



World Leaders in
Tools Manufacturing

CARMET TOOLS & INSERTS Ltd.



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INDEXABLE DRILLS & Drill Tips





Indexable Head Drills with Coolant Holes and a Cylindrical Shank



<u>MINIMUM CUTTING DIAMETER</u>	<u>MAXIMUM CUTTING DIAMETER</u>	<u>DRILL DIAMETER X LENGTH RATIO</u>	<u>MAXIMUM DEPTH OF CUT</u>	<u>SHANK DIAMETER</u>
0.313"	0.334"	3XD	3.071"	0.500"
0.335"	0.354"	3XD	2.835"	0.500"
0.354"	0.374"	3XD	2.598"	0.500"

0.374"	0.393"	3XD	2.362"	0.500"
0.394"	0.413"	3XD	2.126"	0.625"
0.413"	0.433"	3XD	1.890"	0.625"
0.433"	0.452"	3XD	1.713"	0.625"
0.453"	0.472"	3XD	1.594"	0.625"
0.472"	0.492"	3XD	1.476"	0.625"
0.492"	0.511"	3XD	1.358"	0.625"
0.512"	0.531"	3XD	1.240"	0.625"
0.531"	0.551"	3XD	1.222"	0.625"
0.551"	0.570"	3XD	1.004"	0.625"
0.571"	0.590"	3XD	1.063"	0.625"
0.591"	0.630"	3XD	1.181"	0.750"
0.630"	0.669"	3XD	1.299"	0.750"
0.669"	0.708"	3XD	1.417"	0.750"

0.709"	0.748"	3XD	1.535"	0.750"
0.748"	0.787"	3XD	1.654"	0.750"
0.787"	0.826"	3XD	1.772"	1.000"
0.827"	0.866"	3XD	2.008"	1.000"
0.866"	0.905"	3XD	2.244"	1.000"
0.906"	0.944"	3XD	2.480"	1.000"
0.945"	0.983"	3XD	2.717"	1.000"
0.984"	1.004"	3XD	2.953"	1.000"
0.313"	0.334"	5XD	8.189"	0.500"
0.335"	0.354"	5XD	7.559"	0.500"
0.354"	0.374"	5XD	6.929"	0.500"
0.374"	0.393"	5XD	6.299"	0.500"
0.394"	0.413"	5XD	5.669"	0.625"
0.413"	0.433"	5XD	5.039"	0.625"

0.433"	0.452"	5XD	4.567"	0.625"
0.453"	0.472"	5XD	4.252"	0.625"
0.472"	0.492"	5XD	3.937"	0.625"
0.492"	0.511"	5XD	3.622"	0.625"
0.512"	0.531"	5XD	3.307"	0.625"
0.531"	0.551"	5XD	2.992"	0.625"
0.551"	0.570"	5XD	2.677"	0.625"
0.571"	0.590"	5XD	2.835"	0.625"
0.591"	0.630"	5XD	3.150"	0.750"
0.630"	0.669"	5XD	3.465"	0.750"
0.669"	0.708"	5XD	3.780"	0.750"
0.709"	0.748"	5XD	4.094"	0.750"
0.748"	0.787"	5XD	4.409"	0.750"
0.787"	0.826"	5XD	4.724"	1.000"

0.827"	0.866"	5XD	5.354"	1.000"
0.866"	0.905"	5XD	5.984"	1.000"
0.906"	0.944"	5XD	6.614"	1.000"
0.945"	0.983"	5XD	7.244"	1.000"
0.984"	1.004"	5XD	7.874"	1.000"
0.313"	0.334"	8XD	4.921"	0.500"
0.335"	0.354"	8XD	4.528"	0.500"
0.354"	0.374"	8XD	4.134"	0.500"
0.374"	0.393"	8XD	3.740"	0.500"
0.394"	0.413"	8XD	3.346"	0.625"
0.413"	0.433"	8XD	2.953"	0.625"
0.433"	0.452"	8XD	2.756"	0.625"
0.453"	0.472"	8XD	2.559"	0.625"
0.472"	0.492"	8XD	2.362"	0.625"

0.492"	0.511"	8XD	2.165"	0.625"
0.512"	0.531"	8XD	1.969"	0.625"
0.531"	0.551"	8XD	1.772"	0.625"
0.551"	0.570"	8XD	1.673"	0.625"
0.571"	0.590"	8XD	1.870"	0.625"
0.591"	0.630"	8XD	2.067"	0.750"
0.630"	0.669"	8XD	2.264"	0.750"
0.669"	0.708"	8XD	2.461"	0.750"
0.709"	0.748"	8XD	2.657"	0.750"
0.748"	0.787"	8XD	2.854"	0.750"
0.787"	0.826"	8XD	3.150"	1.000"
0.827"	0.866"	8XD	3.543"	1.000"
0.866"	0.905"	8XD	3.937"	1.000"
0.906"	0.944"	8XD	4.331"	1.000"

0.945"	0.983"	8XD	4.724"	1.000"
0.984"	1.004"	8XD	5.116"	1.000"



Drill tip Insert

CarmeTip



<u>INSERT SIZE</u>
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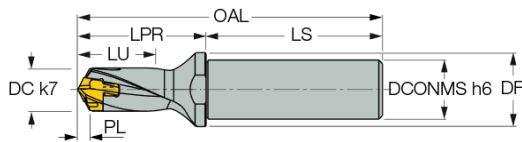
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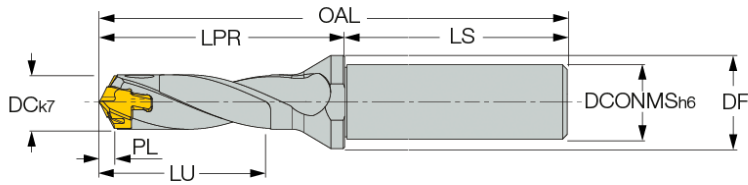
Indexable Head Drills with Coolant Holes and a Cylindrical Shank, Drilling Depth 1.5xD



