

DP Series

High Performance Carbide Drills

高性能超硬ドリル

P	M	K	N	S	H
●	●	●	○	●	○

Internal coolant drills

- Double margin design
- Drilling depth : 3D~30D
- New UNIX multi-layer smooth coating

External coolant drills

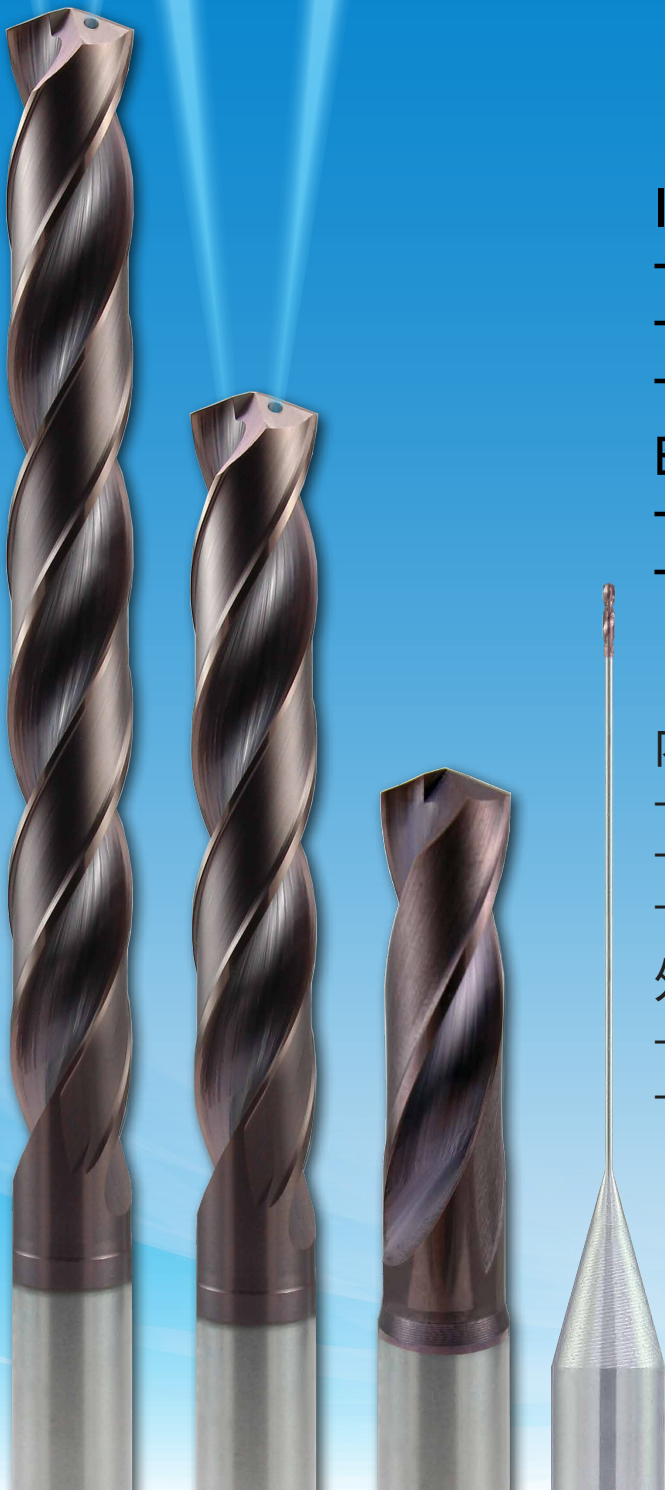
- Drilling depth : 3D~50D
- New UNIX multi-layer smooth coating

内部給油式ドリル

- ダブルマージン設計
- 加工深さ : 3D~30D
- 新しい UNIX 多層スムーズコーティングです

外部給油式ドリル

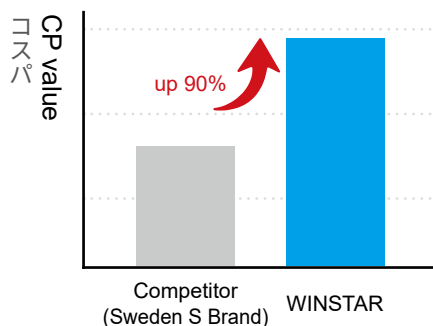
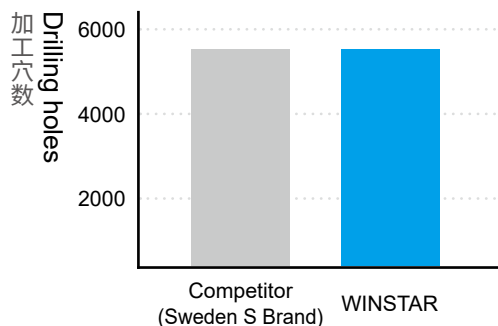
- 加工深さ : 3D~50D
- 新しい UNIX 多層スムーズコーティングです

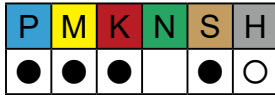


Appearance 外観	Name 名前	Code No. 番号	Diameter 直径	Tip Angle 先端角度	Coating コーティング	P	M	K	N	S	H	Page ページ
						●	●	●	●	●	○	
	Universal · Internal Coolant · 3D 高性能内部給油ドリル · 3倍深	DPC3	Ø1.4~Ø20	140°	UNIX	●	●	●		●	○	02
	Universal · Internal Coolant · 5D 高性能内部給油ドリル · 5倍深	DPC5	Ø1.4~Ø20	140°	UNIX	●	●	●		●	○	04
	Universal · Internal Coolant · 7D 高性能内部給油ドリル · 7倍深	DPC7	Ø4~Ø16	140°	UNIX	●	●	●		●	○	06
	Universal · Internal Coolant · 10D 高性能内部給油ドリル · 10倍深	DPC9	Ø3~Ø12	135°	UNIX	●	●	●		●	○	07
	Universal · Internal Coolant · 15D 高性能内部給油ドリル · 15倍深	DPC9	Ø3~Ø16	135°	UNIX	●	●	●		●	○	08
	Universal · Internal Coolant · 20D 高性能内部給油ドリル · 20倍深	DPC9	Ø3~Ø10	135°	UNIX	●	●	●		●	○	09
	Universal · Internal Coolant · 30D 高性能内部給油ドリル · 30倍深	DPC9	Ø3~Ø6	135°	UNIX	●	●	●		●	○	10
	Universal · External Coolant · 3D 高性能外部給油ドリル · 3倍深	DPN3	Ø0.3~Ø20	140°	UNIX	●	●	●		●	○	11
	Universal · External Coolant · 5D 高性能外部給油ドリル · 5倍深	DPN5	Ø3~Ø20	140°	UNIX	●	●	●		●	○	13
	Universal · Micro Hole · External Coolant · 10~50D 微小径深穴用ドリル · 5~50倍深 (ステップ加工)	DPN9	Ø0.1~Ø1	130°	UNIX	●	●	●		○	○	15

