

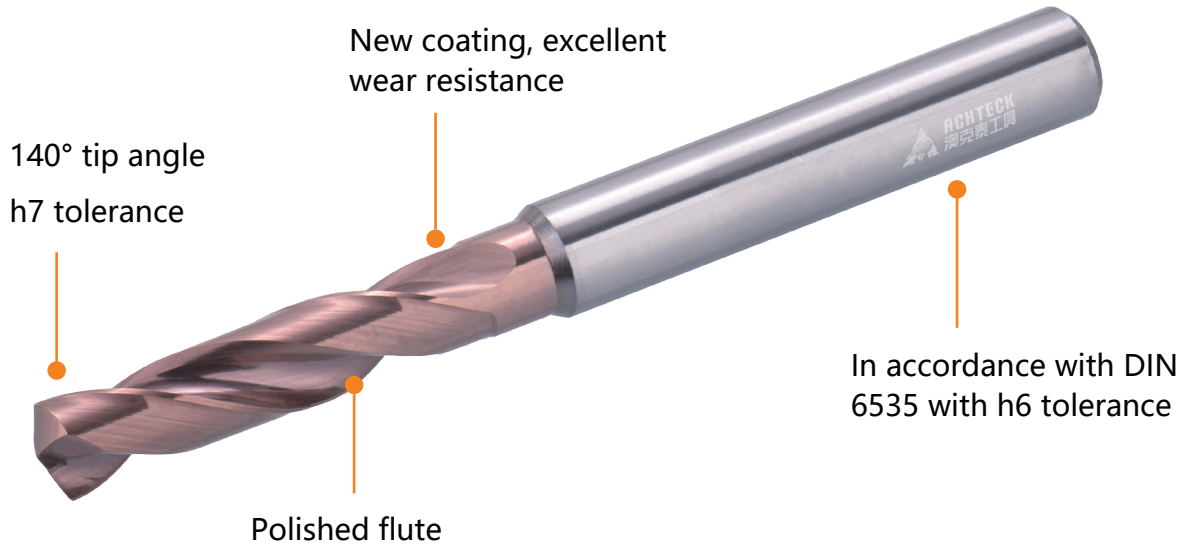
NEW
PRODUCT!

D105_ECO Series Solid Carbide Universal Drill



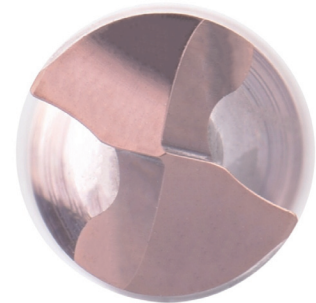


◆ **D105 Solid Carbide Universal Drill**



Product feature

- Double-arc surface design, sickle-type edge, enhanced chip breaking effect;
- Polished flute for smooth chip removal;
- New coating technology for excellent processing life ;



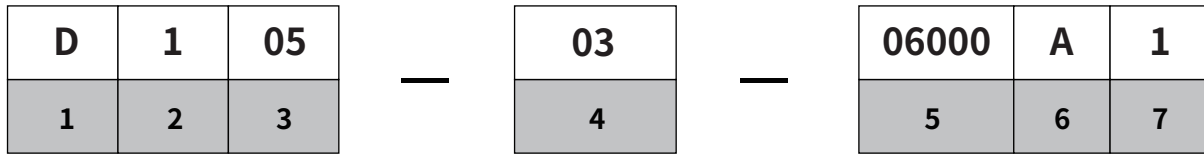
Product specification

- With internal coolant and external coolant;
- Diameter range 3-20mm;
- Cutting edge tolerance h7;
- Size: DIN 6537K--3xDc
DIN 6537L--5xDc

Application range

- For the ISO material groups P,M,K,N,S,H;
- For use in general mechanical engineering; automotive and energy industry

• **D105 Solid Carbide Drill Naming System**



1-Tool group	
D	Drill

2-Generation
1

3-Serie	
05	Universal

4-Drilling depth	
03	3xDc in accordance with DIN 6537 K
05	5xDc in accordance with DIN 6537 L

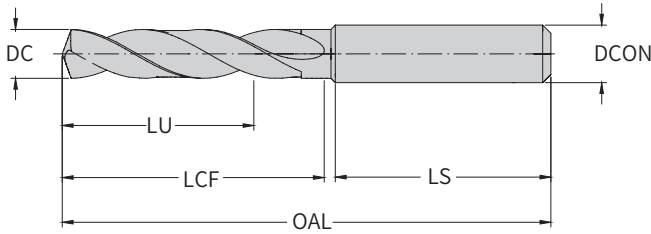
5-Cutting diameter	
06000	6.0mm
12100	12.1mm

6-Shank type	
A	DIN 6535 HA cylindrical shank

7-Coolant	
0	External coolant
1	Internal coolant



◆ D105 with External Coolant _ 3xDc



●● 1st choice
● 2nd choice

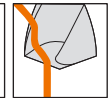
P	M	K	N	S	H
●●		●●	●		●

3×DC

DIN 6537K

h7

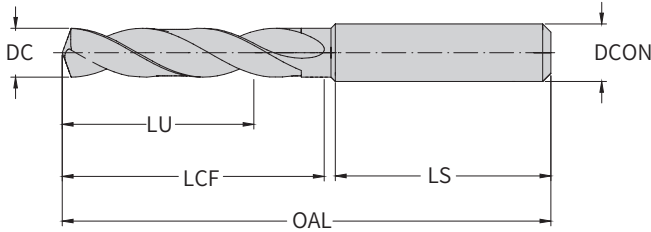
140°



Product cede	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-03000A0	3.0	14	62	20	36	4	●
D105-03-03100A0	3.1	14	62	20	36	4	●
D105-03-03200A0	3.2	14	62	20	36	4	●
D105-03-03300A0	3.3	14	62	20	36	4	●
D105-03-03400A0	3.4	14	62	20	36	4	●
D105-03-03500A0	3.5	14	62	20	36	4	●
D105-03-03600A0	3.6	14	62	20	36	4	●
D105-03-03700A0	3.7	14	62	20	36	4	●
D105-03-03800A0	3.8	17	66	24	36	4	●
D105-03-03900A0	3.9	17	66	24	36	4	○
D105-03-04000A0	4.0	17	66	24	36	4	●
D105-03-04100A0	4.1	17	66	24	36	6	●
D105-03-04200A0	4.2	17	66	24	36	6	●
D105-03-04300A0	4.3	17	66	24	36	6	●
D105-03-04400A0	4.4	17	66	24	36	6	●
D105-03-04500A0	4.5	17	66	24	36	6	●
D105-03-04600A0	4.6	17	66	24	36	6	●
D105-03-04700A0	4.7	17	66	24	36	6	●
D105-03-04800A0	4.8	20	66	28	36	6	●
D105-03-04900A0	4.9	20	66	28	36	6	○
D105-03-05000A0	5.0	20	66	28	36	6	●
D105-03-05100A0	5.1	20	66	28	36	6	●
D105-03-05200A0	5.2	20	66	28	36	6	●
D105-03-05300A0	5.3	20	66	28	36	6	●
D105-03-05400A0	5.4	20	66	28	36	6	●
D105-03-05500A0	5.5	20	66	28	36	6	●
D105-03-05600A0	5.6	20	66	28	36	6	○
D105-03-05700A0	5.7	20	66	28	36	6	○
D105-03-05800A0	5.8	20	66	28	36	6	●
D105-03-05900A0	5.9	20	66	28	36	6	○
D105-03-06000A0	6.0	20	66	28	36	6	●
D105-03-06100A0	6.1	24	79	34	36	8	●
D105-03-06200A0	6.2	24	79	34	36	8	○
D105-03-06300A0	6.3	24	79	34	36	8	●
D105-03-06400A0	6.4	24	79	34	36	8	○
D105-03-06500A0	6.5	24	79	34	36	8	●
D105-03-06600A0	6.6	24	79	34	36	8	●
D105-03-06700A0	6.7	24	79	34	36	8	●
D105-03-06800A0	6.8	24	79	34	36	8	●
D105-03-06900A0	6.9	24	79	34	36	8	●
D105-03-07000A0	7.0	24	79	34	36	8	●