DCN	DCX	DCONM S	DF	LU	LPR	PL	LS	OAL
6	6.4	12	16	10.1	23	1.09	45	68
6.5	6.9	12	16	11.2	24.1	1.18	45	69.1
7	7.4	12	16	12.3	25.1	1.27	45	70.1
7.5	7.9	12	16	12.4	25.9	1.36	45	70.9
8	8.4	12	16	13.5	27.9	1.46	45	72.9
8.5	8.9	12	16	14.6	28.2	1.55	45	73.2
9	9.4	12	16	15.6	29.3	1.64	45	74.3

9.5	9.9	12	16	15.7	30.1	1.73	45	75.1
10	10.4	16	20	16.8	31.2	1.82	48	79.2
10.5	10.9	16	20	17.9	32	1.91	48	80
11	11.4	16	20	19	33.1	2	48	81.1
11.5	11.9	16	20	19.1	33.9	2.09	48	81.9
12	12.4	16	20	20.2	35	2.18	48	83
12.5	12.9	16	20	21.3	35.8	2.27	48	83.8
13	13.4	16	20	22.4	37.1	2.37	48	85.1
13.5	13.9	16	20	22.5	37.9	2.46	48	85.9
14	14.4	16	20	23.6	41.1	2.55	48	89.1
14.5	14.9	16	20	24.6	41.9	2.64	48	89.9
15	15.9	20	25	25.7	46.2	2.73	50	96.2
16	16.9	20	25	26.9	49.3	2.91	50	99.3
17	17.9	20	25	29.1	52.4	3.09	50	102.4
18	18.9	25	32	30.3	55.5	3.28	56	111.5
19	19.9	25	32	32.5	58.5	3.46	56	114.5
20	20.9	25	32	33.6	61.6	3.64	56	117.6
21	21.9	25	32	35.8	64.7	3.82	56	120.7
22	22.9	25	32	37	67.8	4	56	123.8
23	23.9	32	42	39.2	70.9	4.19	60	130.9
24	24.9	32	42	40.4	74	4.37	60	134
25	25.9	32	42	42.6	77	4.55	60	137
26	26.9	32	42	43.7	80.1	4.73	60	140.1
27	27.9	32	42	45.9	83.1	4.91	60	143.1
28	28.9	32	42	47.1	86.2	5.1	60	146.2
29	29.9	32	42	49.3	89.3	5.28	60	149.3
30	30.9	32	42	50.5	92.4	5.46	60	152.4
31	31.9	32	42	52.6	95.5	5.64	60	155.5
32	32.9	32	42	53.8	98.5	5.82	60	158.5

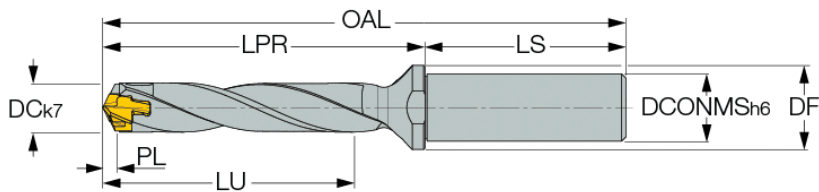
Indexable Head Drills with Coolant Holes and a Cylindrical Shank, Drilling Depth 3xD



DCN	DCX	DCONM S	DF	LU	LPR	PL	LS	OAL
6	6.4	12	16	19.1	32	1.09	45	77
6.5	6.9	12	16	21.2	33.8	1.18	45	78.8
7	7.4	12	16	22.3	35.6	1.27	45	80.6
7.5	7.9	12	16	24.4	37.1	1.36	45	82.1
8	8.4	12	16	25.5	39.4	1.46	45	84.4
8.5	8.9	12	16	26.6	40.9	1.55	45	85.9
9	9.4	12	16	28.6	42.8	1.64	45	87.8

9.5	9.9	12	16	30.7	44.3	1.73	45	89.3
10	10.4	16	20	31.8	46.2	1.82	48	94.2
10.5	10.9	16	20	33.9	47.7	1.91	48	95.7
11	11.4	16	20	35	49.6	2	48	97.6
11.5	11.9	16	20	37.1	51.1	2.09	48	99.1
12	12.4	16	20	38.2	53	2.18	48	101
12.5	12.9	16	20	39.3	54.5	2.27	48	102.5
13	13.4	16	20	41.4	56.6	2.37	48	104.6
13.5	13.9	16	20	43.5	58.1	2.46	48	106.1
14	14.4	16	20	44.6	62.1	2.55	48	110.1
14.5	14.9	16	20	46.6	63.6	2.64	48	111.6
15	15.9	20	25	47.7	68.7	2.73	50	118.7
16	16.9	20	25	50.9	73.3	2.91	50	123.3
17	17.9	20	25	54.1	77.9	3.09	50	127.9
18	18.9	25	32	57.3	82.5	3.28	56	138.5
19	19.9	25	32	60.5	87	3.46	56	143
20	20.9	25	32	63.6	91.6	3.64	56	147.6
21	21.9	25	32	66.8	96.2	3.82	56	152.2
22	22.9	25	32	70	100.8	4	56	156.8
23	23.9	32	42	73.2	105.4	4.19	60	165.4
24	24.9	32	42	76.4	110	4.37	60	170
25	25.9	32	42	79.6	114.5	4.55	60	174.5
26	26.9	32	42	82.7	119	4.73	60	179
27	27.9	32	42	85.9	123.7	4.91	60	183.7
28	28.9	32	42	89.1	128.2	5.1	60	188.2
29	29.9	32	42	92.3	132.8	5.28	60	192.8
30	30.9	32	42	95.5	137.4	5.46	60	197.4
31	31.9	32	42	98.6	142	5.64	60	202
32	32.9	32	42	101.8	146.5	5.82	60	206.5

