP	7,80	.307	2,85	.112	3,18	.125	0,40	.016	4	7	11	●
SPPX09T308LP	9,38	.369	3,60	.142	3,97	.156	0,80	.031	4	7	11	●
SPPX120408LP	12,56	.494	4,60	.181	4,76	.187	0,80	.031	4	7	11	●



Indexable Drills

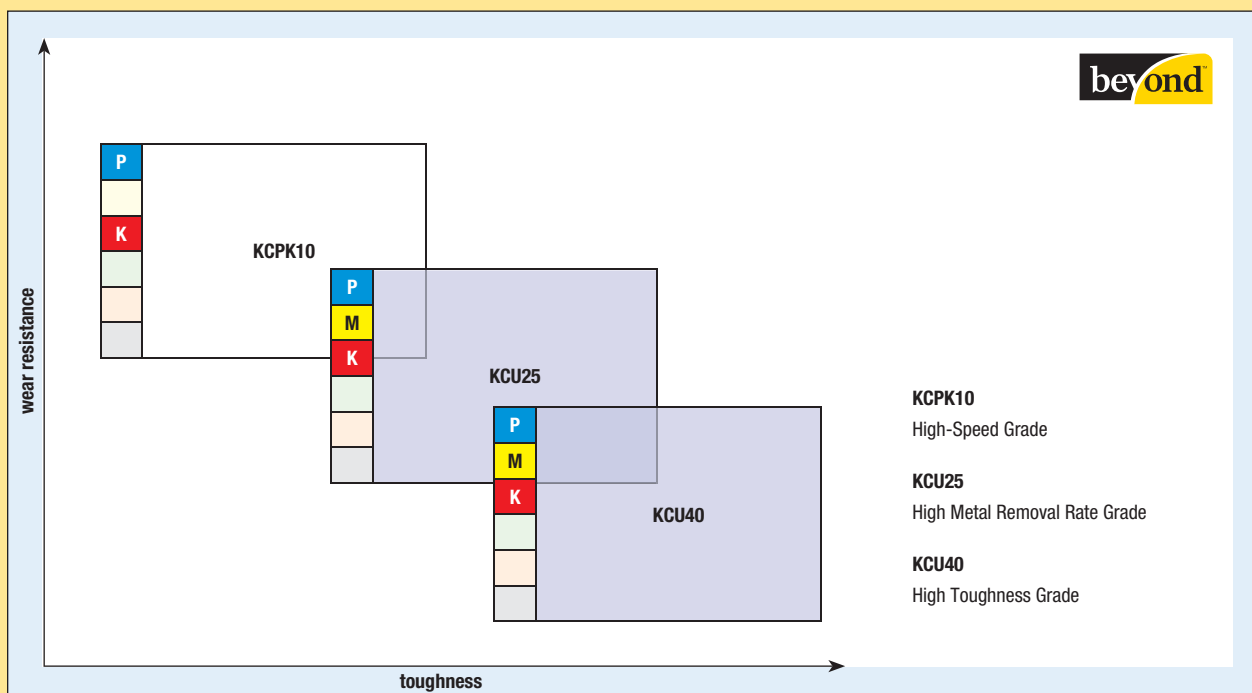


Coatings provide high-speed capability and are engineered for finishing to light roughing.