Special product can be ordered

● Stocked
○ Limited-stock


 ● 1st choice
 ○ 2nd choice

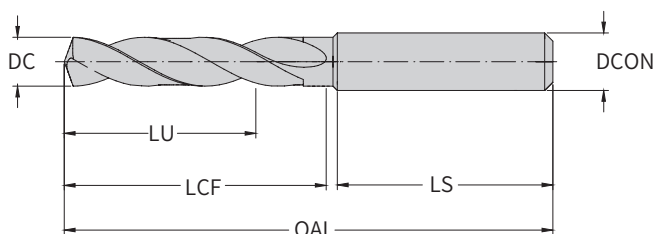
P	M	K	N	S	H
●●		●●	●		●



Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-07100A0	7.1	29	79	41	36	8	●
D105-03-07200A0	7.2	29	79	41	36	8	●
D105-03-07300A0	7.3	29	79	41	36	8	○
D105-03-07400A0	7.4	29	79	41	36	8	○
D105-03-07500A0	7.5	29	79	41	36	8	●
D105-03-07600A0	7.6	29	79	41	36	8	○
D105-03-07700A0	7.7	29	79	41	36	8	○
D105-03-07800A0	7.8	29	79	41	36	8	●
D105-03-07900A0	7.9	29	79	41	36	8	●
D105-03-08000A0	8.0	29	79	41	36	8	●
D105-03-08100A0	8.1	35	89	47	40	10	●
D105-03-08200A0	8.2	35	89	47	40	10	●
D105-03-08300A0	8.3	35	89	47	40	10	○
D105-03-08400A0	8.4	35	89	47	40	10	○
D105-03-08500A0	8.5	35	89	47	40	10	●
D105-03-08600A0	8.6	35	89	47	40	10	●
D105-03-08700A0	8.7	35	89	47	40	10	●
D105-03-08800A0	8.8	35	89	47	40	10	●
D105-03-08900A0	8.9	35	89	47	40	10	○
D105-03-09000A0	9.0	35	89	47	40	10	●
D105-03-09100A0	9.1	35	89	47	40	10	●
D105-03-09200A0	9.2	35	89	47	40	10	●
D105-03-09300A0	9.3	35	89	47	40	10	●
D105-03-09400A0	9.4	35	89	47	40	10	●
D105-03-09500A0	9.5	35	89	47	40	10	●
D105-03-09600A0	9.6	35	89	47	40	10	●
D105-03-09700A0	9.7	35	89	47	40	10	●
D105-03-09800A0	9.8	35	89	47	40	10	●
D105-03-09900A0	9.9	35	89	47	40	10	○
D105-03-10000A0	10.0	35	89	47	40	10	●
D105-03-10100A0	10.1	40	102	55	45	12	○
D105-03-10200A0	10.2	40	102	55	45	12	●
D105-03-10300A0	10.3	40	102	55	45	12	●
D105-03-10400A0	10.4	40	102	55	45	12	●
D105-03-10500A0	10.5	40	102	55	45	12	●
D105-03-10600A0	10.6	40	102	55	45	12	○
D105-03-10700A0	10.7	40	102	55	45	12	○
D105-03-10800A0	10.8	40	102	55	45	12	●
D105-03-10900A0	10.9	40	102	55	45	12	○
D105-03-11000A0	11.0	40	102	55	45	12	●
D105-03-11100A0	11.1	40	102	55	45	12	○

Special product can be ordered

 ● Stocked
 ○ Limited-stock


 ● 1st choice
 ○ 2nd choice

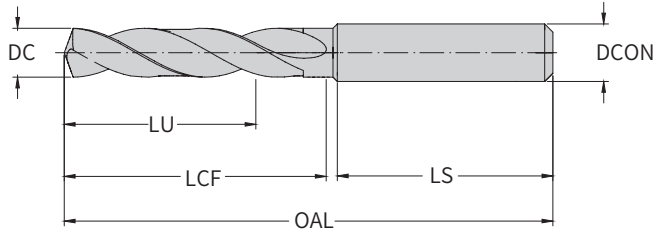
P	M	K	N	S	H
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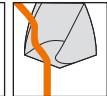
Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-11200A0	11.2	40	102	55	45	12	○
D105-03-11300A0	11.3	40	102	55	45	12	○
D105-03-11400A0	11.4	40	102	55	45	12	○
D105-03-11500A0	11.5	40	102	55	45	12	●
D105-03-11600A0	11.6	40	102	55	45	12	○
D105-03-11700A0	11.7	40	102	55	45	12	○
D105-03-11800A0	11.8	40	102	55	45	12	○
D105-03-11900A0	11.9	40	102	55	45	12	○
D105-03-12000A0	12.0	40	102	55	45	12	●
D105-03-12100A0	12.1	43	107	60	45	14	○
D105-03-12200A0	12.2	43	107	60	45	14	○
D105-03-12300A0	12.3	43	107	60	45	14	○
D105-03-12400A0	12.4	43	107	60	45	14	○
D105-03-12500A0	12.5	43	107	60	45	14	○
D105-03-12600A0	12.6	43	107	60	45	14	●
D105-03-12700A0	12.7	43	107	60	45	14	●
D105-03-12800A0	12.8	43	107	60	45	14	●
D105-03-12900A0	12.9	43	107	60	45	14	○
D105-03-13000A0	13.0	43	107	60	45	14	●
D105-03-13100A0	13.1	43	107	60	45	14	○
D105-03-13200A0	13.2	43	107	60	45	14	●
D105-03-13300A0	13.3	43	107	60	45	14	●
D105-03-13400A0	13.4	43	107	60	45	14	○
D105-03-13500A0	13.5	43	107	60	45	14	●
D105-03-13600A0	13.6	43	107	60	45	14	○
D105-03-13700A0	13.7	43	107	60	45	14	○
D105-03-13800A0	13.8	43	107	60	45	14	○
D105-03-13900A0	13.9	43	107	60	45	14	○
D105-03-14000A0	14.0	43	107	60	45	14	●
D105-03-14100A0	14.1	45	115	65	48	16	○
D105-03-14200A0	14.2	45	115	65	48	16	●
D105-03-14300A0	14.3	45	115	65	48	16	○
D105-03-14400A0	14.4	45	115	65	48	16	○
D105-03-14500A0	14.5	45	115	65	48	16	●
D105-03-14600A0	14.6	45	115	65	48	16	○
D105-03-14700A0	14.7	45	115	65	48	16	●
D105-03-14800A0	14.8	45	115	65	48	16	○
D105-03-14900A0	14.9	45	115	65	48	16	○
D105-03-15000A0	15.0	45	115	65	48	16	●
D105-03-15100A0	15.1	45	115	65	48	16	○
D105-03-15200A0	15.2	45	115	65	48	16	○

Special product can be ordered

 ● Stocked
 ○ Limited-stock


 ● 1st choice
 ● 2nd choice

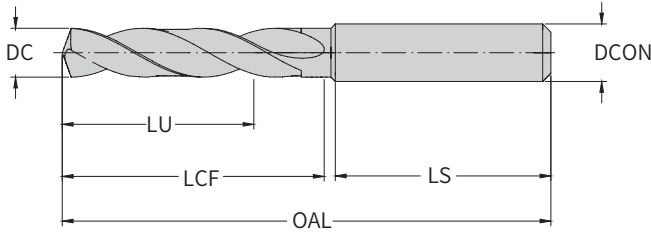
P	M	K	N	S	H
●●		●●	●		●

3×DC
DIN 6537K


Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-15300A0	15.3	45	115	65	48	16	○
D105-03-15400A0	15.4	45	115	65	48	16	○
D105-03-15500A0	15.5	45	115	65	48	16	●
D105-03-15600A0	15.6	45	115	65	48	16	○
D105-03-15700A0	15.7	45	115	65	48	16	○
D105-03-15800A0	15.8	45	115	65	48	16	○
D105-03-15900A0	15.9	45	115	65	48	16	○
D105-03-16000A0	16.0	45	115	65	48	16	●
D105-03-16100A0	16.1	51	123	73	48	18	○
D105-03-16200A0	16.2	51	123	73	48	18	○
D105-03-16300A0	16.3	51	123	73	48	18	○
D105-03-16400A0	16.4	51	123	73	48	18	○
D105-03-16500A0	16.5	51	123	73	48	18	●
D105-03-16600A0	16.6	51	123	73	48	18	○
D105-03-16700A0	16.7	51	123	73	48	18	○
D105-03-16800A0	16.8	51	123	73	48	18	○
D105-03-16900A0	16.9	51	123	73	48	18	○
D105-03-17000A0	17.0	51	123	73	48	18	●
D105-03-17100A0	17.1	51	123	73	48	18	○
D105-03-17200A0	17.2	51	123	73	48	18	○
D105-03-17300A0	17.3	51	123	73	48	18	○
D105-03-17400A0	17.4	51	123	73	48	18	○
D105-03-17500A0	17.5	51	123	73	48	18	●
D105-03-17600A0	17.6	51	123	73	48	18	○
D105-03-17700A0	17.7	51	123	73	48	18	○
D105-03-17800A0	17.8	51	123	73	48	18	○
D105-03-17900A0	17.9	51	123	73	48	18	○
D105-03-18000A0	18.0	51	123	73	48	18	●
D105-03-18100A0	18.1	55	131	79	50	20	○
D105-03-18200A0	18.2	55	131	79	50	20	○
D105-03-18300A0	18.3	55	131	79	50	20	○
D105-03-18400A0	18.4	55	131	79	50	20	○
D105-03-18500A0	18.5	55	131	79	50	20	●
D105-03-18600A0	18.6	55	131	79	50	20	○
D105-03-18700A0	18.7	55	131	79	50	20	○
D105-03-18800A0	18.8	55	131	79	50	20	○
D105-03-18900A0	18.9	55	131	79	50	20	○
D105-03-19000A0	19.0	55	131	79	50	20	●
D105-03-19100A0	19.1	55	131	79	50	20	○
D105-03-19200A0	19.2	55	131	79	50	20	○
D105-03-19300A0	19.3	55	131	79	50	20	○