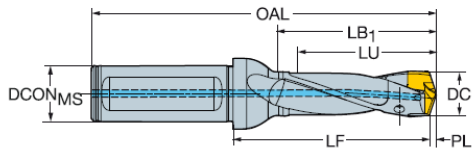
Indexable Head Drills with Coolant Holes and a Cylindrical Shank, Drilling Depth 5xD



DCN	DCX	DCONM S	DF	LU	LPR	PL	LS	OAL
6	6.4	12	16	31.1	44	1.09	45	89
6.5	6.9	12	16	34.2	46.8	1.18	45	91.8
7	7.4	12	16	36.3	49.6	1.27	45	94.6
7.5	7.9	12	16	39.4	52.1	1.36	45	97.1
8	8.4	12	16	41.5	55.4	1.46	45	100.4
8.5	8.9	12	16	43.6	57.9	1.55	45	102.9
9	9.4	12	16	46.6	60.8	1.64	45	105.8
9.5	9.9	12	16	49.7	63.3	1.73	45	108.3
10	10.4	16	20	51.8	66.2	1.82	48	114.2

10.5	10.9	16	20	54.9	68.7	1.91	48	116.7
11	11.4	16	20	57	71.6	2	48	119.6
11.5	11.9	16	20	60.1	74.1	2.09	48	122.1
12	12.4	16	20	62.2	77	2.18	48	125
12.5	12.9	16	20	64.3	79.5	2.27	48	127.5
13	13.4	16	20	67.4	82.6	2.37	48	130.6
13.5	13.9	16	20	70.5	85.1	2.46	48	133.1
14	14.4	16	20	72.6	90.2	2.55	48	138.2
14.5	14.9	16	20	75.6	92.7	2.64	48	140.7
15	15.9	20	25	77.7	98.7	2.73	50	148.7
16	16.9	20	25	82.9	105.3	2.91	50	155.3
17	17.9	20	25	88.1	111.9	3.09	50	161.9
18	18.9	25	32	93.3	118.5	3.28	56	174.5
19	19.9	25	32	98.5	125	3.46	56	181
20	20.9	25	32	103.6	131.6	3.64	56	187.6
21	21.9	25	32	108.8	138.2	3.82	56	194.2
22	22.9	25	32	114	144.8	4	56	200.8
23	23.9	32	42	119.2	151.4	4.19	60	211.4
24	24.9	32	42	124.4	158	4.37	60	218
25	25.9	32	42	129.6	164.5	4.55	60	224.5
26	26.9	32	42	134.7	171	4.73	60	231
27	27.9	32	42	139.9	177.7	4.91	60	237.7
28	28.9	32	42	145.1	184.2	5.1	60	244.2
29	29.9	32	42	150.3	190.8	5.28	60	250.8
30	30.9	32	42	155.5	197.4	5.46	60	257.4
31	31.9	32	42	160.6	204	5.64	60	264
32	32.9	32	42	165.8	210.5	5.82	60	270.5

Indexable Head Drills & Drill tips



DCN	DCX	DCON _{MS}	LF	OAL	LB ₁
10.00	10.49	16.00	46.40	96.00	35.00
10.00	10.49	16.00	67.40	117.00	56.00
10.00	10.49	16.00	99.40	149.00	88.00
10.00	10.49	16.00	120.40	170.00	109.00
10.50	10.99	16.00	47.31	97.00	36.00
10.50	10.99	16.00	69.31	119.00	58.00
10.50	10.99	16.00	102.31	152.00	91.00
10.50	10.99	16.00	124.31	174.00	113.00
11.00	11.49	16.00	49.25	99.00	38.00
11.00	11.49	16.00	72.25	122.00	61.00
11.00	11.49	16.00	107.25	157.00	96.00
11.00	11.49	16.00	130.25	180.00	119.00
11.50	11.99	16.00	51.17	101.00	40.00
11.50	11.99	16.00	75.17	125.00	64.00
11.50	11.99	16.00	111.17	161.00	100.00
11.50	11.99	16.00	135.17	185.00	124.00
12.00	12.49	16.00	53.10	103.00	42.00
12.00	12.49	16.00	77.10	127.00	66.00
12.00	12.49	16.00	116.10	166.00	105.00
12.00	12.49	16.00	141.10	191.00	130.00
12.50	12.99	16.00	54.02	104.00	43.00
12.50	12.99	16.00	80.02	130.00	69.00
12.50	12.99	16.00	119.02	169.00	108.00
12.50	12.99	16.00	145.02	195.00	134.00
13.00	13.49	16.00	55.94	106.00	45.00
13.00	13.49	16.00	82.94	133.00	72.00
13.00	13.49	16.00	123.94	174.00	113.00
13.00	13.49	16.00	150.94	201.00	140.00
13.50	13.99	16.00	57.86	108.00	47.00
13.50	13.99	16.00	84.86	135.00	74.00
13.50	13.99	16.00	127.86	178.00	117.00
13.50	13.99	16.00	155.86	206.00	145.00
14.00	14.99	20.00	63.72	116.00	50.00
14.00	14.99	20.00	93.72	146.00	80.00
14.00	14.99	20.00	138.72	191.00	125.00
14.00	14.99	20.00	168.72	221.00	155.00
15.00	15.99	20.00	66.56	119.00	53.00
15.00	15.99	20.00	98.56	151.00	85.00
15.00	15.99	20.00	146.56	199.00	133.00
15.00	15.99	20.00	178.56	231.00	165.00
16.00	16.99	20.00	69.42	122.00	56.00
16.00	16.99	20.00	103.42	156.00	90.00
16.00	16.99	20.00	154.42	207.00	141.00
16.00	16.99	20.00	188.42	241.00	175.00