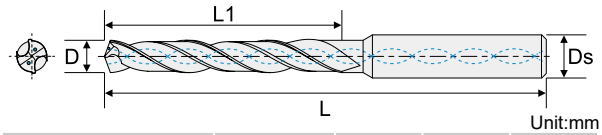
Cutting Example 加工事例

Drill : DPC30670030UX(Ø6.7mm)
 Working Material : SUS304
 Vc = 50 m/min, fr = 0.08 mm/rev, ap = 12.7 mm
 Wet(Internal coolant)

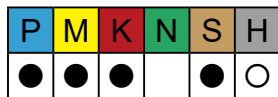




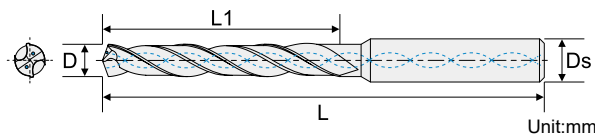
- 3×D Cutting Depth
- 140° SX Tip
- Double Margin
- New UNIX Smooth Coating
- h8 Tolerance



Order No. 型番	D	L1	L	Ds	Order No. 型番	D	L1	L	Ds
DPC30140031UX	1.40	8	50	3	DPC30570030UX	5.70	28	66	6
DPC30150031UX	1.50	10	50	3	DPC30580030UX	5.80	28	66	6
DPC30160031UX	1.60	10	50	3	DPC30590030UX	5.90	28	66	6
DPC30170031UX	1.70	10	50	3	DPC30600030UX	6.00	28	66	6
DPC30180031UX	1.80	12	50	3	DPC30610030UX	6.10	34	79	8
DPC30190031UX	1.90	12	50	3	DPC30620030UX	6.20	34	79	8
DPC30200031UX	2.00	12	50	3	DPC30630030UX	6.30	34	79	8
DPC30210031UX	2.10	12	50	3	DPC30635030UX	6.35(1/4")	34	79	8
DPC30220031UX	2.20	12	50	3	DPC30640030UX	6.40	34	79	8
DPC30230031UX	2.30	14	50	3	DPC30650030UX	6.50	34	79	8
DPC30240031UX	2.40	14	50	3	DPC30660030UX	6.60	34	79	8
DPC30250031UX	2.50	16	50	3	DPC30670030UX	6.70	34	79	8
DPC30260031UX	2.60	16	50	3	DPC30680030UX	6.80	34	79	8
DPC30270031UX	2.70	16	50	3	DPC30690030UX	6.90	34	79	8
DPC30280031UX	2.80	16	50	3	DPC30700030UX	7.00	34	79	8
DPC30290031UX	2.90	16	50	3	DPC30710030UX	7.10	41	79	8
DPC30300031UX	3.00	16	50	3	DPC30720030UX	7.20	41	79	8
DPC30300034UX	3.00	20	60	4	DPC30730030UX	7.30	41	79	8
DPC30310034UX	3.10	20	60	4	DPC30740030UX	7.40	41	79	8
DPC30317034UX	3.17(1/8")	20	60	4	DPC30750030UX	7.50	41	79	8
DPC30320034UX	3.20	20	60	4	DPC30760030UX	7.60	41	79	8
DPC30330034UX	3.30	20	60	4	DPC30770030UX	7.70	41	79	8
DPC30340034UX	3.40	20	60	4	DPC30780030UX	7.80	41	79	8
DPC30350034UX	3.50	20	60	4	DPC30790030UX	7.90	41	79	8
DPC30360034UX	3.60	20	60	4	DPC30794030UX	7.94(5/16)	41	79	8
DPC30370034UX	3.70	20	60	4	DPC30800030UX	8.00	41	79	8
DPC30380034UX	3.80	24	60	4	DPC30810030UX	8.10	47	89	10
DPC30390034UX	3.90	24	60	4	DPC30820030UX	8.20	47	89	10
DPC30400030UX	4.00	24	66	6	DPC30830030UX	8.30	47	89	10
DPC30410030UX	4.10	24	66	6	DPC30840030UX	8.40	47	89	10
DPC30420030UX	4.20	24	66	6	DPC30850030UX	8.50	47	89	10
DPC30430030UX	4.30	24	66	6	DPC30860030UX	8.60	47	89	10
DPC30440030UX	4.40	24	66	6	DPC30870030UX	8.70	47	89	10
DPC30450030UX	4.50	24	66	6	DPC30880030UX	8.80	47	89	10
DPC30460030UX	4.60	24	66	6	DPC30890030UX	8.90	47	89	10
DPC30465030UX	4.65(13/71")	24	66	6	DPC30900030UX	9.00	47	89	10
DPC30470030UX	4.70	24	66	6	DPC30910030UX	9.10	47	89	10
DPC30476030UX	4.76(3/16")	28	66	6	DPC30920030UX	9.20	47	89	10
DPC30480030UX	4.80	28	66	6	DPC30925030UX	9.25(23/64")	47	89	10
DPC30490030UX	4.90	28	66	6	DPC30930030UX	9.30	47	89	10
DPC30500030UX	5.00	28	66	6	DPC30940030UX	9.40	47	89	10
DPC30510030UX	5.10	28	66	6	DPC30950030UX	9.50	47	89	10
DPC30520030UX	5.20	28	66	6	DPC30952030UX	9.52(3/8")	47	89	10
DPC30530030UX	5.30	28	66	6	DPC30960030UX	9.60	47	89	10
DPC30540030UX	5.40	28	66	6	DPC30970030UX	9.70	47	89	10
DPC30550030UX	5.50	28	66	6	DPC30980030UX	9.80	47	89	10
DPC30556030UX	5.56	28	66	6	DPC30990030UX	9.90	47	89	10
DPC30560030UX	5.60	28	66	6	DPC31000030UX	10.00	47	89	10

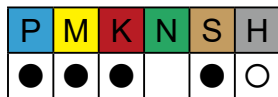


- 3×D Cutting Depth
- 140° SX Tip
- Double Margin
- New UNIX Smooth Coating
- h8 Tolerance

