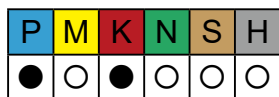


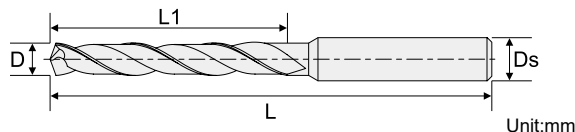
DPN - for Universal · External Coolant · 5D



Specification

- 5×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8 standard / m7 possible on request
- SX Design

※Peck drilling (G73/G83 code) is recommended for M, S, H materials.

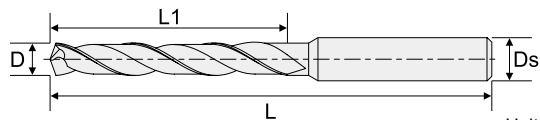


Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPN503000501	3.00	28	66	6	DPN507100501	7.10	53	91	8
DPN503170501	3.17(1/8")	28	66	6	DPN507200501	7.20	53	91	8
DPN503250501	3.25	28	66	6	DPN507300501	7.30	53	91	8
DPN503300501	3.30	28	66	6	DPN507400501	7.40	53	91	8
DPN503400501	3.40	28	66	6	DPN507500501	7.50	53	91	8
DPN503500501	3.50	28	66	6	DPN507600501	7.60	53	91	8
DPN503570501	3.57	28	66	6	DPN507700501	7.70	53	91	8
DPN503600501	3.60	28	66	6	DPN507800501	7.80	53	91	8
DPN503700501	3.70	28	66	6	DPN507900501	7.90	53	91	8
DPN503800501	3.80	36	74	6	DPN507940501	7.94(5/16")	53	91	8
DPN503900501	3.90	36	74	6	DPN508000501	8.00	53	91	8
DPN503970501	3.97(5/32")	36	74	6	DPN508100501	8.10	61	103	10
DPN504000501	4.00	36	74	6	DPN508200501	8.20	61	103	10
DPN504100501	4.10	36	74	6	DPN508300501	8.30	61	103	10
DPN504200501	4.20	36	74	6	DPN508400501	8.40	61	103	10
DPN504300501	4.30	36	74	6	DPN508500501	8.50	61	103	10
DPN504400501	4.40	36	74	6	DPN508600501	8.60	61	103	10
DPN504500501	4.50	36	74	6	DPN508700501	8.70	61	103	10
DPN504600501	4.60	36	74	6	DPN508800501	8.80	61	103	10
DPN504650501	4.65(13/71")	36	74	6	DPN508900501	8.90	61	103	10
DPN504700501	4.70	36	74	6	DPN509000501	9.00	61	103	10
DPN504760501	4.76(3/16")	44	82	6	DPN509100501	9.10	61	103	10
DPN504800501	4.80	44	82	6	DPN509200501	9.20	61	103	10
DPN504900501	4.90	44	82	6	DPN509250501	9.25(23/64")	61	103	10
DPN505000501	5.00	44	82	6	DPN509300501	9.30	61	103	10
DPN505100501	5.10	44	82	6	DPN509400501	9.40	61	103	10
DPN505200501	5.20	44	82	6	DPN509500501	9.50	61	103	10
DPN505300501	5.30	44	82	6	DPN509520501	9.52(3/8")	61	103	10
DPN505400501	5.40	44	82	6	DPN509600501	9.60	61	103	10
DPN505500501	5.50	44	82	6	DPN509700501	9.70	61	103	10
DPN505550501	5.55	44	82	6	DPN509800501	9.80	61	103	10
DPN505560501	5.56(7/32")	44	82	6	DPN509900501	9.90	61	103	10
DPN505600501	5.60	44	82	6	DPN510000501	10.00	61	103	10
DPN505700501	5.70	44	82	6	DPN510100501	10.10	71	118	12
DPN505800501	5.80	44	82	6	DPN510200501	10.20	71	118	12
DPN505900501	5.90	44	82	6	DPN510300501	10.30	71	118	12
DPN506000501	6.00	44	82	6	DPN510400501	10.40	71	118	12
DPN506100501	6.10	53	91	8	DPN510500501	10.50	71	118	12
DPN506200501	6.20	53	91	8	DPN510600501	10.60	71	118	12
DPN506300501	6.30	53	91	8	DPN510700501	10.70	71	118	12
DPN506350501	6.35(1/4")	53	91	8	DPN510800501	10.80	71	118	12
DPN506400501	6.40	53	91	8	DPN510900501	10.90	71	118	12
DPN506500501	6.50	53	91	8	DPN511000501	11.00	71	118	12
DPN506600501	6.60	53	91	8	DPN511100501	11.10	71	118	12
DPN506700501	6.70	53	91	8	DPN511110501	11.11(7/16")	71	118	12
DPN506800501	6.80	53	91	8	DPN511200501	11.20	71	118	12
DPN506900501	6.90	53	91	8	DPN511300501	11.30	71	118	12
DPN507000501	7.00	53	91	8	DPN511400501	11.40	71	118	12

Cutting conditions : Table 02

P	M	K	N	S	H
●	○	●	○	○	○

· 5xD Cutting depth · Reinforced Shank · 140° Tip Angle · External Coolant · UNIX Coating
 · Tolerance h8 standard / m7 possible on request · SX Design
 ※Peck drilling (G73/G83 code) is recommended for M, S, H materials.