DCN	DCX	DCON _{MS}	LF	OAL	LB ₁
17.00	17.99	20.00	73.27	126.00	59.00
17.00	17.99	20.00	109.27	162.00	95.00
17.00	17.99	20.00	163.27	216.00	149.00
17.00	17.99	20.00	199.27	252.00	185.00
18.00	18.99	20.00	76.13	129.00	62.00
18.00	18.99	20.00	113.13	166.00	100.00
18.00	18.99	20.00	171.13	224.00	157.00
18.00	18.99	20.00	209.13	262.00	195.00
19.00	19.99	25.00	82.98	142.00	66.00
19.00	19.99	25.00	122.98	182.00	106.00
19.00	19.99	25.00	182.98	242.00	166.00
19.00	19.99	25.00	222.98	282.00	206.00
20.00	20.99	25.00	86.83	146.00	69.00
20.00	20.99	25.00	128.83	188.00	111.00
20.00	20.99	25.00	191.83	251.00	174.00
20.00	20.99	25.00	233.83	293.00	216.00
21.00	21.99	25.00	89.68	149.00	72.00
21.00	21.99	25.00	133.68	193.00	116.00
21.00	21.99	25.00	199.68	259.00	182.00
21.00	21.99	25.00	243.68	303.00	226.00
22.00	22.99	25.00	93.53	153.00	76.00
22.00	22.99	25.00	139.53	199.00	122.00
22.00	22.99	25.00	208.53	268.00	191.00
22.00	22.99	25.00	253.53	313.00	236.00
23.00	23.99	25.00	97.39	157.00	79.00
23.00	23.99	25.00	145.39	205.00	127.00
23.00	23.99	25.00	217.39	277.00	199.00
23.00	23.99	25.00	265.39	325.00	247.00
24.00	24.99	32.00	104.23	168.00	82.00
24.00	24.99	32.00	155.23	219.00	132.00
24.00	24.99	32.00	229.23	293.00	207.00
24.00	24.99	32.00	275.23	339.00	257.00
25.00	25.99	32.00	107.09	171.00	85.00
25.00	25.99	32.00	159.09	223.00	137.00
25.00	25.99	32.00	237.09	301.00	215.00
25.00	25.99	32.00	289.09	353.00	267.00
26.00	26.99	32.00	111.97	176.00	89.00
26.00	26.99	32.00	165.97	230.00	143.00
26.00	26.99	32.00	245.97	310.00	223.00
26.00	26.99	32.00	299.97	364.00	277.00
27.00	27.99	32.00	113.86	178.00	92.00
27.00	27.99	32.00	170.86	235.00	148.00
27.00	27.99	32.00	253.86	318.00	232.00
28.00	28.99	32.00	116.68	181.00	95.00
28.00	28.99	32.00	174.68	239.00	153.00
28.00	28.99	32.00	261.68	326.00	240.00

DCN	DCX	DCON _{MS}	LF	OAL	LB ₁
29.00	29.99	32.00	119.52	184.00	98.00
29.00	29.99	32.00	180.52	245.00	158.00
29.00	29.99	32.00	269.52	334.00	248.00
30.00	30.99	32.00	123.40	188.00	102.00
30.00	30.99	32.00	186.40	251.00	164.00
30.00	30.99	32.00	277.40	342.00	256.00
31.00	33.00	32.00	128.92	194.00	108.00
31.00	33.00	32.00	194.92	260.00	174.00
31.00	33.00	32.00	293.92	359.00	273.00

DCN	DCX	DCON _{MS}	LF	OAL	LB ₁
.393	.413	.625	1.827	3.780	1.378
.393	.413	.625	2.654	4.606	2.205
.393	.413	.625	3.913	5.866	3.465
.393	.413	.625	4.740	6.693	4.291
.413	.433	.625	1.863	3.819	1.417
.413	.433	.625	2.729	4.685	2.283
.413	.433	.625	4.028	5.984	3.583
.413	.433	.625	4.894	6.850	4.449
.433	.452	.625	1.939	3.898	1.496
.433	.452	.625	2.844	4.803	2.402
.433	.452	.625	4.222	6.181	3.780
.433	.452	.625	5.128	7.087	4.685
.452	.472	.625	2.015	3.976	1.575
.452	.472	.625	2.959	4.921	2.520
.452	.472	.625	4.377	6.339	3.937
.452	.472	.625	5.322	7.283	4.882
.472	.492	.625	2.091	4.055	1.654
.472	.492	.625	3.035	5.000	2.598
.472	.492	.625	4.571	6.535	4.134
.472	.492	.625	5.555	7.520	5.118
.492	.511	.625	2.127	4.094	1.693
.492	.511	.625	3.150	5.118	2.717
.492	.511	.625	4.686	6.654	4.252
.492	.511	.625	5.709	7.677	5.276
.511	.531	.625	2.202	4.173	1.772
.511	.531	.625	3.265	5.236	2.835
.511	.531	.625	4.880	6.850	4.449
.511	.531	.625	5.943	7.913	5.512
.531	.551	.625	2.278	4.252	1.850
.531	.551	.625	3.341	5.315	2.913
.531	.551	.625	5.034	7.008	4.606
.531	.551	.625	6.136	8.110	5.709
.551	.590	.750	2.509	4.567	1.969
.551	.590	.750	3.690	5.748	3.150
.551	.590	.750	5.461	7.520	4.921
.551	.590	.750	6.643	8.701	6.102
.590	.630	.750	2.620	4.685	2.087
.590	.630	.750	3.880	5.945	3.346
.590	.630	.750	5.770	7.835	5.236
.590	.630	.750	7.030	9.094	6.496
.629	.669	.750	2.733	4.803	2.205
.629	.669	.750	4.072	6.142	3.543
.629	.669	.750	6.080	8.150	5.551
.629	.669	.750	7.418	9.488	6.890