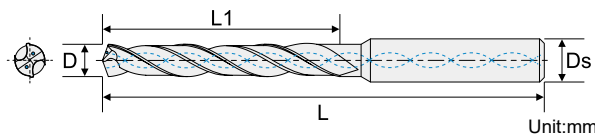


Order No. 型番	D	L1	L	Ds
DPC31010030UX	10.10	55	102	12
DPC31020030UX	10.20	55	102	12
DPC31030030UX	10.30	55	102	12
DPC31040030UX	10.40	55	102	12
DPC31050030UX	10.50	55	102	12
DPC31060030UX	10.60	55	102	12
DPC31070030UX	10.70	55	102	12
DPC31080030UX	10.80	55	102	12
DPC31090030UX	10.90	55	102	12
DPC31100030UX	11.00	55	102	12
DPC31110030UX	11.10	55	102	12
DPC31111030UX	11.11(7/16")	55	102	12
DPC31120030UX	11.20	55	102	12
DPC31130030UX	11.30	55	102	12
DPC31140030UX	11.40	55	102	12
DPC31150030UX	11.50	55	102	12
DPC31160030UX	11.60	55	102	12
DPC31170030UX	11.70	55	102	12
DPC31180030UX	11.80	55	102	12
DPC31190030UX	11.90	55	102	12
DPC31200030UX	12.00	55	102	12
DPC31210030UX	12.10	60	107	14
DPC31220030UX	12.20	60	107	14
DPC31230030UX	12.30	60	107	14
DPC31240030UX	12.40	60	107	14
DPC31250030UX	12.50	60	107	14
DPC31260030UX	12.60	60	107	14
DPC31270030UX	12.70(1/2")	60	107	14
DPC31280030UX	12.80	60	107	14
DPC31290030UX	12.90	60	107	14
DPC31300030UX	13.00	60	107	14
DPC31320030UX	13.20	60	107	14
DPC31330030UX	13.30	60	107	14
DPC31350030UX	13.50	60	107	14
DPC31370030UX	13.70	60	107	14
DPC31380030UX	13.80	60	107	14
DPC31400030UX	14.00	60	107	14
DPC31420030UX	14.20	65	115	16
DPC31429030UX	14.29(9/16")	65	115	16
DPC31430030UX	14.30	65	115	16
DPC31440030UX	14.40	65	115	16
DPC31450030UX	14.50	65	115	16
DPC31470030UX	14.70	65	115	16
DPC31500030UX	15.00	65	115	16
DPC31520030UX	15.20	65	115	16
DPC31550030UX	15.50	65	115	16
DPC31560030UX	15.60	65	115	16
DPC31570030UX	15.70	65	115	16

Order No. 型番	D	L1	L	Ds
DPC31580030UX	15.80	65	115	16
DPC31587030UX	15.87(5/8")	65	115	16
DPC31600030UX	16.00	65	115	16
DPC31650030UX	16.50	73	123	18
DPC31700030UX	17.00	73	123	18
DPC31750030UX	17.50	73	123	18
DPC31800030UX	18.00	73	123	18
DPC31850030UX	18.50	79	131	20
DPC31900030UX	19.00	79	131	20
DPC31905030UX	19.05(3/4")	79	131	20
DPC31950030UX	19.50	79	131	20
DPC32000030UX	20.00	79	131	20

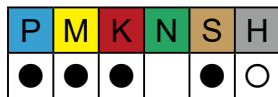


- 5×D Cutting Depth
- 140° SX Tip
- Double Margin
- New UNIX Smooth Coating
- h8 Tolerance

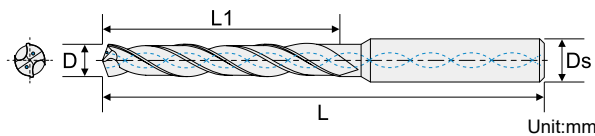


Order No. 型番	D	L1	L	Ds
DPC50140051UX	1.40	10	50	3
DPC50150051UX	1.50	12	50	3
DPC50160051UX	1.60	12	50	3
DPC50170051UX	1.70	12	50	3
DPC50180051UX	1.80	14	50	3
DPC50190051UX	1.90	14	50	3
DPC50200051UX	2.00	14	50	3
DPC50210051UX	2.10	16	50	3
DPC50220051UX	2.20	16	50	3
DPC50230051UX	2.30	18	50	3
DPC50240051UX	2.40	18	50	3
DPC50250051UX	2.50	20	60	3
DPC50260051UX	2.60	20	60	3
DPC50270051UX	2.70	20	60	3
DPC50280051UX	2.80	20	60	3
DPC50290051UX	2.90	22	60	3
DPC50300051UX	3.00	22	60	3
DPC50300054UX	3.00	28	60	4
DPC50317054UX	3.17(1/8")	28	60	4
DPC50325054UX	3.25	28	60	4
DPC50330054UX	3.30	28	60	4
DPC50340054UX	3.40	28	60	4
DPC50350054UX	3.50	28	60	4
DPC50360054UX	3.60	28	60	4
DPC50370054UX	3.70	28	60	4
DPC50380054UX	3.80	36	74	4
DPC50397054UX	3.97(5/32")	36	74	4
DPC50400050UX	4.00	36	74	6
DPC50410050UX	4.10	36	74	6
DPC50420050UX	4.20	36	74	6
DPC50430050UX	4.30	36	74	6
DPC50440050UX	4.40	36	74	6
DPC50450050UX	4.50	36	74	6
DPC50460050UX	4.60	36	74	6
DPC50465050UX	4.65(13/71")	36	74	6
DPC50470050UX	4.70	36	74	6
DPC50476050UX	4.76(3/16")	44	82	6
DPC50480050UX	4.80	44	82	6
DPC50490050UX	4.90	44	82	6
DPC50500050UX	5.00	44	82	6
DPC50510050UX	5.10	44	82	6
DPC50520050UX	5.20	44	82	6
DPC50530050UX	5.30	44	82	6
DPC50540050UX	5.40	44	82	6
DPC50550050UX	5.50	44	82	6
DPC50555050UX	5.55(7/32")	44	82	6
DPC50560050UX	5.60	44	82	6
DPC50570050UX	5.70	44	82	6