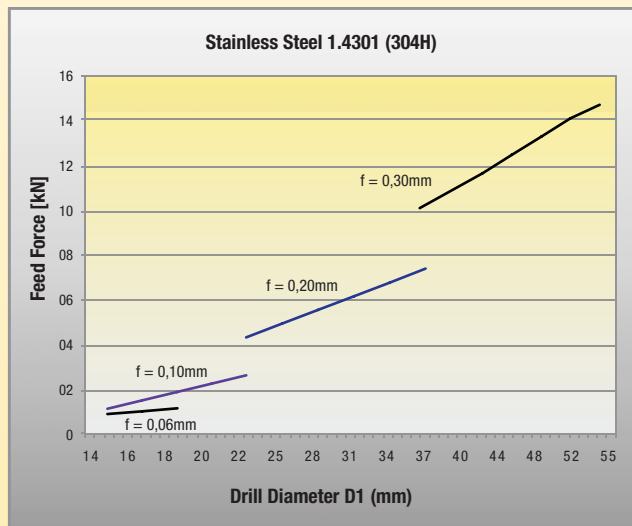
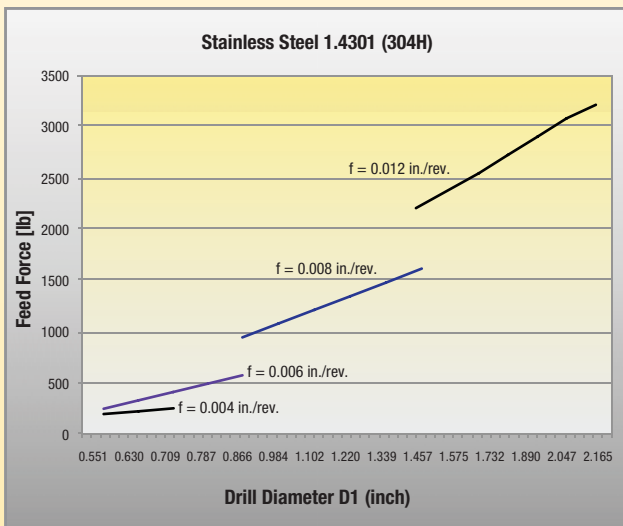
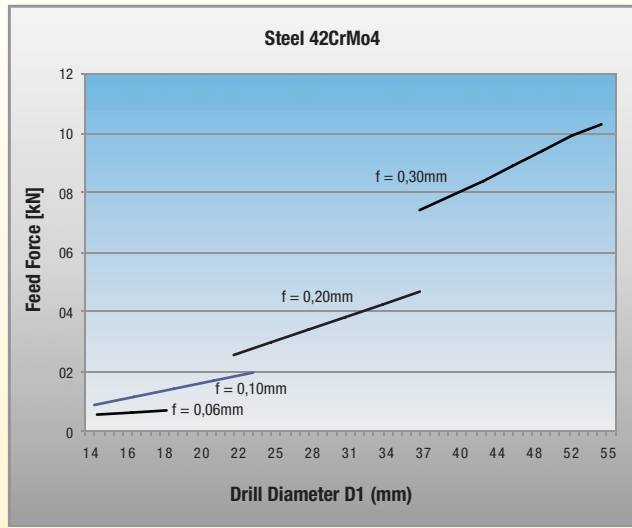
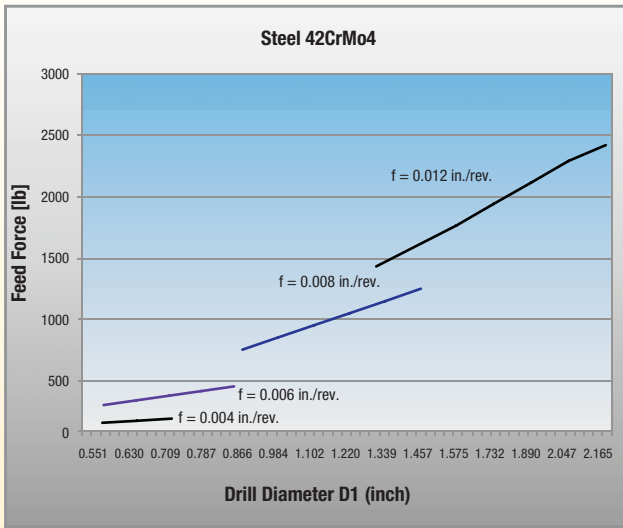
P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

wear resistance ← → toughness

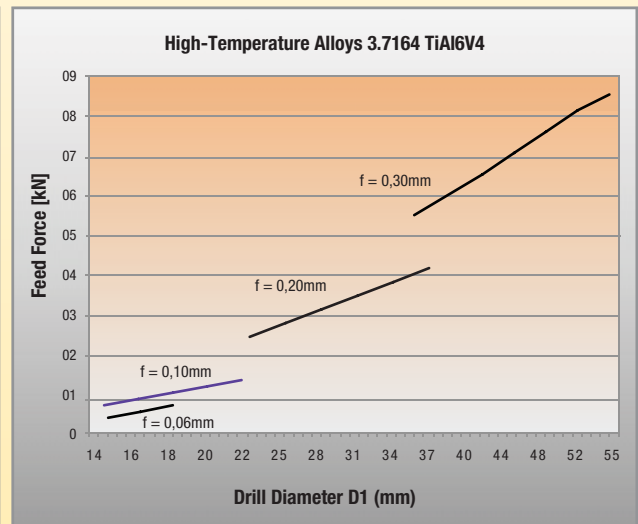
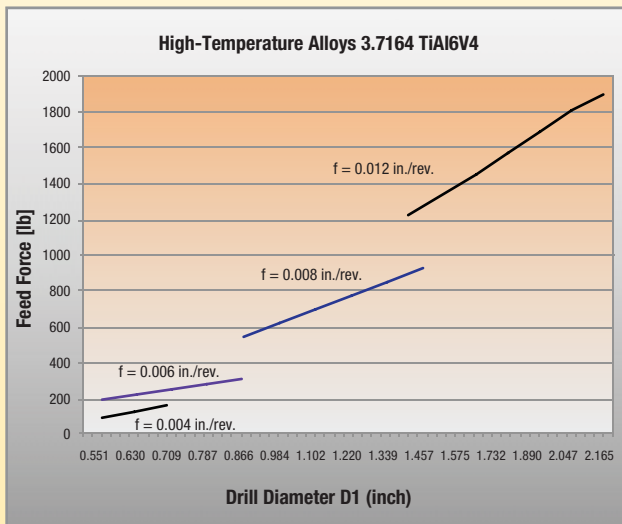
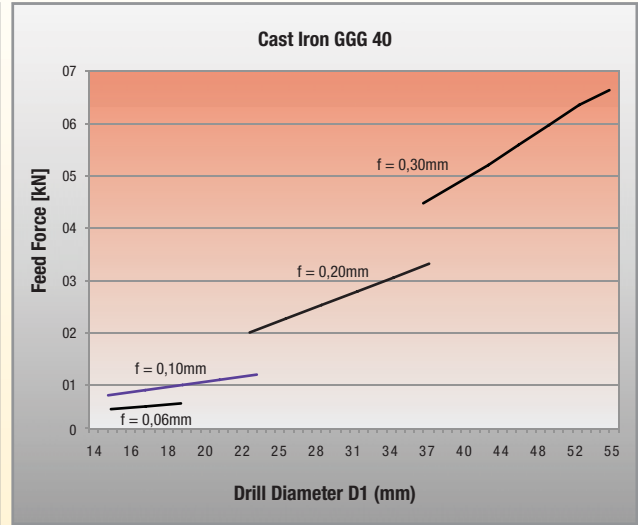
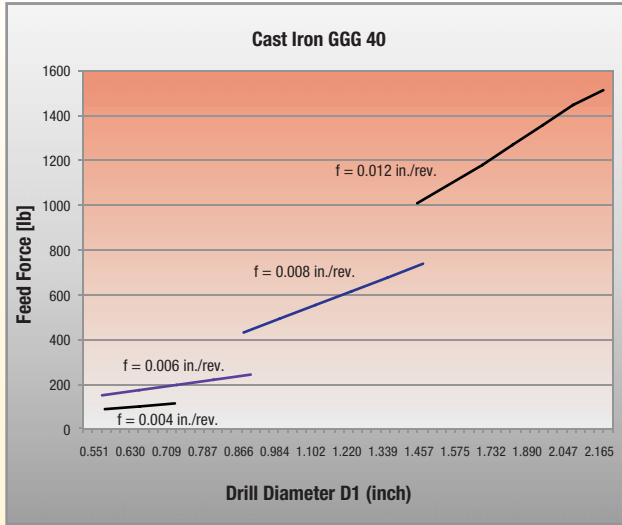
Grade	Coating	Grade Description	Material																		