DCN	DCX	DCON _{MS}	LF	OAL	LB ₁
.669	.708	.750	2.885	4.961	2.323
.669	.708	.750	4.302	6.378	3.740
.669	.708	.750	6.428	8.504	5.866
.669	.708	.750	7.845	9.921	7.283
.708	.748	.750	2.997	5.079	2.441
.708	.748	.750	4.454	6.535	3.937
.708	.748	.750	6.737	8.819	6.181
.708	.748	.750	8.233	10.315	7.677
.748	.787	1.000	3.267	5.591	2.598
.748	.787	1.000	4.842	7.165	4.173
.748	.787	1.000	7.204	9.528	6.535
.748	.787	1.000	8.779	11.102	8.110
.787	.826	1.000	3.419	5.748	2.717
.787	.826	1.000	5.072	7.402	4.370
.787	.826	1.000	7.552	9.882	6.850
.787	.826	1.000	9.206	11.535	8.504
.826	.866	1.000	3.531	5.866	2.835
.826	.866	1.000	5.263	7.598	4.567
.826	.866	1.000	7.861	10.197	7.165
.826	.866	1.000	9.594	11.929	8.898
.866	.905	1.000	3.682	6.024	2.992
.866	.905	1.000	5.493	7.835	4.803
.866	.905	1.000	8.210	10.551	7.520
.866	.905	1.000	9.982	12.323	9.291
.905	.944	1.000	3.834	6.181	3.110
.905	.944	1.000	5.724	8.071	5.000
.905	.944	1.000	8.559	10.906	7.835
.905	.944	1.000	10.448	12.795	9.724
.944	.984	1.250	4.104	6.614	3.228
.944	.984	1.250	6.111	8.622	5.197
.944	.984	1.250	9.025	11.535	8.150
.944	.984	1.250	10.836	13.347	10.118
.984	1.023	1.250	4.216	6.732	3.346
.984	1.023	1.250	6.263	8.780	5.394
.984	1.023	1.250	9.334	11.850	8.465
.984	1.023	1.250	11.382	13.898	10.512
1.023	1.063	1.250	4.408	6.929	3.504
1.023	1.063	1.250	6.534	9.055	5.630
1.023	1.063	1.250	9.684	12.205	8.780
1.023	1.063	1.250	11.810	14.331	10.906
1.062	1.102	1.250	4.483	7.008	3.622
1.062	1.102	1.250	6.727	9.252	5.827
1.062	1.102	1.250	9.994	12.520	9.134
1.102	1.141	1.250	4.594	7.126	3.740
1.102	1.141	1.250	6.877	9.409	6.024
1.102	1.141	1.250	10.302	12.835	9.449

DCN	DCX	DCON _{MS}	LF	OAL
1.141	1.181	1.250	4.706	7.244
1.141	1.181	1.250	7.107	9.646
1.141	1.181	1.250	10.611	13.150
1.181	1.220	1.250	4.858	7.402
1.181	1.220	1.250	7.339	9.882
1.181	1.220	1.250	10.921	13.465
1.220	1.299	1.250	5.076	7.638
1.220	1.299	1.250	7.674	10.236
1.220	1.299	1.250	11.572	14.134



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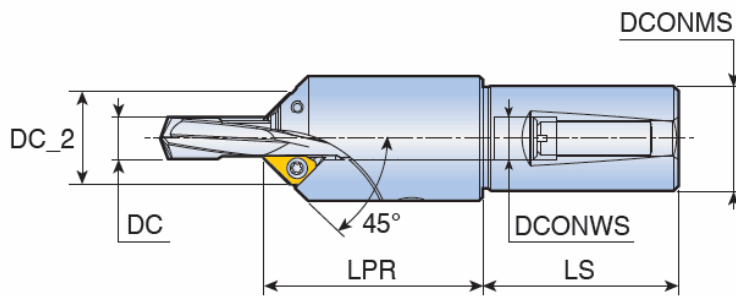
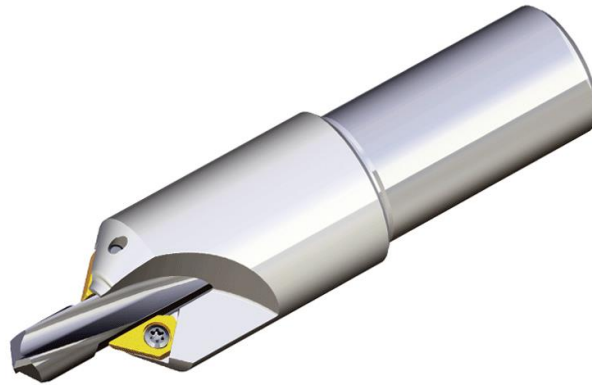
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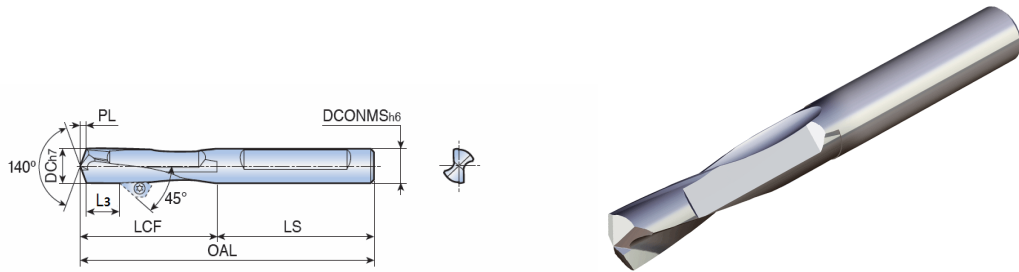
Drill holders for drilling & chamfering