Order No. 型番	D	L1	L	Ds
DPC50580050UX	5.80	44	82	6
DPC50590050UX	5.90	44	82	6
DPC50600050UX	6.00	44	82	6
DPC50610050UX	6.10	53	91	8
DPC50620050UX	6.20	53	91	8
DPC50630050UX	6.30	53	91	8
DPC50635050UX	6.35(1/4")	53	91	8
DPC50640050UX	6.40	53	91	8
DPC50650050UX	6.50	53	91	8
DPC50660050UX	6.60	53	91	8
DPC50670050UX	6.70	53	91	8
DPC50680050UX	6.80	53	91	8
DPC50690050UX	6.90	53	91	8
DPC50700050UX	7.00	53	91	8
DPC50710050UX	7.10	53	91	8
DPC50720050UX	7.20	53	91	8
DPC50730050UX	7.30	53	91	8
DPC50740050UX	7.40	53	91	8
DPC50750050UX	7.50	53	91	8
DPC50760050UX	7.60	53	91	8
DPC50770050UX	7.70	53	91	8
DPC50780050UX	7.80	53	91	8
DPC50790050UX	7.90	53	91	8
DPC50794050UX	7.94(5/16")	53	91	8
DPC50800050UX	8.00	53	91	8
DPC50810050UX	8.10	61	103	10
DPC50820050UX	8.20	61	103	10
DPC50830050UX	8.30	61	103	10
DPC50840050UX	8.40	61	103	10
DPC50850050UX	8.50	61	103	10
DPC50860050UX	8.60	61	103	10
DPC50870050UX	8.70	61	103	10
DPC50880050UX	8.80	61	103	10
DPC50890050UX	8.90	61	103	10
DPC50900050UX	9.00	61	103	10
DPC50910050UX	9.10	61	103	10
DPC50920050UX	9.20	61	103	10
DPC50925050UX	9.25(23/64")	61	103	10
DPC50930050UX	9.30	61	103	10
DPC50940050UX	9.40	61	103	10
DPC50950050UX	9.50	61	103	10
DPC50952050UX	9.52(3/8")	61	103	10
DPC50960050UX	9.60	61	103	10
DPC50970050UX	9.70	61	103	10
DPC50980050UX	9.80	61	103	10
DPC50990050UX	9.90	61	103	10
DPC51000050UX	10.00	61	103	10
DPC51010050UX	10.10	71	118	12

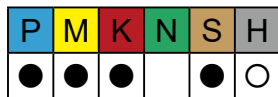


- 5×D Cutting Depth
- 140° SX Tip
- Double Margin
- New UNIX Smooth Coating
- h8 Tolerance



Order No. 型番	D	L1	L	Ds
DPC51020050UX	10.20	71	118	12
DPC51030050UX	10.30	71	118	12
DPC51040050UX	10.40	71	118	12
DPC51050050UX	10.50	71	118	12
DPC51060050UX	10.60	71	118	12
DPC51070050UX	10.70	71	118	12
DPC51080050UX	10.80	71	118	12
DPC51090050UX	10.90	71	118	12
DPC51100050UX	11.00	71	118	12
DPC51110050UX	11.10	71	118	12
DPC51111050UX	11.11(7/16")	71	118	12
DPC51120050UX	11.20	71	118	12
DPC51130050UX	11.30	71	118	12
DPC51140050UX	11.40	71	118	12
DPC51150050UX	11.50	71	118	12
DPC51160050UX	11.60	71	118	12
DPC51170050UX	11.70	71	118	12
DPC51180050UX	11.80	71	118	12
DPC51190050UX	11.90	71	118	12
DPC51200050UX	12.00	71	118	12
DPC51210050UX	12.10	77	124	14
DPC51220050UX	12.20	77	124	14
DPC51230050UX	12.30	77	124	14
DPC51240050UX	12.40	77	124	14
DPC51250050UX	12.50	77	124	14
DPC51260050UX	12.60	77	124	14
DPC51270050UX	12.70(1/2")	77	124	14
DPC51280050UX	12.80	77	124	14
DPC51290050UX	12.90	77	124	14
DPC51300050UX	13.00	77	124	14
DPC51310050UX	13.10	77	124	14
DPC51330050UX	13.30	77	124	14
DPC51340050UX	13.40	77	124	14
DPC51350050UX	13.50	77	124	14
DPC51360050UX	13.60	77	124	14
DPC51370050UX	13.70	77	124	14
DPC51380050UX	13.80	77	124	14
DPC51390050UX	13.90	77	124	14
DPC51400050UX	14.00	77	124	14
DPC51410050UX	14.10	83	133	16
DPC51420050UX	14.20	83	133	16
DPC51429050UX	14.29(9/16")	83	133	16
DPC51430050UX	14.30	83	133	16
DPC51440050UX	14.40	83	133	16
DPC51450050UX	14.50	83	133	16
DPC51460050UX	14.60	83	133	16
DPC51470050UX	14.70	83	133	16
DPC51480050UX	14.80	83	133	16

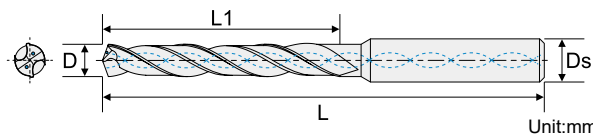
Order No. 型番	D	L1	L	Ds
DPC51490050UX	14.90	83	133	16
DPC51500050UX	15.00	83	133	16
DPC51510050UX	15.10	83	133	16
DPC51520050UX	15.20	83	133	16
DPC51530050UX	15.30	83	133	16
DPC51540050UX	15.40	83	133	16
DPC51550050UX	15.50	83	133	16
DPC51560050UX	15.60	83	133	16
DPC51570050UX	15.70	83	133	16
DPC51580050UX	15.80	83	133	16
DPC51587050UX	15.87(5/8")	83	133	16
DPC51590050UX	15.90	83	133	16
DPC51600050UX	16.00	83	133	16
DPC51650050UX	16.50	93	143	18
DPC51700050UX	17.00	93	143	18
DPC51750050UX	17.50	93	143	18
DPC51800050UX	18.00	93	143	18
DPC52000050UX	20.00	101	153	20



- 7×D Cutting Depth
- 140° SX Tip
- Double Margin
- New UNIX Smooth Coating
- h8 Tolerance