			P	05	10	15	20	25	30	35	40	45									
KCPK10	 Al ₂ O ₃ TiCN	<p>Composition: With an advanced CVD TiCN-Al₂O₃ coating combined with a cobalt-enriched carbide substrate, this grade offers a balanced combination of deformation-resistance and edge toughness.</p> <p>Application: The KCPK10™ grade offers outstanding abrasion and crater wear resistance for high-speed machining of steels and cast irons. Use for very high cutting speeds with low to medium feed rates.</p>	P																		
			K																		
KCU25	 Al ₂ O ₃ TiCN	<p>Composition: This advanced CVD TiCN-Al₂O₃ coating, together with a newly engineered tough carbide substrate, ensures adequate deformation resistance along with excellent edge strength, and offers very good wear resistance over a wide range of machining conditions.</p> <p>Application: KCU25, as a high productivity grade with high speeds and feeds, is the first choice for productive process with very good reliability in steels, stainless steels, and cast irons.</p>	P																		
			M																		
KCU40	 PVD TiN_TiAlN	<p>Composition: With a multilayered PVD TiN-TiAlN coating and a tough substrate, this grade withstands interruptions and provides high wear resistance for long tool life.</p> <p>Application: The KCU40 grade is the first choice for high reliability in most materials. This grade