Drill holders of chamfering and drilling together for solid carbide drills

7.1	8.0	8.00	18.80	20.00	47.4	50.0
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10.1	10.0	10.00	24.90	32.00	67.3	60.0
11.1	11.0	11.00	25.90	32.00	67.3	60.0
12.1	12.0	12.00	26.90	32.00	67.3	60.0
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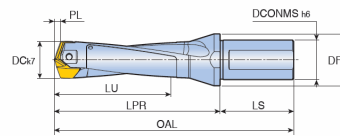
15.1	15.0	15.00	29.40	32.00	67.3	60.0
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18.1	18.0	18.00	32.40	32.00	67.3	60.0
19.1	19.0	19.00	33.40	32.00	75.0	60.0
20.1	20.0	20.00	34.40	32.00	75.0	60.0



Solid carbide drills for T-CHAMFER holder

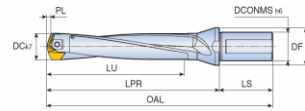
DC	DCONMS	OAL	LCF	LS	L3min	L3max	PL
8.00	8.00	80.30	37.3	43.0	9.50	17.5	1.30
9.00	9.00	85.40	42.4	43.0	13.00	23.5	1.40
10.00	10.00	90.60	47.6	43.0	15.50	25.0	1.60
11.00	11.00	96.80	53.8	43.0	21.50	30.0	1.80
12.00	12.00	103.90	60.9	43.0	25.50	37.0	1.90
13.00	13.00	104.10	61.1	43.0	25.50	35.0	2.10
15.00	15.00	113.40	65.4	48.0	26.50	40.5	2.40
17.00	17.00	121.70	71.7	20.0	24.50	44.0	2.70
18.00	18.00	125.90	75.9	50.0	26.50	48.0	2.90
19.00	19.00	130.00	76.0	54.0	26.50	49.0	3.00

Drills of large diameters



Drill Head changeable drill of large diameter with coolant holes in drilling depth of 3XD WELDON SHANK

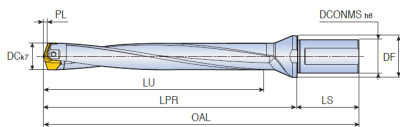
DCN	DCX	DCONMS	DF	LU	LPR	LS	OAL	PL	SSC
20.00	20.90	25.00	32.00	63.0	92.10	56.0	148.10	3.11	20
21.00	21.90	25.00	32.00	66.0	95.30	56.0	151.30	3.29	21
22.00	22.90	25.00	32.00	69.0	98.40	56.0	154.40	3.42	22
23.00	23.90	25.00	32.00	73.0	101.60	56.0	157.60	3.60	23
24.00	24.90	32.00	40.00	76.0	110.70	60.0	170.70	3.73	24
25.00	25.90	32.00	40.00	79.0	113.90	60.0	173.90	3.91	25
26.00	26.90	32.00	40.00	82.0	117.00	60.0	177.00	4.04	26
27.00	27.90	32.00	40.00	85.0	120.20	60.0	180.20	4.22	27
28.00	28.90	32.00	40.00	88.0	128.40	60.0	188.40	4.35	28
29.00	29.90	32.00	40.00	92.0	131.50	60.0	191.50	4.53	29
30.00	30.90	32.00	42.00	95.0	134.70	60.0	194.70	4.67	30
31.00	31.90	32.00	42.00	98.0	137.90	60.0	197.90	4.85	31
32.00	32.90	40.00	48.00	101.0	143.00	68.0	211.00	4.98	32
33.00	33.90	40.00	48.00	104.0	146.20	68.0	214.20	5.16	33
34.00	34.90	40.00	48.00	107.0	149.30	68.0	217.30	5.34	34
35.00	35.90	40.00	48.00	110.0	152.40	68.0	220.40	5.44	35
36.00	36.90	40.00	48.00	114.0	155.60	68.0	223.60	5.62	36
37.00	37.90	40.00	48.00	117.0	158.80	68.0	226.80	5.80	37
38.00	38.90	40.00	50.00	120.0	166.90	68.0	234.90	5.91	38
39.00	39.90	40.00	50.00	123.0	170.10	68.0	238.10	6.09	39
40.00	41.00	40.00	50.00	126.0	173.30	68.0	241.30	6.27	40



Drill Head changeable drill of large diameter with coolant holes in drilling depth of 5XD WELDON SHANK

DCN	DCX	DCONMS	DF	LU	LPR	LS	OAL	PL	SSC
20.00	20.90	25.00	32.00	103.0	132.10	56.0	188.10	3.11	20
21.00	21.90	25.00	32.00	108.0	137.30	56.0	193.30	3.29	21
22.00	22.90	25.00	32.00	113.0	142.40	56.0	198.40	3.42	22
23.00	23.90	25.00	32.00	119.0	147.60	56.0	203.60	3.60	23
24.00	24.90	32.00	40.00	124.0	158.70	60.0	218.70	3.73	24
25.00	25.90	32.00	40.00	129.0	163.90	60.0	223.90	3.91	25
26.00	26.90	32.00	40.00	134.0	169.00	60.0	229.00	4.04	26
27.00	27.90	32.00	40.00	139.0	174.20	60.0	234.20	4.22	27
28.00	28.90	32.00	40.00	144.0	184.40	60.0	244.40	4.35	28
29.00	29.90	32.00	40.00	150.0	189.50	60.0	249.50	4.53	29
30.00	30.90	32.00	42.00	155.0	194.70	60.0	254.70	4.67	30
31.00	31.90	32.00	42.00	160.0	199.90	60.0	259.90	4.85	31
32.00	32.90	40.00	48.00	165.0	207.00	68.0	275.00	4.98	32