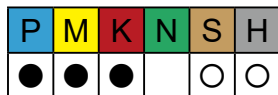


* Made to order 受注生産

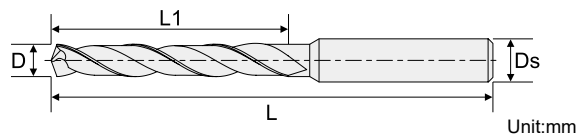


Order No. 型番	D	L1	L	Ds
DPC70400070UX	4.00	40	80	6
DPC70410070UX	4.10	40	80	6
DPC70420070UX	4.20	40	80	6
DPC70430070UX	4.30	45	80	6
DPC70440070UX	4.40	45	80	6
DPC70450070UX	4.50	45	80	6
DPC70460070UX	4.60	45	80	6
DPC70465070UX	4.65(13/71")	45	80	6
DPC70470070UX	4.70	45	80	6
DPC70480070UX	4.80	50	97	6
DPC70490070UX	4.90	50	97	6
DPC70500070UX	5.00	50	97	6
DPC70510070UX	5.10	50	97	6
DPC70520070UX	5.20	50	97	6
DPC70530070UX	5.30	50	97	6
DPC70540070UX	5.40	57	97	6
DPC70550070UX	5.50	57	97	6
DPC70570070UX	5.70	57	97	6
DPC70580070UX	5.80	57	97	6
DPC70590070UX	5.90	57	97	6
DPC70600070UX	6.00	57	97	6
DPC70620070UX	6.20	66	106	8
DPC70630070UX	6.30	66	106	8
DPC70635070UX	6.35(1/4")	66	106	8
DPC70650070UX	6.50	66	106	8
DPC70660070UX	6.60	66	106	8
DPC70670070UX	6.70	66	106	8
DPC70680070UX	6.80	66	106	8
DPC70690070UX	6.90	76	116	8
DPC70700070UX	7.00	76	116	8
DPC70710070UX	7.10	76	116	8
DPC70720070UX	7.20	76	116	8
DPC70750070UX	7.50	76	116	8
DPC70760070UX	7.60	76	116	8
DPC70770070UX	7.70	76	116	8
DPC70780070UX	7.80	76	116	8
DPC70800070UX	8.00	76	116	8
DPC70810070UX	8.10	87	131	10
DPC70820070UX	8.20	87	131	10
DPC70840070UX	8.40	87	131	10
DPC70850070UX	8.50	87	131	10
DPC70860070UX	8.60	87	131	10
DPC70870070UX	8.70	87	131	10
DPC70880070UX	8.80	87	131	10
DPC70890070UX	8.90	87	131	10
DPC70900070UX	9.00	95	139	10
DPC70910070UX	9.10	95	139	10
DPC70920070UX	9.20	95	139	10

Order No. 型番	D	L1	L	Ds
DPC70930070UX	9.30	95	139	10
DPC70940070UX	9.40	95	139	10
DPC70950070UX	9.50	95	139	10
DPC70952070UX	9.52	95	139	10
DPC70970070UX	9.70	95	139	10
DPC70980070UX	9.80	95	139	10
DPC71000070UX	10.00	95	139	10
DPC71020070UX	10.20	106	155	12
DPC71030070UX	10.30	106	155	12
DPC71050070UX	10.50	106	155	12
DPC71072070UX	10.72(27/64")	106	155	12
DPC71080070UX	10.80	106	155	12
DPC71100070UX	11.00	106	155	12
DPC71120070UX	11.20	114	155	12
DPC71150070UX	11.50	114	155	12
DPC71180070UX	11.80	114	155	12
DPC71200070UX	12.00	114	155	12
DPC71210070UX	12.10	133	182	14
DPC71220070UX	12.20	133	182	14
DPC71230070UX	12.30	133	182	14
DPC71250070UX	12.50	133	182	14
DPC71270070UX	12.70	133	182	14
DPC71300070UX	13.00	133	182	14
DPC71350070UX	13.50	133	182	14
DPC71400070UX	14.00	133	182	14
DPC71410070UX	14.10	152	200	16
DPC71420070UX	14.20	152	200	16
DPC71450070UX	14.50	152	200	16
DPC71500070UX	15.00	152	200	16
DPC71550070UX	15.50	152	200	16
DPC71587070UX	15.87	152	200	16
DPC71600070UX	16.00	152	200	16

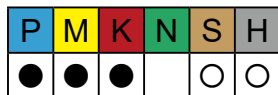


- 3×D Cutting Depth
- SX Tip design, Tip Angle (D < 3 : 130°, D ≥ 3 : 140°)
- New UNIX Smooth Coating
- h8 Tolerance