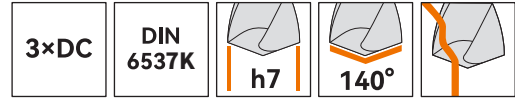
Special product can be ordered

 ● Stocked
 ○ Limited-stock



●● 1st choice
● 2nd choice

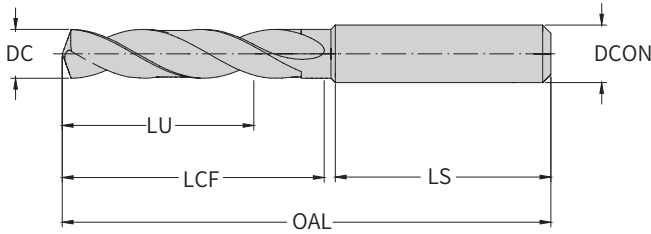
P	M	K	N	S	H
●●		●●	●		●



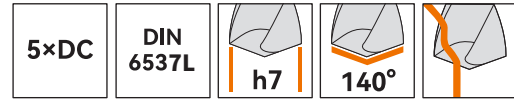
Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-19400A0	19.4	55	131	79	50	20	○
D105-03-19500A0	19.5	55	131	79	50	20	●
D105-03-19600A0	19.6	55	131	79	50	20	○
D105-03-19700A0	19.7	55	131	79	50	20	○
D105-03-19800A0	19.8	55	131	79	50	20	○
D105-03-19900A0	19.9	55	131	79	50	20	○
D105-03-20000A0	20.0	55	131	79	50	20	○

Special product can be ordered

● Stocked
○ Limited-stock

• D105 with External Coolant _ 5xDc

 ● 1st choice
 ● 2nd choice

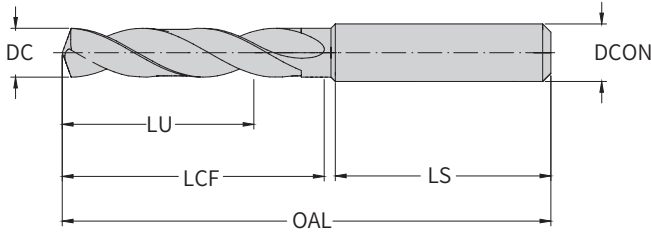
P	M	K	N	S	H
●●		●●	●		●



Product cede	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-03000A0	3.0	23	66	28	36	4	●
D105-05-03100A0	3.1	23	66	28	36	4	●
D105-05-03200A0	3.2	23	66	28	36	4	●
D105-05-03300A0	3.3	23	66	28	36	4	●
D105-05-03400A0	3.4	23	66	28	36	4	●
D105-05-03500A0	3.5	23	66	28	36	4	●
D105-05-03600A0	3.6	23	66	28	36	4	●
D105-05-03700A0	3.7	23	66	28	36	4	●
D105-05-03800A0	3.8	29	74	36	36	4	●
D105-05-03900A0	3.9	29	74	36	36	4	●
D105-05-04000A0	4.0	29	74	36	36	4	●
D105-05-04100A0	4.1	29	74	36	36	6	○
D105-05-04200A0	4.2	29	74	36	36	6	●
D105-05-04300A0	4.3	29	74	36	36	6	●
D105-05-04400A0	4.4	29	74	36	36	6	○
D105-05-04500A0	4.5	29	74	36	36	6	●
D105-05-04600A0	4.6	29	74	36	36	6	●
D105-05-04700A0	4.7	29	74	36	36	6	●
D105-05-04800A0	4.8	35	82	44	36	6	●
D105-05-04900A0	4.9	35	82	44	36	6	●
D105-05-05000A0	5.0	35	82	44	36	6	●
D105-05-05100A0	5.1	35	82	44	36	6	●
D105-05-05200A0	5.2	35	82	44	36	6	●
D105-05-05300A0	5.3	35	82	44	36	6	●
D105-05-05400A0	5.4	35	82	44	36	6	●
D105-05-05500A0	5.5	35	82	44	36	6	●
D105-05-05600A0	5.6	35	82	44	36	6	●
D105-05-05700A0	5.7	35	82	44	36	6	●
D105-05-05800A0	5.8	35	82	44	36	6	●
D105-05-05900A0	5.9	35	82	44	36	6	●
D105-05-06000A0	6.0	35	82	44	36	6	●
D105-05-06100A0	6.1	43	91	53	36	8	●
D105-05-06200A0	6.2	43	91	53	36	8	●
D105-05-06300A0	6.3	43	91	53	36	8	●
D105-05-06400A0	6.4	43	91	53	36	8	●
D105-05-06500A0	6.5	43	91	53	36	8	●
D105-05-06600A0	6.6	43	91	53	36	8	●
D105-05-06700A0	6.7	43	91	53	36	8	●
D105-05-06800A0	6.8	43	91	53	36	8	●
D105-05-06900A0	6.9	43	91	53	36	8	●
D105-05-07000A0	7.0	43	91	53	36	8	●

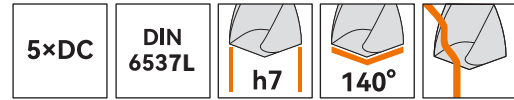
Special product can be ordered

 ● Stocked
 ○ Limited-stock



● 1st choice
● 2nd choice

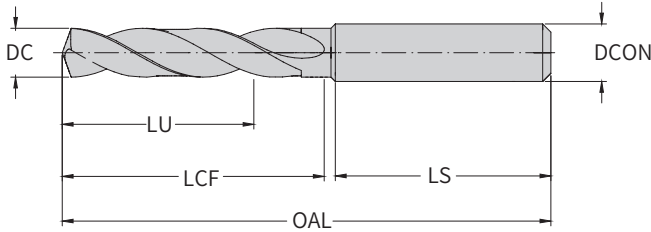
P	M	K	N	S	H
●●		●●	●		●



Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-07100A0	7.1	43	91	53	36	8	○
D105-05-07200A0	7.2	43	91	53	36	8	○
D105-05-07300A0	7.3	43	91	53	36	8	○
D105-05-07400A0	7.4	43	91	53	36	8	●
D105-05-07500A0	7.5	43	91	53	36	8	●
D105-05-07600A0	7.6	43	91	53	36	8	○
D105-05-07700A0	7.7	43	91	53	36	8	○
D105-05-07800A0	7.8	43	91	53	36	8	●
D105-05-07900A0	7.9	43	91	53	36	8	○
D105-05-08000A0	8.0	43	91	53	36	8	●
D105-05-08100A0	8.1	49	103	61	40	10	●
D105-05-08200A0	8.2	49	103	61	40	10	●
D105-05-08300A0	8.3	49	103	61	40	10	●
D105-05-08400A0	8.4	49	103	61	40	10	●
D105-05-08500A0	8.5	49	103	61	40	10	●
D105-05-08600A0	8.6	49	103	61	40	10	●
D105-05-08700A0	8.7	49	103	61	40	10	●
D105-05-08800A0	8.8	49	103	61	40	10	●
D105-05-08900A0	8.9	49	103	61	40	10	●
D105-05-09000A0	9.0	49	103	61	40	10	●
D105-05-09100A0	9.1	49	103	61	40	10	●
D105-05-09200A0	9.2	49	103	61	40	10	●
D105-05-09300A0	9.3	49	103	61	40	10	○
D105-05-09400A0	9.4	49	103	61	40	10	●
D105-05-09500A0	9.5	49	103	61	40	10	●
D105-05-09600A0	9.6	49	103	61	40	10	○
D105-05-09700A0	9.7	49	103	61	40	10	○
D105-05-09800A0	9.8	49	103	61	40	10	●
D105-05-09900A0	9.9	49	103	61	40	10	○
D105-05-10000A0	10.0	49	103	61	40	10	●
D105-05-10100A0	10.1	56	118	71	45	12	○
D105-05-10200A0	10.2	56	118	71	45	12	●
D105-05-10300A0	10.3	56	118	71	45	12	●
D105-05-10400A0	10.4	56	118	71	45	12	●
D105-05-10500A0	10.5	56	118	71	45	12	●
D105-05-10600A0	10.6	56	118	71	45	12	○
D105-05-10700A0	10.7	56	118	71	45	12	○
D105-05-10800A0	10.8	56	118	71	45	12	●
D105-05-10900A0	10.9	56	118	71	45	12	○
D105-05-11000A0	11.0	56	118	71	45	12	●
D105-05-11100A0	11.1	56	118	71	45	12	○