33.00	33.90	40.00	48.00	170.0	212.20	68.0	280.20	5.16	33
34.00	34.90	40.00	48.00	175.0	217.30	68.0	285.30	5.34	34
35.00	35.90	40.00	48.00	180.0	222.40	68.0	290.40	5.44	35
36.00	36.90	40.00	48.00	186.0	227.60	68.0	295.60	5.62	36
37.00	37.90	40.00	48.00	191.0	232.80	68.0	300.80	5.80	37
38.00	38.90	40.00	50.00	196.0	242.90	68.0	310.90	5.91	38
39.00	39.90	40.00	50.00	201.0	248.10	68.0	316.10	6.09	39
40.00	41.00	40.00	50.00	206.0	253.30	68.0	321.30	6.27	40

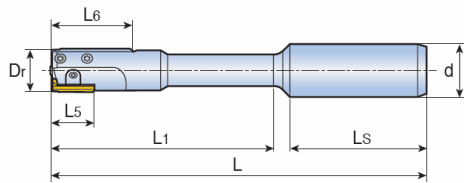
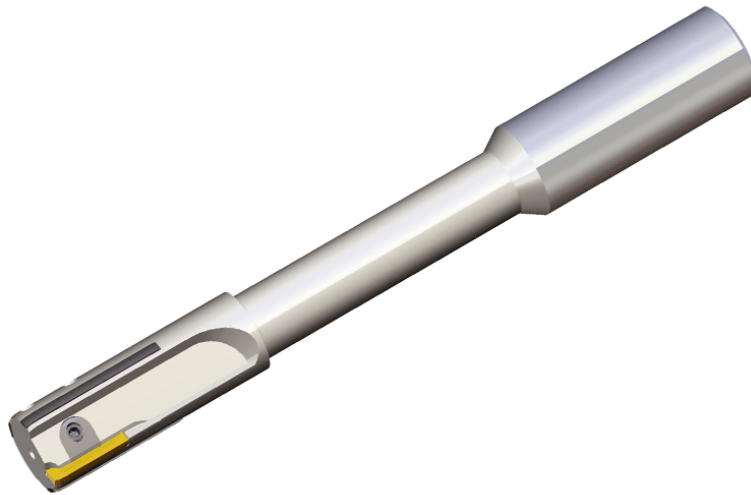


Drill Head changeable drill of large diameter with coolant holes in drilling depth of 5XD WELDON SHANK

DCN	DCX	DCONMS	DF	LU	LPR	LS	OAL	PL	SSC
20.00	20.90	25.00	32.00	163.1	192.10	56.0	248.10	3.11	20
21.00	21.90	25.00	32.00	171.3	200.10	56.0	256.10	3.29	21
22.00	22.90	25.00	32.00	179.4	208.40	56.0	264.40	3.42	22
23.00	23.90	25.00	32.00	187.6	216.40	56.0	272.40	3.60	23
24.00	24.90	32.00	40.00	195.7	230.70	60.0	290.70	3.73	24
25.00	25.90	32.00	40.00	203.9	238.70	60.0	298.70	3.91	25
26.00	26.90	32.00	40.00	212.0	247.00	60.0	307.00	4.04	26
27.00	27.90	32.00	40.00	220.2	255.00	60.0	315.00	4.22	27
28.00	28.90	32.00	40.00	228.4	268.40	60.0	328.40	4.35	28
29.00	29.90	32.00	40.00	236.5	276.40	60.0	336.40	4.53	29
30.00	30.90	32.00	42.00	244.7	284.70	60.0	344.70	4.67	30
31.00	31.90	32.00	42.00	252.9	292.70	60.0	352.70	4.85	31

32.00	32.90	40.00	48.00	261.0	303.00	68.0	371.00	4.98	32
33.00	33.90	40.00	48.00	269.2	311.00	68.0	379.00	5.16	33
34.00	34.90	40.00	48.00	277.3	319.00	68.0	387.00	5.34	34
35.00	35.90	40.00	48.00	285.4	327.40	68.0	395.40	5.44	35
36.00	36.90	40.00	48.00	293.6	335.40	68.0	403.40	5.62	36
37.00	37.90	40.00	48.00	301.8	343.40	68.0	411.40	5.80	37
38.00	38.90	40.00	50.00	309.9	356.90	68.0	424.90	5.91	38
39.00	39.90	40.00	50.00	318.1	364.90	68.0	432.90	6.09	39
40.00	41.00	40.00	50.00	326.3	372.90	68.0	440.90	6.27	40

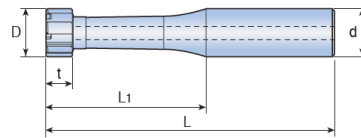
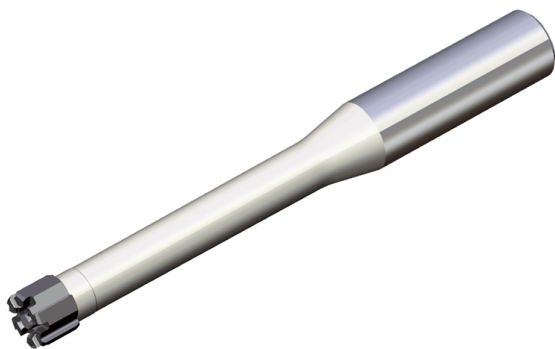
Indexable reamers



Single-edged indexable reamers for through holes.