Order No.	D	L1	L	Ds
DPN511500501	11.50	71	118	12
DPN511600501	11.60	71	118	12
DPN511700501	11.70	71	118	12
DPN511800501	11.80	71	118	12
DPN511900501	11.90	71	118	12
DPN512000501	12.00	71	118	12
DPN512100501	12.10	77	124	14
DPN512200501	12.20	77	124	14
DPN512300501	12.30	77	124	14
DPN512400501	12.40	77	124	14
DPN512500501	12.50	77	124	14
DPN512600501	12.60	77	124	14
DPN512700501	12.70(1/2")	77	124	14
DPN512800501	12.80	77	124	14
DPN512900501	12.90	77	124	14
DPN513000501	13.00	77	124	14
DPN513100501	13.10	77	124	14
DPN513300501	13.30	77	124	14
DPN513400501	13.40	77	124	14
DPN513500501	13.50	77	124	14
DPN513600501	13.60	77	124	14
DPN513700501	13.70	77	124	14
DPN513800501	13.80	77	124	14
DPN513900501	13.90	77	124	14
DPN514000501	14.00	77	124	14
DPN514100501	14.10	83	133	16
DPN514200501	14.20	83	133	16
DPN514290501	14.29(9/16")	83	133	16
DPN514300501	14.30	83	133	16
DPN514400501	14.40	83	133	16
DPN514500501	14.50	83	133	16
DPN514600501	14.60	83	133	16
DPN514700501	14.70	83	133	16
DPN514800501	14.80	83	133	16
DPN514900501	14.90	83	133	16
DPN515000501	15.00	83	133	16
DPN515100501	15.10	83	133	16
DPN515200501	15.20	83	133	16
DPN515300501	15.30	83	133	16
DPN515400501	15.40	83	133	16
DPN515500501	15.50	83	133	16
DPN515600501	15.60	83	133	16
DPN515700501	15.70	83	133	16
DPN515800501	15.80	83	133	16
DPN515870501	15.87(5/8")	83	133	16
DPN515900501	15.90	83	133	16
DPN516000501	16.00	83	133	16
DPN516500501	16.50	93	143	18

B017

Recommended Cutting Conditions

Table 01 - DPC Series (Internal Coolant)

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)	Feed (mm/rev)
P	Mild Steel	(<180HB)	70~120	0.1~0.2	90~130	0.15~0.3	110~150	0.25~0.4
	Carbon Steel	(180~280HB)	70~110	0.1~0.2	90~120	0.15~0.3	110~140	0.25~0.4
	Alloy Steel	(280~350HB)	60~100	0.08~0.18	65~110	0.15~0.27	80~120	0.22~0.35
M	Stainless Steel	(<200HB)	35~60	0.06~0.15	45~80	0.1~0.25	55~100	0.2~0.3
K	Cast Iron	(<350Mpa)	70~100	0.1~0.2	80~120	0.15~0.3	90~140	0.25~0.4
	Ductile Cast Iron	(<450Mpa)	50~80	0.1~0.2	60~90	0.15~0.3	70~110	0.25~0.4
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~20xD), need reduce the Vc to 90% and require an initial pilot hole to help guide the drill.

Table 02 - DPN, DFN, DGN Series (External Coolant)

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)	Feed (mm/rev)
P	Mild Steel	(<180HB)	40~70	0.1~0.2	55~85	0.15~0.3	60~100	0.25~0.4
	Carbon Steel	(180~280HB)	35~65	0.1~0.2	50~80	0.15~0.3	55~90	0.25~0.4
	Alloy Steel	(280~350HB)	30~60	0.08~0.18	40~75	0.15~0.27	50~85	0.22~0.35
M	Stainless Steel	(<200HB)	20~40	0.06~0.15	25~50	0.1~0.25	30~60	0.2~0.3
K	Cast Iron	(<350Mpa)	40~60	0.1~0.2	50~75	0.15~0.3	55~85	0.25~0.4
	Ductile Cast Iron	(<450Mpa)	35~55	0.1~0.2	45~70	0.15~0.3	50~80	0.25~0.4
N	Aluminum <12% Si	-	60~100	0.1~0.25	65~115	0.15~0.35	70~130	0.3~0.45
	Aluminum >12% Si	-	50~90	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

Warning :For slope drilling, please adjust cutting data according to inclined angle

1. For inclined angle under 20 degree, reduce the feed to 50%
2. For inclined angle between 20 to 50 degree, reduce the feed to 40%, and reduce rotation to 70%
3. For inclined angle between 50 to 65 degree, reduce the feed to 30%, and reduce rotation to 70%
4. Not recommend to side milling