Special product can be ordered

● Stocked
○ Limited-stock

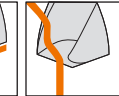


● 1st choice
● 2nd choice

P	M	K	N	S	H
●●		●●	●		●

5×DC

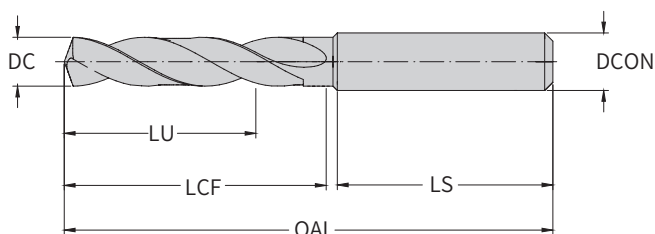
DIN 6537L



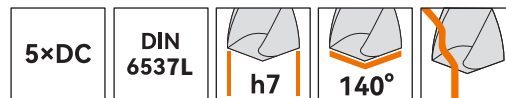
Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-11200A0	11.2	56	118	71	45	12	●
D105-05-11300A0	11.3	56	118	71	45	12	○
D105-05-11400A0	11.4	56	118	71	45	12	○
D105-05-11500A0	11.5	56	118	71	45	12	●
D105-05-11600A0	11.6	56	118	71	45	12	○
D105-05-11700A0	11.7	56	118	71	45	12	○
D105-05-11800A0	11.8	56	118	71	45	12	●
D105-05-11900A0	11.9	56	118	71	45	12	○
D105-05-12000A0	12.0	56	118	71	45	12	●
D105-05-12100A0	12.1	60	124	77	45	14	○
D105-05-12200A0	12.2	60	124	77	45	14	●
D105-05-12300A0	12.3	60	124	77	45	14	○
D105-05-12400A0	12.4	60	124	77	45	14	○
D105-05-12500A0	12.5	60	124	77	45	14	●
D105-05-12600A0	12.6	60	124	77	45	14	○
D105-05-12700A0	12.7	60	124	77	45	14	○
D105-05-12800A0	12.8	60	124	77	45	14	○
D105-05-12900A0	12.9	60	124	77	45	14	○
D105-05-13000A0	13.0	60	124	77	45	14	●
D105-05-13100A0	13.1	60	124	77	45	14	○
D105-05-13200A0	13.2	60	124	77	45	14	○
D105-05-13300A0	13.3	60	124	77	45	14	○
D105-05-13400A0	13.4	60	124	77	45	14	○
D105-05-13500A0	13.5	60	124	77	45	14	●
D105-05-13600A0	13.6	60	124	77	45	14	○
D105-05-13700A0	13.7	60	124	77	45	14	○
D105-05-13800A0	13.8	60	124	77	45	14	○
D105-05-13900A0	13.9	60	124	77	45	14	○
D105-05-14000A0	14.0	60	124	77	45	14	●
D105-05-14100A0	14.1	63	133	83	48	16	○
D105-05-14200A0	14.2	63	133	83	48	16	○
D105-05-14300A0	14.3	63	133	83	48	16	○
D105-05-14400A0	14.4	63	133	83	48	16	○
D105-05-14500A0	14.5	63	133	83	48	16	●
D105-05-14600A0	14.6	63	133	83	48	16	○
D105-05-14700A0	14.7	63	133	83	48	16	○
D105-05-14800A0	14.8	63	133	83	48	16	○
D105-05-14900A0	14.9	63	133	83	48	16	○
D105-05-15000A0	15.0	63	133	83	48	16	●
D105-05-15100A0	15.1	63	133	83	48	16	○
D105-05-15200A0	15.2	63	133	83	48	16	○

Special product can be ordered

● Stocked
○ Limited-stock


 ● 1st choice
 ● 2nd choice

P	M	K	N	S	H
●●		●●	●		●

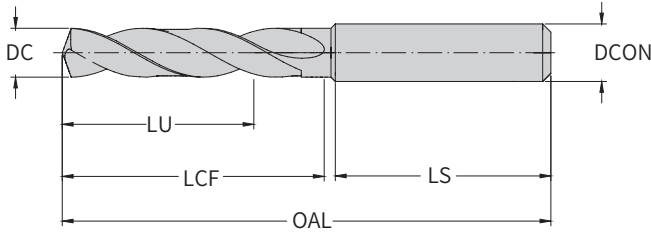


Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-15300A0	15.3	63	133	83	48	16	○
D105-05-15400A0	15.4	63	133	83	48	16	○
D105-05-15500A0	15.5	63	133	83	48	16	●
D105-05-15600A0	15.6	63	133	83	48	16	○
D105-05-15700A0	15.7	63	133	83	48	16	○
D105-05-15800A0	15.8	63	133	83	48	16	○
D105-05-15900A0	15.9	63	133	83	48	16	○
D105-05-16000A0	16.0	63	133	83	48	16	●
D105-05-16100A0	16.1	71	143	93	48	18	○
D105-05-16200A0	16.2	71	143	93	48	18	○
D105-05-16300A0	16.3	71	143	93	48	18	○
D105-05-16400A0	16.4	71	143	93	48	18	○
D105-05-16500A0	16.5	71	143	93	48	18	●
D105-05-16600A0	16.6	71	143	93	48	18	○
D105-05-16700A0	16.7	71	143	93	48	18	○
D105-05-16800A0	16.8	71	143	93	48	18	○
D105-05-16900A0	16.9	71	143	93	48	18	○
D105-05-17000A0	17.0	71	143	93	48	18	●
D105-05-17100A0	17.1	71	143	93	48	18	○
D105-05-17200A0	17.2	71	143	93	48	18	○
D105-05-17300A0	17.3	71	143	93	48	18	○
D105-05-17400A0	17.4	71	143	93	48	18	○
D105-05-17500A0	17.5	71	143	93	48	18	●
D105-05-17600A0	17.6	71	143	93	48	18	○
D105-05-17700A0	17.7	71	143	93	48	18	○
D105-05-17800A0	17.8	71	143	93	48	18	○
D105-05-17900A0	17.9	71	143	93	48	18	○
D105-05-18000A0	18.0	71	143	93	48	18	●
D105-05-18100A0	18.1	77	153	101	50	20	○
D105-05-18200A0	18.2	77	153	101	50	20	○
D105-05-18300A0	18.3	77	153	101	50	20	○
D105-05-18400A0	18.4	77	153	101	50	20	○
D105-05-18500A0	18.5	77	153	101	50	20	●
D105-05-18600A0	18.6	77	153	101	50	20	○
D105-05-18700A0	18.7	77	153	101	50	20	○
D105-05-18800A0	18.8	77	153	101	50	20	○
D105-05-18900A0	18.9	77	153	101	50	20	○
D105-05-19000A0	19.0	77	153	101	50	20	●
D105-05-19100A0	19.1	77	153	101	50	20	○
D105-05-19200A0	19.2	77	153	101	50	20	○
D105-05-19300A0	19.3	77	153	101	50	20	○

Special product can be ordered




● Stocked

○ Limited-stock



●● 1st choice
● 2nd choice

P	M	K	N	S	H
●●		●●	●		●

5×DC	DIN 6537L	 h7	 140°	
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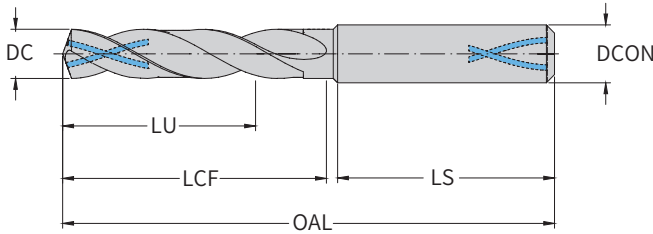
Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-19400A0	19.4	77	153	101	50	20	○
D105-05-19500A0	19.5	77	153	101	50	20	●
D105-05-19600A0	19.6	77	153	101	50	20	○
D105-05-19700A0	19.7	77	153	101	50	20	○
D105-05-19800A0	19.8	77	153	101	50	20	○
D105-05-19900A0	19.9	77	153	101	50	20	○
D105-05-20000A0	20.0	77	153	101	50	20	○