should be used at medium speeds and high feeds due to sharper edges, and as a grade for high toughness applications. It covers steel, stainless steel, cast iron, and high-temp alloys under certain conditions.</p>	P																		
			M																		



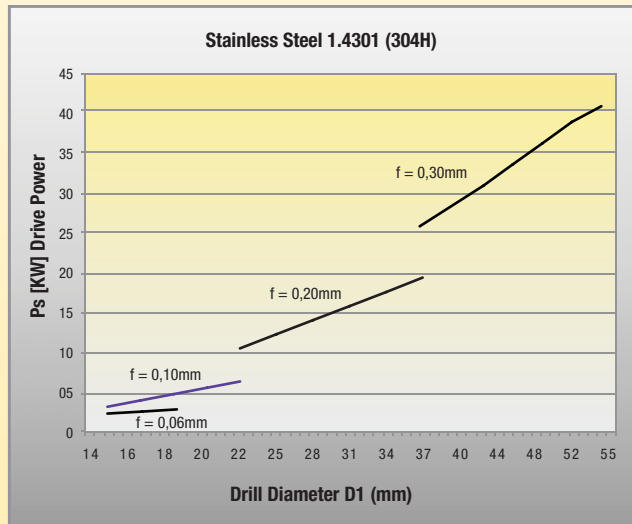
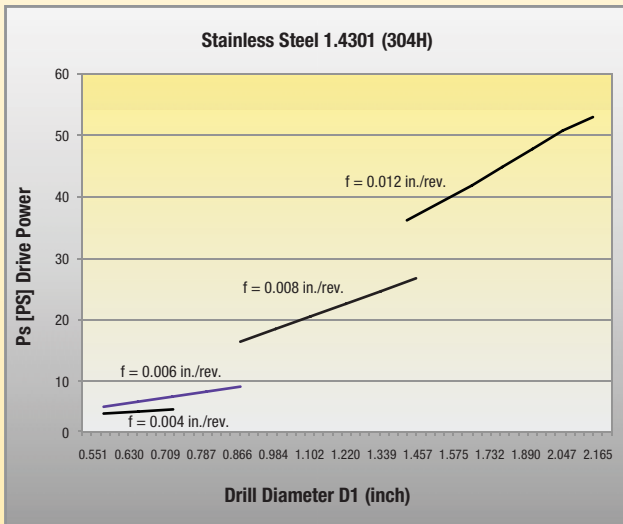
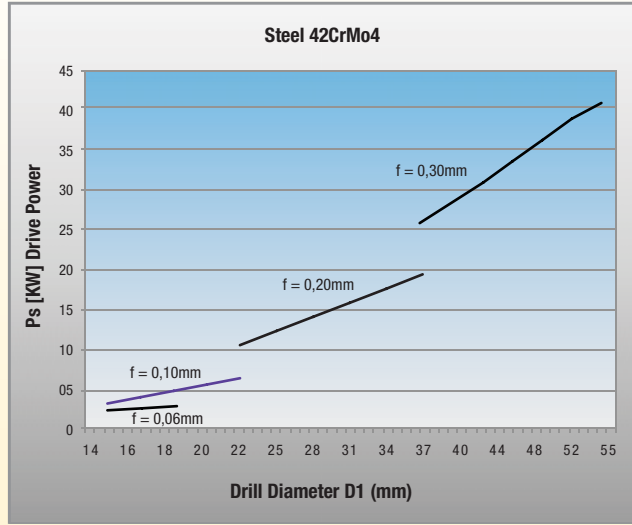
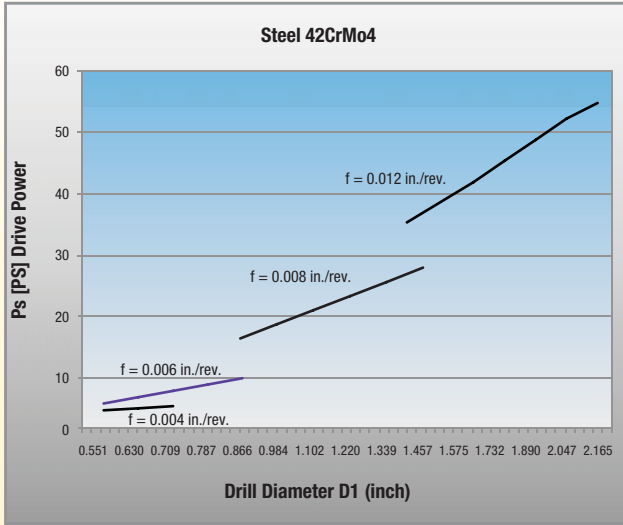
■ Feed Force Requirement