Dr	L	L1	Ls	L5	L6	d	Po.Size
8.000	45.00	75.0	123.0	30.00	30.00	16.00	1.00
9.000	45.00	75.0	123.0	15.50	30.00	16.00	1.00
10.000	45.00	75.0	123.0	15.50	30.00	16.00	2.00
11.000	45.00	75.0	123.0	30.00	30.00	16.00	2.00
12.000	45.00	85.0	135.0	17.00	30.00	16.00	3.00
13.000	45.00	85.0	135.0	17.00	30.00	16.00	3.00
14.000	45.00	85.0	135.0	30.00	30.00	16.00	3.00
15.000	45.00	85.0	135.0	17.00	30.00	16.00	3.00
16.000	50.00	110.0	165.0	30.00	30.00	20.00	3.00
17.000	50.00	110.0	165.0	17.00	30.00	20.00	3.00
18.000	50.00	110.0	165.0	17.00	30.00	20.00	3.00
19.000	50.00	110.0	165.0	17.00	30.00	20.00	3.00

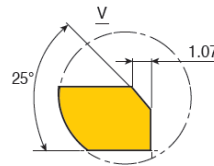
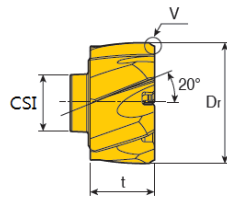
20.000	56.00	110.0	171.0	30.00	30.00	25.00	3.00
21.000	56.00	110.0	171.0	17.00	30.00	25.00	3.00
22.000	56.00	130.0	191.0	17.00	30.00	25.00	3.00
23.000	56.00	130.0	191.0	17.00	30.00	25.00	3.00
24.000	56.00	130.0	191.0	17.00	30.00	25.00	3.00
25.000	56.00	130.0	191.0	17.00	30.00	25.00	3.00
26.000	56.00	160.0	221.0	22.50	30.00	25.00	4.00
27.000	56.00	160.0	221.0	22.50	30.00	25.00	4.00
28.000	56.00	160.0	221.0	22.50	30.00	25.00	4.00
29.000	56.00	160.0	221.0	22.50	30.00	25.00	4.00
30.000	56.00	160.0	221.0	30.00	30.00	25.00	4.00
31.000	56.00	160.0	221.0	22.50	30.00	25.00	4.00
32.000	56.00	160.0	221.0	22.50	30.00	25.00	4.00



interchangeable head reamers

Dr (min)	Dr (max)	CSI	d	t	L	L1
11.500	13.500	B5	16.00	9.30	97.80	49.8
13.500	16.000	B6	16.00	9.40	105.40	57.4
16.000	20.000	B7	20.00	10.60	120.60	70.6
20.000	25.400	B8	20.00	12.80	137.80	87.8
25.400	32.000	B9	32.00	12.80	167.10	107.1
11.500	13.500	B5	16.00	9.30	125.00	77.0
13.500	16.000	B6	16.00	9.40	137.40	89.4

16.000	20.000	B7	20.00	10.60	160.60	110.6
20.000	25.400	B8	20.00	12.80	187.80	137.8
25.400	32.000	B9	32.00	12.80	231.10	171.1
11.500	13.500	B5	16.00	9.30	165.50	117.5
13.500	16.000	B6	16.00	9.40	185.40	137.4
16.000	20.000	B7	20.00	10.60	220.60	170.6
20.000	25.400	B8	20.00	12.80	262.80	212.8
25.400	32.000	B9	32.00	12.80	327.10	267.1

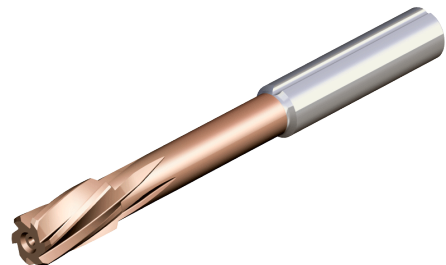
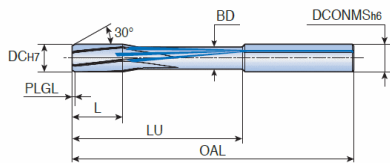


solid carbide reaming heads

with left- handed flute for through holes of high speed reaming

CSI	Dr	t	Flute ty	Flute	Edge typ
B5	11.501	9.30	L	6	B
B5	12.000	9.30	L	6	B
B5	13.000	9.30	L	6	B
B5	13.500	9.30	L	6	B
B6	13.501	9.30	L	6	B
B6	14.000	9.40	L	6	B
B6	15.000	9.40	L	6	B
B6	16.000	9.40	L	6	B
B7	16.001	9.40	L	6	B

B7	17.000	10.60	L	6	B
B7	18.000	10.60	L	6	B
B7	19.000	10.60	L	6	B
B7	20.000	10.60	L	6	B
B8	20.001	12.80	L	8	B
B8	21.000	12.80	L	8	B
B8	22.000	12.80	L	8	B
B8	23.000	12.80	L	8	B
B8	24.000	12.80	L	8	B
B8	25.000	12.80	L	8	B
B9	26.000	12.80	L	8	B
B9	27.000	12.80	L	8	B
B9	28.000	12.80	L	8	B
B9	29.000	12.80	L	8	B
B9	30.000	12.80	L	8	B
B9	31.000	12.80	L	8	B
B9	32.000	12.80	L	8	B



Solid carbide reamers with left-handed spiral flute for through hole

DC	L	PLGL	BD	LU	OAL	DCONMS	NOF
3.00	12.00	0.700	2.20	31.0	60.00	4.00	4
4.00	12.00	0.700	3.00	40.0	68.00	6.00	4
5.00	12.00	0.900	3.80	40.0	76.00	6.00	4
6.00	12.00	0.900	4.50	40.0	76.00	6.00	4
7.00	15.00	0.900	5.60	65.0	101.00	8.00	6

8.00	15.00	0.900	6.40	65.0	101.00	8.00	6
9.00	18.00	0.950	7.20	61.0	101.00	10.00	6
10.00	18.00	0.950	8.00	61.0	101.00	10.00	6
10.50	18.00	1.050	8.40	85.0	130.00	12.00	6
11.00	18.00	1.050	8.80	85.0	130.00	12.00	6
11.50	18.00	1.050	9.20	85.0	130.00	12.00	6
12.00	18.00	1.050	9.60	85.0	130.00	12.00	6

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