Special product can be ordered

● Stocked
○ Limited-stock



◆ **D105 with Internal Coolant _ 3xDc**

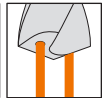


●● 1st choice
● 2nd choice

P	M	K	N	S	H
●●	●	●●	●●	●	●

3xDc

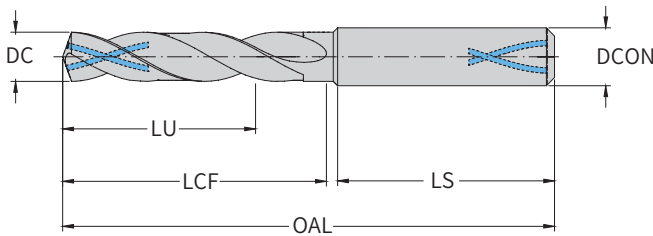
DIN 6537K



Product cede	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-03000A1	3.0	14	62	20	36	4	○
D105-03-03100A1	3.1	14	62	20	36	4	○
D105-03-03200A1	3.2	14	62	20	36	4	○
D105-03-03300A1	3.3	14	62	20	36	4	●
D105-03-03400A1	3.4	14	62	20	36	4	●
D105-03-03500A1	3.5	14	62	20	36	4	○
D105-03-03600A1	3.6	14	62	20	36	4	○
D105-03-03700A1	3.7	14	62	20	36	4	○
D105-03-03800A1	3.8	17	66	24	36	4	●
D105-03-03900A1	3.9	17	66	24	36	4	○
D105-03-04000A1	4.0	17	66	24	36	4	●
D105-03-04100A1	4.1	17	66	24	36	6	○
D105-03-04200A1	4.2	17	66	24	36	6	○
D105-03-04300A1	4.3	17	66	24	36	6	●
D105-03-04400A1	4.4	17	66	24	36	6	●
D105-03-04500A1	4.5	17	66	24	36	6	●
D105-03-04600A1	4.6	17	66	24	36	6	○
D105-03-04700A1	4.7	17	66	24	36	6	○
D105-03-04800A1	4.8	20	66	28	36	6	○
D105-03-04900A1	4.9	20	66	28	36	6	○
D105-03-05000A1	5.0	20	66	28	36	6	●
D105-03-05100A1	5.1	20	66	28	36	6	●
D105-03-05200A1	5.2	20	66	28	36	6	○
D105-03-05300A1	5.3	20	66	28	36	6	○
D105-03-05400A1	5.4	20	66	28	36	6	○
D105-03-05500A1	5.5	20	66	28	36	6	○
D105-03-05600A1	5.6	20	66	28	36	6	○
D105-03-05700A1	5.7	20	66	28	36	6	○
D105-03-05800A1	5.8	20	66	28	36	6	●
D105-03-05900A1	5.9	20	66	28	36	6	○
D105-03-06000A1	6.0	20	66	28	36	6	●
D105-03-06100A1	6.1	24	79	34	36	8	●
D105-03-06200A1	6.2	24	79	34	36	8	○
D105-03-06300A1	6.3	24	79	34	36	8	○
D105-03-06400A1	6.4	24	79	34	36	8	○
D105-03-06500A1	6.5	24	79	34	36	8	○
D105-03-06600A1	6.6	24	79	34	36	8	○
D105-03-06700A1	6.7	24	79	34	36	8	○
D105-03-06800A1	6.8	24	79	34	36	8	●
D105-03-06900A1	6.9	24	79	34	36	8	○
D105-03-07000A1	7.0	24	79	34	36	8	●

Special product can be ordered

● Stocked
○ Limited-stock



●● 1st choice
● 2nd choice

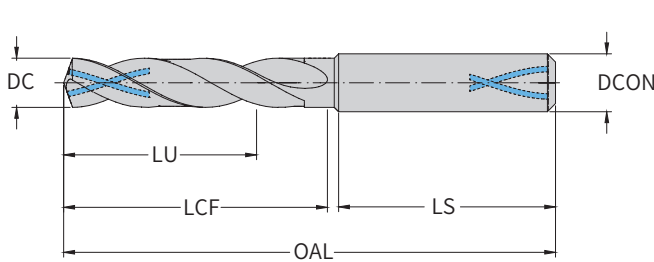
P	M	K	N	S	H
●●	●	●●	●●	●	●

3×DC DIN 6537K h7 140°

Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-07100A1	7.1	29	79	41	36	8	○
D105-03-07200A1	7.2	29	79	41	36	8	○
D105-03-07300A1	7.3	29	79	41	36	8	●
D105-03-07400A1	7.4	29	79	41	36	8	○
D105-03-07500A1	7.5	29	79	41	36	8	●
D105-03-07600A1	7.6	29	79	41	36	8	○
D105-03-07700A1	7.7	29	79	41	36	8	○
D105-03-07800A1	7.8	29	79	41	36	8	○
D105-03-07900A1	7.9	29	79	41	36	8	○
D105-03-08000A1	8.0	29	79	41	36	8	●
D105-03-08100A1	8.1	35	89	47	40	10	●
D105-03-08200A1	8.2	35	89	47	40	10	○
D105-03-08300A1	8.3	35	89	47	40	10	○
D105-03-08400A1	8.4	35	89	47	40	10	○
D105-03-08500A1	8.5	35	89	47	40	10	●
D105-03-08600A1	8.6	35	89	47	40	10	○
D105-03-08700A1	8.7	35	89	47	40	10	○
D105-03-08800A1	8.8	35	89	47	40	10	●
D105-03-08900A1	8.9	35	89	47	40	10	○
D105-03-09000A1	9.0	35	89	47	40	10	●
D105-03-09100A1	9.1	35	89	47	40	10	○
D105-03-09200A1	9.2	35	89	47	40	10	●
D105-03-09300A1	9.3	35	89	47	40	10	○
D105-03-09400A1	9.4	35	89	47	40	10	●
D105-03-09500A1	9.5	35	89	47	40	10	●
D105-03-09600A1	9.6	35	89	47	40	10	●
D105-03-09700A1	9.7	35	89	47	40	10	○
D105-03-09800A1	9.8	35	89	47	40	10	○
D105-03-09900A1	9.9	35	89	47	40	10	○
D105-03-10000A1	10.0	35	89	47	40	10	●
D105-03-10100A1	10.1	40	102	55	45	12	●
D105-03-10200A1	10.2	40	102	55	45	12	○
D105-03-10300A1	10.3	40	102	55	45	12	●
D105-03-10400A1	10.4	40	102	55	45	12	○
D105-03-10500A1	10.5	40	102	55	45	12	○
D105-03-10600A1	10.6	40	102	55	45	12	○
D105-03-10700A1	10.7	40	102	55	45	12	○
D105-03-10800A1	10.8	40	102	55	45	12	○
D105-03-10900A1	10.9	40	102	55	45	12	○
D105-03-11000A1	11.0	40	102	55	45	12	○
D105-03-11100A1	11.1	40	102	55	45	12	○

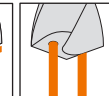
Special product can be ordered

● Stocked
○ Limited-stock


 ● 1st choice
 ○ 2nd choice

P	M	K	N	S	H
●●	●	●●	●●	●	●

3×DC

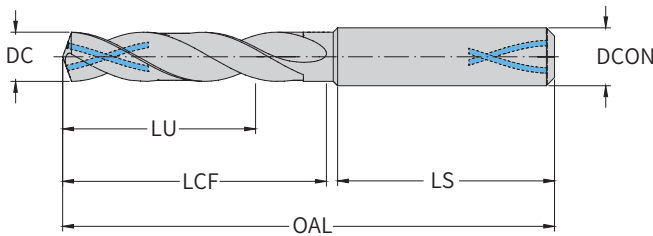
 DIN
 6537K


Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-11200A1	11.2	40	102	55	45	12	●
D105-03-11300A1	11.3	40	102	55	45	12	○
D105-03-11400A1	11.4	40	102	55	45	12	○
D105-03-11500A1	11.5	40	102	55	45	12	○
D105-03-11600A1	11.6	40	102	55	45	12	○
D105-03-11700A1	11.7	40	102	55	45	12	○
D105-03-11800A1	11.8	40	102	55	45	12	○
D105-03-11900A1	11.9	40	102	55	45	12	○
D105-03-12000A1	12.0	40	102	55	45	12	●
D105-03-12100A1	12.1	43	107	60	45	14	○
D105-03-12200A1	12.2	43	107	60	45	14	○
D105-03-12300A1	12.3	43	107	60	45	14	○
D105-03-12400A1	12.4	43	107	60	45	14	○
D105-03-12500A1	12.5	43	107	60	45	14	○
D105-03-12600A1	12.6	43	107	60	45	14	○
D105-03-12700A1	12.7	43	107	60	45	14	○
D105-03-12800A1	12.8	43	107	60	45	14	○
D105-03-12900A1	12.9	43	107	60	45	14	○
D105-03-13000A1	13.0	43	107	60	45	14	○
D105-03-13100A1	13.1	43	107	60	45	14	○
D105-03-13200A1	13.2	43	107	60	45	14	○
D105-03-13300A1	13.3	43	107	60	45	14	○
D105-03-13400A1	13.4	43	107	60	45	14	○
D105-03-13500A1	13.5	43	107	60	45	14	○
D105-03-13600A1	13.6	43	107	60	45	14	○
D105-03-13700A1	13.7	43	107	60	45	14	○
D105-03-13800A1	13.8	43	107	60	45	14	○
D105-03-13900A1	13.9	43	107	60	45	14	○
D105-03-14000A1	14.0	43	107	60	45	14	●
D105-03-14100A1	14.1	45	115	65	48	16	○
D105-03-14200A1	14.2	45	115	65	48	16	○
D105-03-14300A1	14.3	45	115	65	48	16	○
D105-03-14400A1	14.4	45	115	65	48	16	○
D105-03-14500A1	14.5	45	115	65	48	16	●
D105-03-14600A1	14.6	45	115	65	48	16	○
D105-03-14700A1	14.7	45	115	65	48	16	○
D105-03-14800A1	14.8	45	115	65	48	16	○
D105-03-14900A1	14.9	45	115	65	48	16	○
D105-03-15000A1	15.0	45	115	65	48	16	○
D105-03-15100A1	15.1	45	115	65	48	16	○
D105-03-15200A1	15.2	45	115	65	48	16	○