Unit:mm

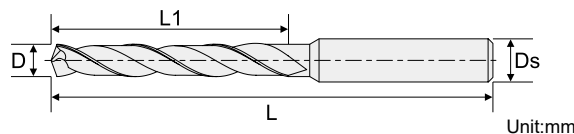
Order No. 型番	D	L1	L	Ds	Order No. 型番	D	L1	L	Ds
DPN30030033UX	0.30	2	38	3	DPN30350030UX	3.50	20	62	6
DPN30050033UX	0.50	3	38	3	DPN30360030UX	3.60	20	62	6
DPN30060033UX	0.60	3	38	3	DPN30370030UX	3.70	20	62	6
DPN30070033UX	0.70	3	38	3	DPN30380030UX	3.80	24	66	6
DPN30080033UX	0.80	4	38	3	DPN30390030UX	3.90	24	66	6
DPN30090033UX	0.90	4	38	3	DPN30397030UX	3.97(5/32")	24	66	6
DPN30100033UX	1.00	4	38	3	DPN30400030UX	4.00	24	66	6
DPN30110033UX	1.10	6	38	3	DPN30410030UX	4.10	24	66	6
DPN30120033UX	1.20	6	38	3	DPN30420030UX	4.20	24	66	6
DPN30130033UX	1.30	6	38	3	DPN30430030UX	4.30	24	66	6
DPN30140033UX	1.40	6	38	3	DPN30440030UX	4.40	24	66	6
DPN30150033UX	1.50	6	38	3	DPN30450030UX	4.50	24	66	6
DPN30160033UX	1.60	8	38	3	DPN30460030UX	4.60	24	66	6
DPN30170033UX	1.70	8	38	3	DPN30465030UX	4.65(13/71")	24	66	6
DPN30180033UX	1.80	10	50	3	DPN30470030UX	4.70	24	66	6
DPN30190033UX	1.90	10	50	3	DPN30476030UX	4.76(3/16")	28	66	6
DPN30200033UX	2.00	10	50	3	DPN30480030UX	4.80	28	66	6
DPN30210033UX	2.10	12	50	3	DPN30490030UX	4.90	28	66	6
DPN30220033UX	2.20	12	50	3	DPN30500030UX	5.00	28	66	6
DPN30230033UX	2.30	12	50	3	DPN30510030UX	5.10	28	66	6
DPN30240033UX	2.40	12	50	3	DPN30520030UX	5.20	28	66	6
DPN30250033UX	2.50	16	50	3	DPN30530030UX	5.30	28	66	6
DPN30260033UX	2.60	16	50	3	DPN30540030UX	5.40	28	66	6
DPN30270033UX	2.70	16	50	3	DPN30550030UX	5.50	28	66	6
DPN30280033UX	2.80	16	50	3	DPN30556030UX	5.56(7/32")	28	66	6
DPN30290033UX	2.90	16	50	3	DPN30560030UX	5.60	28	66	6
DPN30300034UX	3.00	20	60	4	DPN30570030UX	5.70	28	66	6
DPN30310034UX	3.10	20	60	4	DPN30580030UX	5.80	28	66	6
DPN30317034UX	3.17(1/8")	20	60	4	DPN30590030UX	5.90	28	66	6
DPN30320034UX	3.20	20	60	4	DPN30600030UX	6.00	28	66	6
DPN30325034UX	3.25(5/39")	20	60	4	DPN30610030UX	6.10	34	79	8
DPN30330034UX	3.30	20	60	4	DPN30620030UX	6.20	34	79	8
DPN30340034UX	3.40	20	60	4	DPN30630030UX	6.30	34	79	8
DPN30350034UX	3.50	20	60	4	DPN30635030UX	6.35(1/4")	34	79	8
DPN30360034UX	3.60	20	60	4	DPN30640030UX	6.40	34	79	8
DPN30370034UX	3.70	20	60	4	DPN30650030UX	6.50	34	79	8
DPN30380034UX	3.80	24	60	4	DPN30660030UX	6.60	34	79	8
DPN30390034UX	3.90	24	60	4	DPN30670030UX	6.70	34	79	8
DPN30397034UX	3.97(5/32")	24	60	4	DPN30680030UX	6.80	34	79	8
DPN30400034UX	4.00	24	60	4	DPN30690030UX	6.90	34	79	8
DPN30300030UX	3.00	20	62	6	DPN30700030UX	7.00	34	79	8
DPN30310030UX	3.10	20	62	6	DPN30710030UX	7.10	41	79	8
DPN30317030UX	3.17(1/8")	20	62	6	DPN30720030UX	7.20	41	79	8
DPN30320030UX	3.20	20	62	6	DPN30730030UX	7.30	41	79	8
DPN30323030UX	3.23	20	62	6	DPN30740030UX	7.40	41	79	8
DPN30325030UX	3.25(5/39")	20	62	6	DPN30750030UX	7.50	41	79	8
DPN30330030UX	3.30	20	62	6	DPN30760030UX	7.60	41	79	8
DPN30340030UX	3.40	20	62	6	DPN30770030UX	7.70	41	79	8



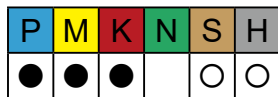
- 3×D Cutting Depth
- h8 Tolerance

- 140° SX Tip

- New UNIX Smooth Coating



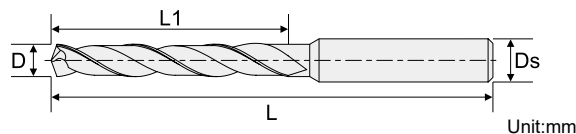
Order No. 型番	D	L1	L	Ds	Order No. 型番	D	L1	L	Ds
DPN30780030UX	7.80	41	79	8	DPN31220030UX	12.20	60	107	14
DPN30790030UX	7.90	41	79	8	DPN31230030UX	12.30	60	107	14
DPN30794030UX	7.94(5/16")	41	79	8	DPN31240030UX	12.40	60	107	14
DPN30800030UX	8.00	41	79	8	DPN31250030UX	12.50	60	107	14
DPN30810030UX	8.10	47	89	10	DPN31260030UX	12.60	60	107	14
DPN30820030UX	8.20	47	89	10	DPN31270030UX	12.70(1/2")	60	107	14
DPN30830030UX	8.30	47	89	10	DPN31280030UX	12.80	60	107	14
DPN30840030UX	8.40	47	89	10	DPN31290030UX	12.90	60	107	14
DPN30850030UX	8.50	47	89	10	DPN31300030UX	13.00	60	107	14
DPN30860030UX	8.60	47	89	10	DPN31320030UX	13.20	60	107	14
DPN30870030UX	8.70	47	89	10	DPN31330030UX	13.30	60	107	14
DPN30880030UX	8.80	47	89	10	DPN31350030UX	13.50	60	107	14
DPN30890030UX	8.90	47	89	10	DPN31370030UX	13.70	60	107	14
DPN30900030UX	9.00	47	89	10	DPN31380030UX	13.80	60	107	14
DPN30910030UX	9.10	47	89	10	DPN31400030UX	14.00	60	107	14
DPN30920030UX	9.20	47	89	10	DPN31420030UX	14.20	65	115	16
DPN30925030UX	9.25(23/64")	47	89	10	DPN31429030UX	14.29(9/16")	65	115	16
DPN30930030UX	9.30	47	89	10	DPN31430030UX	14.30	65	115	16
DPN30940030UX	9.40	47	89	10	DPN31440030UX	14.40	65	115	16
DPN30950030UX	9.50	47	89	10	DPN31450030UX	14.50	65	115	16
DPN30952030UX	9.52(3/8")	47	89	10	DPN31470030UX	14.70	65	115	16
DPN30960030UX	9.60	47	89	10	DPN31500030UX	15.00	65	115	16
DPN30970030UX	9.70	47	89	10	DPN31520030UX	15.20	65	115	16
DPN30980030UX	9.80	47	89	10	DPN31550030UX	15.50	65	115	16
DPN30990030UX	9.90	47	89	10	DPN31560030UX	15.60	65	115	16
DPN31000030UX	10.00	47	89	10	DPN31570030UX	15.70	65	115	16
DPN31010030UX	10.10	55	102	12	DPN31580030UX	15.80	65	115	16
DPN31020030UX	10.20	55	102	12	DPN31587030UX	15.87(5/8")	65	115	16
DPN31030030UX	10.30	55	102	12	DPN31600030UX	16.00	65	115	16
DPN31040030UX	10.40	55	102	12	DPN31650030UX	16.50	73	123	18
DPN31050030UX	10.50	55	102	12	DPN31700030UX	17.00	73	123	18
DPN31060030UX	10.60	55	102	12	DPN31750030UX	17.50	73	123	18
DPN31070030UX	10.70	55	102	12	DPN31800030UX	18.00	73	123	18
DPN31080030UX	10.80	55	102	12	DPN31850030UX	18.50	79	131	20
DPN31090030UX	10.90	55	102	12	DPN31900030UX	19.00	79	131	20
DPN31100030UX	11.00	55	102	12	DPN31905030UX	19.05(3/4")	79	131	20
DPN31110030UX	11.10	55	102	12	DPN31950030UX	19.50	79	131	20
DPN31111030UX	11.11(7/16")	55	102	12	DPN32000030UX	20.00	79	131	20
DPN31120030UX	11.20	55	102	12					
DPN31130030UX	11.30	55	102	12					
DPN31140030UX	11.40	55	102	12					
DPN31150030UX	11.50	55	102	12					
DPN31160030UX	11.60	55	102	12					
DPN31170030UX	11.70	55	102	12					
DPN31180030UX	11.80	55	102	12					
DPN31190030UX	11.90	55	102	12					
DPN31200030UX	12.00	55	102	12					
DPN31210030UX	12.10	60	107	14					