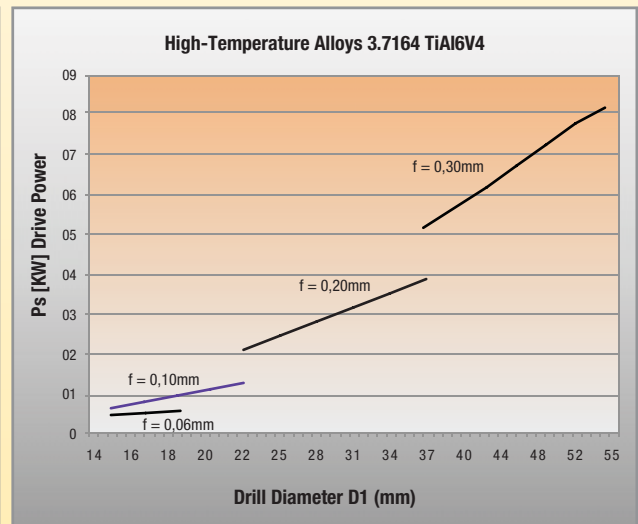
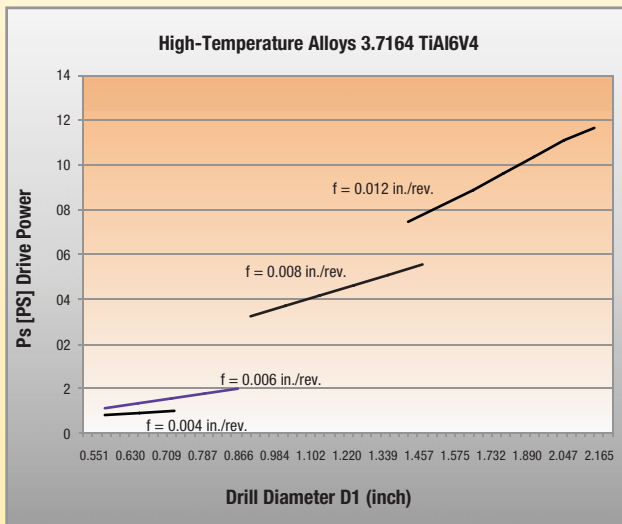
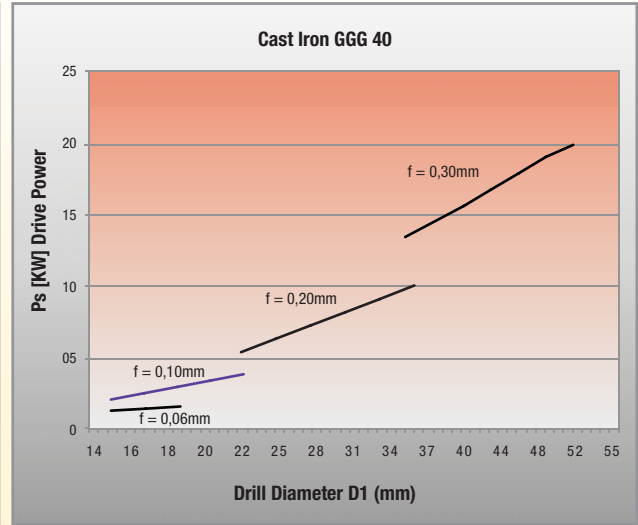
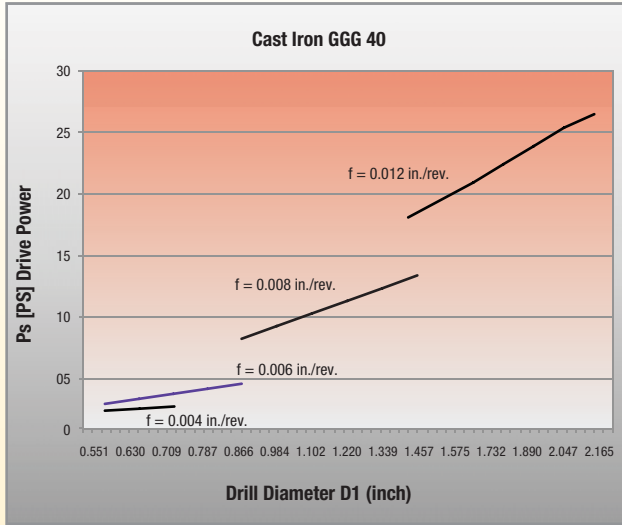
■ Feed Force Requirement



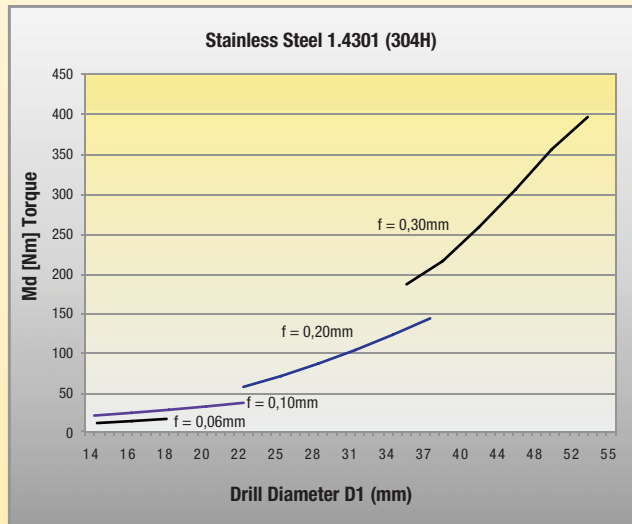
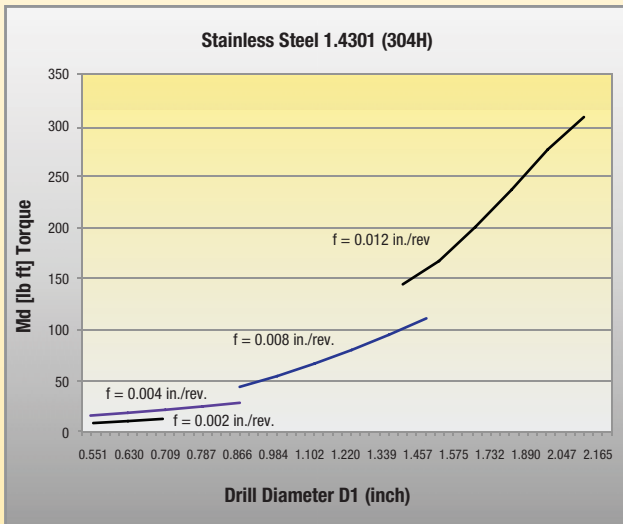
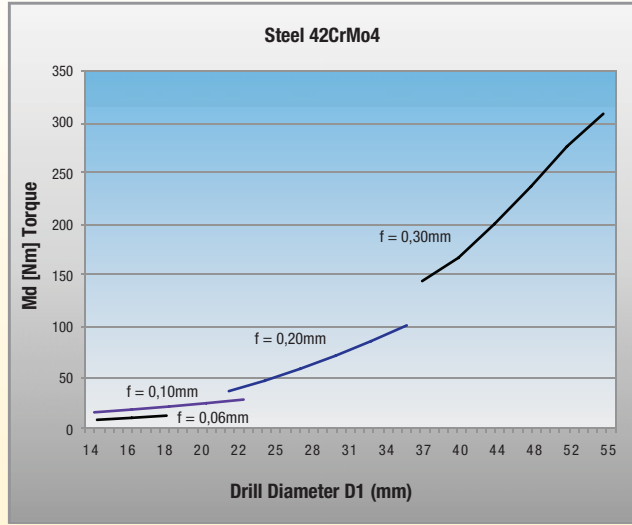
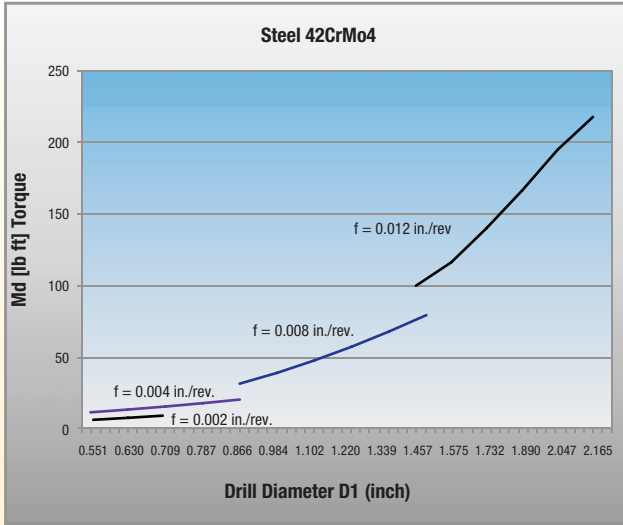
Power Recommendation



■ Power Recommendation



Torque Recommendation



■ Torque Recommendation