Special product can be ordered

● Stocked

○ Limited-stock



●● 1st choice
● 2nd choice

P	M	K	N	S	H
●●	●	●●	●●	●	●

3×DC

DIN 6537K

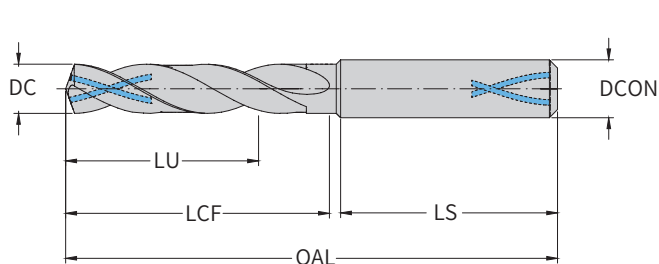
h7

140°

Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-15300A1	15.3	45	115	65	48	16	○
D105-03-15400A1	15.4	45	115	65	48	16	○
D105-03-15500A1	15.5	45	115	65	48	16	○
D105-03-15600A1	15.6	45	115	65	48	16	○
D105-03-15700A1	15.7	45	115	65	48	16	○
D105-03-15800A1	15.8	45	115	65	48	16	○
D105-03-15900A1	15.9	45	115	65	48	16	○
D105-03-16000A1	16.0	45	115	65	48	16	○
D105-03-16100A1	16.1	51	123	73	48	18	○
D105-03-16200A1	16.2	51	123	73	48	18	○
D105-03-16300A1	16.3	51	123	73	48	18	○
D105-03-16400A1	16.4	51	123	73	48	18	○
D105-03-16500A1	16.5	51	123	73	48	18	○
D105-03-16600A1	16.6	51	123	73	48	18	○
D105-03-16700A1	16.7	51	123	73	48	18	○
D105-03-16800A1	16.8	51	123	73	48	18	○
D105-03-16900A1	16.9	51	123	73	48	18	○
D105-03-17000A1	17.0	51	123	73	48	18	○
D105-03-17100A1	17.1	51	123	73	48	18	○
D105-03-17200A1	17.2	51	123	73	48	18	○
D105-03-17300A1	17.3	51	123	73	48	18	○
D105-03-17400A1	17.4	51	123	73	48	18	○
D105-03-17500A1	17.5	51	123	73	48	18	○
D105-03-17600A1	17.6	51	123	73	48	18	○
D105-03-17700A1	17.7	51	123	73	48	18	○
D105-03-17800A1	17.8	51	123	73	48	18	○
D105-03-17900A1	17.9	51	123	73	48	18	○
D105-03-18000A1	18.0	51	123	73	48	18	○
D105-03-18100A1	18.1	55	131	79	50	20	○
D105-03-18200A1	18.2	55	131	79	50	20	○
D105-03-18300A1	18.3	55	131	79	50	20	○
D105-03-18400A1	18.4	55	131	79	50	20	○
D105-03-18500A1	18.5	55	131	79	50	20	○
D105-03-18600A1	18.6	55	131	79	50	20	○
D105-03-18700A1	18.7	55	131	79	50	20	○
D105-03-18800A1	18.8	55	131	79	50	20	○
D105-03-18900A1	18.9	55	131	79	50	20	○
D105-03-19000A1	19.0	55	131	79	50	20	○
D105-03-19100A1	19.1	55	131	79	50	20	○
D105-03-19200A1	19.2	55	131	79	50	20	○
D105-03-19300A1	19.3	55	131	79	50	20	○

Special product can be ordered

● Stocked
○ Limited-stock



●● 1st choice
● 2nd choice

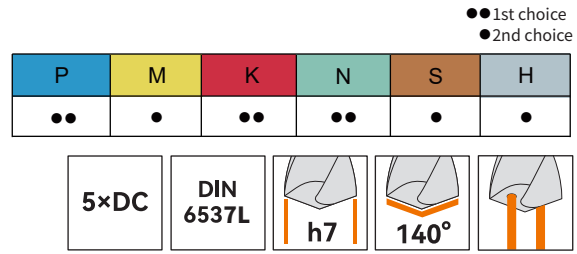
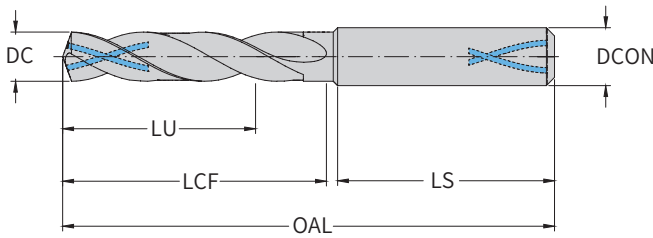
P	M	K	N	S	H
●●	●	●●	●●	●	●

3×DC DIN 6537K h7 140°

Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-03-19400A1	19.4	55	131	79	50	20	○
D105-03-19500A1	19.5	55	131	79	50	20	○
D105-03-19600A1	19.6	55	131	79	50	20	○
D105-03-19700A1	19.7	55	131	79	50	20	○
D105-03-19800A1	19.8	55	131	79	50	20	○
D105-03-19900A1	19.9	55	131	79	50	20	○
D105-03-20000A1	20.0	55	131	79	50	20	○

Special product can be ordered

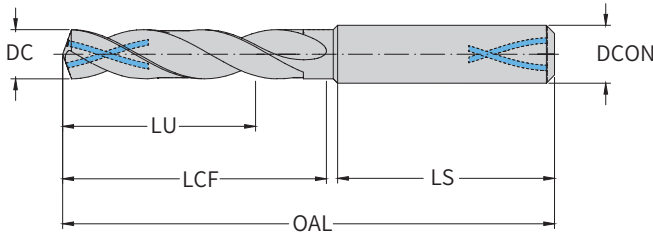
● Stocked
○ Limited-stock

• D105 with Internal Coolant _ 5xDc


Product cede	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-03000A1	3.0	23	66	28	36	4	●
D105-05-03100A1	3.1	23	66	28	36	4	○
D105-05-03200A1	3.2	23	66	28	36	4	○
D105-05-03300A1	3.3	23	66	28	36	4	●
D105-05-03400A1	3.4	23	66	28	36	4	●
D105-05-03500A1	3.5	23	66	28	36	4	●
D105-05-03600A1	3.6	23	66	28	36	4	○
D105-05-03700A1	3.7	23	66	28	36	4	○
D105-05-03800A1	3.8	29	74	36	36	4	○
D105-05-03900A1	3.9	29	74	36	36	4	○
D105-05-04000A1	4.0	29	74	36	36	4	●
D105-05-04100A1	4.1	29	74	36	36	6	○
D105-05-04200A1	4.2	29	74	36	36	6	●
D105-05-04300A1	4.3	29	74	36	36	6	○
D105-05-04400A1	4.4	29	74	36	36	6	○
D105-05-04500A1	4.5	29	74	36	36	6	○
D105-05-04600A1	4.6	29	74	36	36	6	○
D105-05-04700A1	4.7	29	74	36	36	6	○
D105-05-04800A1	4.8	35	82	44	36	6	○
D105-05-04900A1	4.9	35	82	44	36	6	○
D105-05-05000A1	5.0	35	82	44	36	6	●
D105-05-05100A1	5.1	35	82	44	36	6	●
D105-05-05200A1	5.2	35	82	44	36	6	●
D105-05-05300A1	5.3	35	82	44	36	6	●
D105-05-05400A1	5.4	35	82	44	36	6	○
D105-05-05500A1	5.5	35	82	44	36	6	○
D105-05-05600A1	5.6	35	82	44	36	6	○
D105-05-05700A1	5.7	35	82	44	36	6	●
D105-05-05800A1	5.8	35	82	44	36	6	●
D105-05-05900A1	5.9	35	82	44	36	6	●
D105-05-06000A1	6.0	35	82	44	36	6	●
D105-05-06100A1	6.1	43	91	53	36	8	○
D105-05-06200A1	6.2	43	91	53	36	8	○
D105-05-06300A1	6.3	43	91	53	36	8	○
D105-05-06400A1	6.4	43	91	53	36	8	○
D105-05-06500A1	6.5	43	91	53	36	8	●
D105-05-06600A1	6.6	43	91	53	36	8	○
D105-05-06700A1	6.7	43	91	53	36	8	○
D105-05-06800A1	6.8	43	91	53	36	8	●
D105-05-06900A1	6.9	43	91	53	36	8	○
D105-05-07000A1	7.0	43	91	53	36	8	●