- 5×D Cutting Depth
- h8 Tolerance

- 140° SX Tip

- New UNIX Smooth Coating



Order No. 型番	D	L1	L	Ds
DPN50300050UX	3.00	28	66	6
DPN50317050UX	3.17(1/8")	28	66	6
DPN50325050UX	3.25	28	66	6
DPN50330050UX	3.30	28	66	6
DPN50340050UX	3.40	28	66	6
DPN50350050UX	3.50	28	66	6
DPN50357050UX	3.57	28	66	6
DPN50360050UX	3.60	28	66	6
DPN50370050UX	3.70	28	66	6
DPN50380050UX	3.80	36	74	6
DPN50390050UX	3.90	36	74	6
DPN50397050UX	3.97(5/32")	36	74	6
DPN50400050UX	4.00	36	74	6
DPN50410050UX	4.10	36	74	6
DPN50420050UX	4.20	36	74	6
DPN50430050UX	4.30	36	74	6
DPN50440050UX	4.40	36	74	6
DPN50450050UX	4.50	36	74	6
DPN50460050UX	4.60	36	74	6
DPN50465050UX	4.65(13/71")	36	74	6
DPN50470050UX	4.70	36	74	6
DPN50476050UX	4.76(3/16")	44	82	6
DPN50480050UX	4.80	44	82	6
DPN50490050UX	4.90	44	82	6
DPN50500050UX	5.00	44	82	6
DPN50510050UX	5.10	44	82	6
DPN50520050UX	5.20	44	82	6
DPN50530050UX	5.30	44	82	6
DPN50540050UX	5.40	44	82	6
DPN50550050UX	5.50	44	82	6
DPN50555050UX	5.55	44	82	6
DPN50556050UX	5.56(7/32")	44	82	6
DPN50560050UX	5.60	44	82	6
DPN50570050UX	5.70	44	82	6
DPN50580050UX	5.80	44	82	6
DPN50590050UX	5.90	44	82	6
DPN50600050UX	6.00	44	82	6
DPN50610050UX	6.10	53	91	8
DPN50620050UX	6.20	53	91	8
DPN50630050UX	6.30	53	91	8
DPN50635050UX	6.35(1/4")	53	91	8
DPN50640050UX	6.40	53	91	8
DPN50650050UX	6.50	53	91	8
DPN50660050UX	6.60	53	91	8
DPN50670050UX	6.70	53	91	8
DPN50680050UX	6.80	53	91	8
DPN50690050UX	6.90	53	91	8
DPN50700050UX	7.00	53	91	8

Order No. 型番	D	L1	L	Ds
DPN50710050UX	7.10	53	91	8
DPN50720050UX	7.20	53	91	8
DPN50730050UX	7.30	53	91	8
DPN50740050UX	7.40	53	91	8
DPN50750050UX	7.50	53	91	8
DPN50760050UX	7.60	53	91	8
DPN50770050UX	7.70	53	91	8
DPN50780050UX	7.80	53	91	8
DPN50790050UX	7.90	53	91	8
DPN50794050UX	7.94(5/16")	53	91	8
DPN50800050UX	8.00	53	91	8
DPN50810050UX	8.10	61	103	10
DPN50820050UX	8.20	61	103	10
DPN50830050UX	8.30	61	103	10
DPN50840050UX	8.40	61	103	10
DPN50850050UX	8.50	61	103	10
DPN50860050UX	8.60	61	103	10
DPN50870050UX	8.70	61	103	10
DPN50880050UX	8.80	61	103	10
DPN50890050UX	8.90	61	103	10
DPN50900050UX	9.00	61	103	10
DPN50910050UX	9.10	61	103	10
DPN50920050UX	9.20	61	103	10
DPN50925050UX	9.25(23/64")	61	103	10
DPN50930050UX	9.30	61	103	10
DPN50940050UX	9.40	61	103	10
DPN50950050UX	9.50	61	103	10
DPN50952050UX	9.52(3/8")	61	103	10
DPN50960050UX	9.60	61	103	10
DPN50970050UX	9.70	61	103	10
DPN50980050UX	9.80	61	103	10
DPN50990050UX	9.90	61	103	10
DPN51000050UX	10.00	61	103	10
DPN51010050UX	10.10	71	118	12
DPN51020050UX	10.20	71	118	12
DPN51030050UX	10.30	71	118	12
DPN51040050UX	10.40	71	118	12
DPN51050050UX	10.50	71	118	12
DPN51060050UX	10.60	71	118	12
DPN51070050UX	10.70	71	118	12
DPN51080050UX	10.80	71	118	12
DPN51090050UX	10.90	71	118	12
DPN51100050UX	11.00	71	118	12
DPN51110050UX	11.10	71	118	12
DPN5111050UX	11.11(7/16")	71	118	12
DPN51120050UX	11.20	71	118	12
DPN51130050UX	11.30	71	118	12
DPN51140050UX	11.40	71	118	12