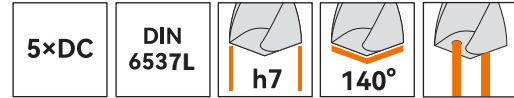
Special product can be ordered

 ● Stocked
 ○ Limited-stock



●● 1st choice
● 2nd choice

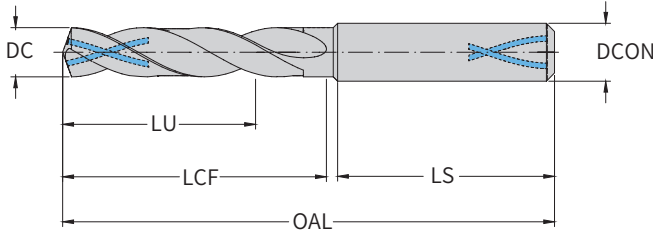
P	M	K	N	S	H
●●	●	●●	●●	●	●



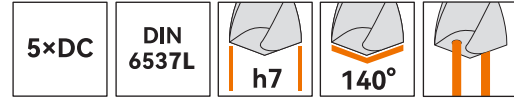
Product cede	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-07100A1	7.1	43	91	53	36	8	○
D105-05-07200A1	7.2	43	91	53	36	8	○
D105-05-07300A1	7.3	43	91	53	36	8	○
D105-05-07400A1	7.4	43	91	53	36	8	●
D105-05-07500A1	7.5	43	91	53	36	8	○
D105-05-07600A1	7.6	43	91	53	36	8	○
D105-05-07700A1	7.7	43	91	53	36	8	○
D105-05-07800A1	7.8	43	91	53	36	8	○
D105-05-07900A1	7.9	43	91	53	36	8	○
D105-05-08000A1	8.0	43	91	53	36	8	●
D105-05-08100A1	8.1	49	103	61	40	10	○
D105-05-08200A1	8.2	49	103	61	40	10	○
D105-05-08300A1	8.3	49	103	61	40	10	○
D105-05-08400A1	8.4	49	103	61	40	10	○
D105-05-08500A1	8.5	49	103	61	40	10	●
D105-05-08600A1	8.6	49	103	61	40	10	●
D105-05-08700A1	8.7	49	103	61	40	10	○
D105-05-08800A1	8.8	49	103	61	40	10	●
D105-05-08900A1	8.9	49	103	61	40	10	○
D105-05-09000A1	9.0	49	103	61	40	10	●
D105-05-09100A1	9.1	49	103	61	40	10	○
D105-05-09200A1	9.2	49	103	61	40	10	○
D105-05-09300A1	9.3	49	103	61	40	10	○
D105-05-09400A1	9.4	49	103	61	40	10	○
D105-05-09500A1	9.5	49	103	61	40	10	○
D105-05-09600A1	9.6	49	103	61	40	10	○
D105-05-09700A1	9.7	49	103	61	40	10	○
D105-05-09800A1	9.8	49	103	61	40	10	○
D105-05-09900A1	9.9	49	103	61	40	10	○
D105-05-10000A1	10.0	49	103	61	40	10	●
D105-05-10100A1	10.1	56	118	71	45	12	○
D105-05-10200A1	10.2	56	118	71	45	12	●
D105-05-10300A1	10.3	56	118	71	45	12	●
D105-05-10400A1	10.4	56	118	71	45	12	○
D105-05-10500A1	10.5	56	118	71	45	12	●
D105-05-10600A1	10.6	56	118	71	45	12	○
D105-05-10700A1	10.7	56	118	71	45	12	○
D105-05-10800A1	10.8	56	118	71	45	12	○
D105-05-10900A1	10.9	56	118	71	45	12	○
D105-05-11000A1	11.0	56	118	71	45	12	●
D105-05-11100A1	11.1	56	118	71	45	12	○

Special product can be ordered

● Stocked
○ Limited-stock


 ●● 1st choice
 ● 2nd choice

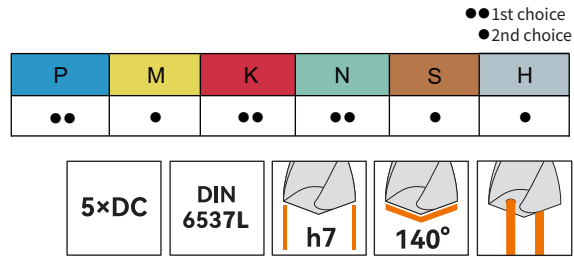
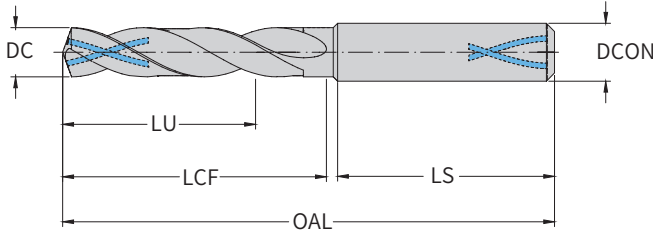
P	M	K	N	S	H
●●	●	●●	●●	●	●



Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-11200A1	11.2	56	118	71	45	12	○
D105-05-11300A1	11.3	56	118	71	45	12	○
D105-05-11400A1	11.4	56	118	71	45	12	○
D105-05-11500A1	11.5	56	118	71	45	12	●
D105-05-11600A1	11.6	56	118	71	45	12	○
D105-05-11700A1	11.7	56	118	71	45	12	○
D105-05-11800A1	11.8	56	118	71	45	12	○
D105-05-11900A1	11.9	56	118	71	45	12	○
D105-05-12000A1	12.0	56	118	71	45	12	●
D105-05-12100A1	12.1	60	124	77	45	14	○
D105-05-12200A1	12.2	60	124	77	45	14	○
D105-05-12300A1	12.3	60	124	77	45	14	○
D105-05-12400A1	12.4	60	124	77	45	14	○
D105-05-12500A1	12.5	60	124	77	45	14	●
D105-05-12600A1	12.6	60	124	77	45	14	○
D105-05-12700A1	12.7	60	124	77	45	14	○
D105-05-12800A1	12.8	60	124	77	45	14	○
D105-05-12900A1	12.9	60	124	77	45	14	○
D105-05-13000A1	13.0	60	124	77	45	14	●
D105-05-13100A1	13.1	60	124	77	45	14	○
D105-05-13200A1	13.2	60	124	77	45	14	○
D105-05-13300A1	13.3	60	124	77	45	14	○
D105-05-13400A1	13.4	60	124	77	45	14	○
D105-05-13500A1	13.5	60	124	77	45	14	●
D105-05-13600A1	13.6	60	124	77	45	14	○
D105-05-13700A1	13.7	60	124	77	45	14	○
D105-05-13800A1	13.8	60	124	77	45	14	○
D105-05-13900A1	13.9	60	124	77	45	14	○
D105-05-14000A1	14.0	60	124	77	45	14	●
D105-05-14100A1	14.1	63	133	83	48	16	●
D105-05-14200A1	14.2	63	133	83	48	16	○
D105-05-14300A1	14.3	63	133	83	48	16	○
D105-05-14400A1	14.4	63	133	83	48	16	○
D105-05-14500A1	14.5	63	133	83	48	16	○
D105-05-14600A1	14.6	63	133	83	48	16	○
D105-05-14700A1	14.7	63	133	83	48	16	○
D105-05-14800A1	14.8	63	133	83	48	16	○
D105-05-14900A1	14.9	63	133	83	48	16	○
D105-05-15000A1	15.0	63	133	83	48	16	●
D105-05-15100A1	15.1	63	133	83	48	16	○
D105-05-15200A1	15.2	63	133	83	48	16	○