Recommended Cutting Conditions

推奨切削条件

DPC Series for 3D~30D (Internal Coolant 内部給油)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
			Hardness	Vc (m/min)	Feed (mm/rev)	Vc (m/min)	Feed (mm/rev)	Vc (m/min)
P	Mild Steel	(<180HB)	70~120	0.06~0.2	90~130	0.12~0.3	110~150	0.2~0.4
	Carbon Steel	(180~280HB)	70~110	0.06~0.2	90~120	0.12~0.3	110~140	0.2~0.4
	Alloy Steel	(280~350HB)	60~100	0.06~0.18	65~110	0.12~0.27	80~120	0.2~0.35
M	Stainless Steel	(<200HB)	35~60	0.05~0.15	45~80	0.1~0.25	55~100	0.15~0.3
K	Cast Iron	(<350Mpa)	70~100	0.6~0.2	80~120	0.12~0.3	90~140	0.2~0.4
	Ductile Cast Iron	(<450Mpa)	50~80	0.6~0.2	60~90	0.12~0.3	70~110	0.2~0.4
N	Aluminum <12% Si	-	80~140	0.1~0.25	100~160	0.15~0.35	110~180	0.3~0.45
	Aluminum >12% Si	-	70~120	0.1~0.25	90~130	0.15~0.35	100~150	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

Warning :

For deep hole drills(10xD~30xD), need reduce the Vc to 90% and require an initial pilot hole to help guide the drill.

DPN Series for 3D~5D (External Coolant 外部給油)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
			Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)
P	Mild Steel	(<180HB)	45~75	0.06~0.2	55~85	0.12~0.3	60~100	0.2~0.4
	Carbon Steel	(180~280HB)	40~70	0.06~0.2	50~80	0.12~0.3	55~90	0.2~0.4
	Alloy Steel	(280~350HB)	35~65	0.06~0.18	40~75	0.12~0.27	50~85	0.2~0.35
M	Stainless Steel	(<200HB)	25~45	0.05~0.15	25~50	0.1~0.25	30~60	0.15~0.3
K	Cast Iron	(<350Mpa)	45~65	0.06~0.2	50~75	0.12~0.3	55~85	0.2~0.4
	Ductile Cast Iron	(<450Mpa)	40~60	0.06~0.2	45~70	0.12~0.3	50~80	0.2~0.4
N	Aluminum <12% Si	-	65~105	0.1~0.25	65~115	0.15~0.35	70~130	0.3~0.45
	Aluminum >12% Si	-	55~95	0.1~0.25	60~110	0.15~0.35	65~120	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

DPN Series for 10D~50D (External Coolant 外部給油)

Dia. (D)	EFF-L (L2)	LD	Carbon steels (180~250HB)			Pre-hardened steels (35~45HRC)			Stainless steels (25~35HRC)			Hardened steels (45~55HRC)		
			RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)
0.1	1	10	25,465	76	0.01	22,282	67	0.007	23,873	72	0.01	20,690	41	0.005
0.1	3	30	25,465	76	0.01	22,282	67	0.007	23,873	72	0.01	20,690	41	0.005
0.1	5	50	20,372	61	0.01	17,825	53	0.007	19,099	57	0.01	16,552	33	0.005
0.15	1.5	10	23,343	70	0.015	20,160	60	0.0105	21,221	64	0.015	19,099	38	0.0075
0.15	4.5	30	23,343	70	0.015	20,160	60	0.0105	21,221	64	0.015	19,099	38	0.0075
0.15	7.5	50	18,674	56	0.015	16,128	48	0.0105	16,977	51	0.015	15,279	31	0.0075
0.2	2	10	20,690	83	0.02	17,507	70	0.014	19,099	76	0.02	16,711	50	0.01
0.2	6	30	20,690	83	0.02	17,507	70	0.014	19,099	76	0.02	16,711	50	0.01
0.2	10	50	16,552	66	0.02	14,006	56	0.014	15,279	61	0.02	13,369	40	0.01
0.3	3	10	14,854	59	0.03	12,732	51	0.021	13,793	55	0.03	12,202	37	0.015
0.3	9	30	14,854	59	0.03	12,732	51	0.021	13,793	55	0.03	12,202	37	0.015
0.3	15	50	11,884	48	0.03	10,186	41	0.021	11,035	44	0.03	9,762	29	0.015
0.4	4	10	12,335	49	0.04	11,539	46	0.028	11,937	48	0.04	10,743	43	0.02
0.4	12	30	12,335	49	0.04	11,539	46	0.028	11,937	48	0.04	10,743	43	0.02
0.4	20	50	9,868	39	0.04	9,231	37	0.028	9,549	38	0.04	8,594	34	0.02
0.5	5	10	9,868	49	0.05	9,231	46	0.035	9,549	48	0.05	8,594	43	0.025
0.5	15	30	9,868	49	0.05	9,231	46	0.035	9,549	48	0.05	8,594	43	0.025
0.5	25	50	7,894	39	0.05	7,385	37	0.035	7,639	38	0.05	6,875	34	0.025
0.6	6	10	8,223	49	0.06	7,692	46	0.042	7,958	48	0.06	7,162	43	0.03
0.6	18	30	8,223	49	0.06	7,692	46	0.042	7,958	48	0.06	7,162	43	0.03
0.6	30	50	6,578	39	0.06	6,154	37	0.042	6,366	38	0.06	5,730	34	0.03
0.7	7	10	7,048	49	0.07	6,594	46	0.049	6,821	48	0.07	6,139	43	0.035
0.7	21	30	7,048	49	0.07	6,594	46	0.049	6,821	48	0.07	6,139	43	0.035
0.7	35	50	5,639	39	0.07	5,275	37	0.049	5,457	38	0.07	4,911	34	0.035
0.8	8	10	6,167	49	0.08	5,769	46	0.056	5,968	48	0.08	5,371	43	0.04
0.8	24	30	6,167	49	0.08	5,769	46	0.056	5,968	48	0.08	5,371	43	0.04
0.8	40	50	4,934	39	0.08	4,615	37	0.056	4,775	38	0.08	4,297	34	0.04
0.9	9	10	5,482	49	0.09	5,128	46	0.063	5,305	48	0.09	4,775	43	0.045
0.9	27	30	5,482	49	0.09	5,128	46	0.063	5,305	48	0.09	4,775	43	0.045
0.9	45	50	4,386	39	0.09	4,103	37	0.063	4,244	38	0.09	3,820	34	0.045
1	10	10	4,934	49	0.1	4,615	46	0.07	4,775	48	0.1	4,297	43	0.05
1	30	30	4,934	49	0.1	4,615	46	0.07	4,775	48	0.1	4,297	43	0.05
1	50	50	3,947	39	0.1	3,692	37	0.07	3,820	38	0.1	3,438	34	0.05

Warning :

1. Always use Peck drilling (G83 program).
2. Use water-soluble or oil-based coolant should be to ensure chip removal.