Special product can be ordered

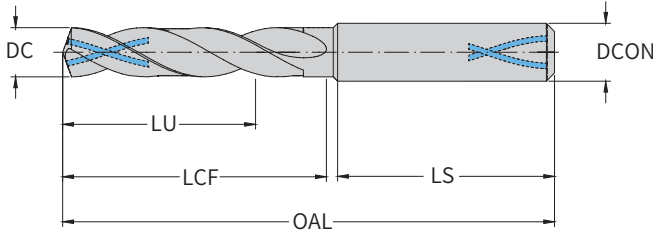
 ● Stocked
 ○ Limited-stock



Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-15300A1	15.3	63	133	83	48	16	○
D105-05-15400A1	15.4	63	133	83	48	16	○
D105-05-15500A1	15.5	63	133	83	48	16	○
D105-05-15600A1	15.6	63	133	83	48	16	○
D105-05-15700A1	15.7	63	133	83	48	16	○
D105-05-15800A1	15.8	63	133	83	48	16	○
D105-05-15900A1	15.9	63	133	83	48	16	○
D105-05-16000A1	16.0	63	133	83	48	16	○
D105-05-16100A1	16.1	71	143	93	48	18	○
D105-05-16200A1	16.2	71	143	93	48	18	○
D105-05-16300A1	16.3	71	143	93	48	18	○
D105-05-16400A1	16.4	71	143	93	48	18	○
D105-05-16500A1	16.5	71	143	93	48	18	○
D105-05-16600A1	16.6	71	143	93	48	18	○
D105-05-16700A1	16.7	71	143	93	48	18	○
D105-05-16800A1	16.8	71	143	93	48	18	○
D105-05-16900A1	16.9	71	143	93	48	18	○
D105-05-17000A1	17.0	71	143	93	48	18	○
D105-05-17100A1	17.1	71	143	93	48	18	○
D105-05-17200A1	17.2	71	143	93	48	18	○
D105-05-17300A1	17.3	71	143	93	48	18	○
D105-05-17400A1	17.4	71	143	93	48	18	○
D105-05-17500A1	17.5	71	143	93	48	18	○
D105-05-17600A1	17.6	71	143	93	48	18	○
D105-05-17700A1	17.7	71	143	93	48	18	○
D105-05-17800A1	17.8	71	143	93	48	18	○
D105-05-17900A1	17.9	71	143	93	48	18	○
D105-05-18000A1	18.0	71	143	93	48	18	○
D105-05-18100A1	18.1	77	153	101	50	20	○
D105-05-18200A1	18.2	77	153	101	50	20	○
D105-05-18300A1	18.3	77	153	101	50	20	○
D105-05-18400A1	18.4	77	153	101	50	20	○
D105-05-18500A1	18.5	77	153	101	50	20	○
D105-05-18600A1	18.6	77	153	101	50	20	○
D105-05-18700A1	18.7	77	153	101	50	20	○
D105-05-18800A1	18.8	77	153	101	50	20	○
D105-05-18900A1	18.9	77	153	101	50	20	○
D105-05-19000A1	19.0	77	153	101	50	20	○
D105-05-19100A1	19.1	77	153	101	50	20	○
D105-05-19200A1	19.2	77	153	101	50	20	○
D105-05-19300A1	19.3	77	153	101	50	20	○

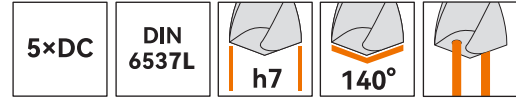
Special product can be ordered

 ● Stocked
○ Limited-stock



●● 1st choice
● 2nd choice

P	M	K	N	S	H
●●	●	●●	●●	●	●




Product code	DC(h7) mm	LU mm	OAL mm	LCF mm	LS mm	DCON(h6) mm	In stock
D105-05-19400A1	19.4	77	153	101	50	20	○
D105-05-19500A1	19.5	77	153	101	50	20	○
D105-05-19600A1	19.6	77	153	101	50	20	○
D105-05-19700A1	19.7	77	153	101	50	20	○
D105-05-19800A1	19.8	77	153	101	50	20	○
D105-05-19900A1	19.9	77	153	101	50	20	○
D105-05-20000A1	20.0	77	153	101	50	20	○

Special product can be ordered

● Stocked
○ Limited-stock

◆ Cutting Data for D105 Solid Carbide Drill Family

Vc=Cutting speed (m/min) Feed code = feed reference table see page 14				Drilling depth		3xDc				
										
				Product family		D105	D105			D105
				Dia. Range(mm)		3.00-20.00	3.00-20.00			3.00-20.00
Workpiece material				Coolant		External		Internal		
				Brinell hardness (HB)	Tensile strength (N/mm2)	Vc	Feed code	Vc	Feed code	
P	Unalloyed steel	C≤0.25%	Annealed	125	428	100-110	F	110-120	F	
		0.25 < C≤0.55%	Annealed	190	639	80-100	E	100-110	E	
		0.25 < C≤0.55%	Heat-treated	210	708	80-100	E	100-110	E	
		C > 0.55%	Annealed	190	639	90-100	E	100-110	E	
		C > 0.55%	Heat-treated	300	1013	70-80	D	80-90	D	
		Free cutting steel (short-chipping)	Annealed	220	745	100-120	F	110-120	F	
	Low-alloyed steel	Annealed		175	591	80-100	E	80-110	E	
		Heat-treated		285	960	70-90	D	70-90	D	
		Heat-treated		380	1282	40-50	C	40-50	C	
		Heat-treated		430	1477	35-45	B	35-45	B	
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	75-85	D	75-85	D	
		Hardened and tempered		300	1013	60-70	C	60-70	C	
		Hardened and tempered		400	1361	50-60	C	50-60	C	
	Stainless steel	Ferritic/martensitic, annealed		200	675	70-80	D	80-90	D	
Martensitic, heat-treated			330	1114			45-60	C		
M	Stainless steel	Austenitic, quench hardened		200	675			40-50	C	
		Austenitic, precipitation hardened (PH)		300	1013			40-50	C	
		Austenitic/ferritic, duplex		230	778			30-40	B	
K	Malleable cast iron	Ferritic		200	400	110-130	G	120-130	G	
		Pearlitic		260	700	85-100	G	90-110	G	
	Grey cast iron	Low tensile strength		180	200	110-120	H	120-130	H	
		High tensile strength/austenitic		245	350	80-100	G	90-110	G	
	Cast iron with spheroidal graphite	Ferritic		155	400	110-120	G	120-130	H	
		Pearlitic		265	700	60-80	F	60-80	F	
	GGV (CGI)			230	400	60-80	F	60-80	F	
N	Wrought aluminium alloys	non-aging		30	-	200-300	G	300-400	G	
		aged		100	340	200-300	G	300-400	G	
	Cast aluminium alloys	≤ 12% Si, non-aging		75	260	160-220	H	180-240	H	
		≤ 12% Si, aged		90	310	160-200	H	180-200	H	
		> 12% Si, non-aging		130	450	130-160	G	140-180	G	
	Magnesium alloys			70	250					
		Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	120-160	C	140-170	D
			Brass, bronze, red brass		90	310	110-140	E	120-140	E
Cu alloys, short-chip				110	380	120-150	F	140-180	F	
High tensile, Ampco alloy			300	1010	45-60	B	45-60	B		
S	Heat-resistant alloys	Fe-based	Annealed		200	680			30-40	B
			Hardened		280	940			20-25	A
		Ni or Co based	Annealed		250	840			20-30	B
			Hardened		350	1180			10-15	A
			Cast		320	1080			15-25	A
	Titanium alloys	Pure titanium		200	680	30-40	B	40-50	C	
		α and β alloys, hardened		375	1260	20-30	A	25-35	B	
		β alloys		410	1400			10-15	A	
	Tungsten alloys			300	1010					
	Molybdenum alloys			300	1010					
H	Hardened steel	Hardened and tempered			50HRC	20-35	A	20-35	A	
		Hardened and tempered			55HRC					
		Hardened and tempered			60HRC					
	Chilled cast iron	Hardened and tempered			55HRC					

The specified cutting data are average recommended values. For special applications, adjustment is needed.



• **Cutting Data for D105 Solid Carbide Drill Family**


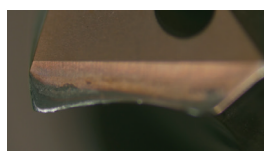





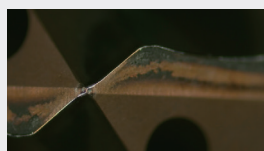

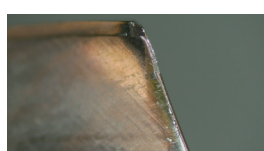
Vc=Cutting speed (m/min) Feed code = feed reference table see page 14				Drilling depth		5xDc				
				Product family		D105	D105			D105
				Dia. Range(mm)		3.00-20.00		3.00-20.00		
				Coolant		External		Internal		
Workpiece material				Brinell hardness (HB)	Tensile strength (N/mm2)	Vc	Feed code	Vc	Feed code	
P	Unalloyed steel	C≤0.25%	Annealed	125	428	100-110	F	110-120	F	
		0.25 < C≤0.55%	Annealed	190	639	80-100	E	100-110	E	
		0.25 < C≤0.55%	Heat-treated	210	708	80-100	E	100-110	E	
		C > 0.55%	Annealed	190	639	90-100	E	100-110	E	
		C > 0.55%	Heat-treated	300	1013	70-80	D	80-90	D	
		Free cutting steel (short-chipping)	Annealed	220	745	100-120	F	110-120	F	
	Low-alloyed steel	Annealed		175	591	80-100	E	80-110	E	
		Heat-treated		285	960	70-90	D	70-90	D	
		Heat-treated		380	1282	40-50	C	40-50	C	
		Heat-treated		430	1477	35-45	B	35-45	B	
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	75-85	D	75-85	D	
		Hardened and tempered		300	1013	60-70	C	60-70	C	
		Hardened and tempered		400	1361	50-60	C	50-60	C	
	Stainless steel	Ferritic/martensitic, annealed		200	675	70-80	D	80-90	D	
Martensitic, heat-treated			330	1114			45-60	C		
M	Stainless steel	Austenitic, quench hardened		200	675			40-50		
		Austenitic, precipitation hardened (PH)		300	1013			40-50	C	
		Austenitic/ferritic, duplex		230	778			30-40		
K	Malleable cast iron	Ferritic		200	400	110-130	G	120-130	G	
		Pearlitic		260	700	85-100	G	90-110	G	
	Grey cast iron	Low tensile strength		180	200	110-120	H	120-130	H	
		High tensile strength/austenitic		245	350	80-100	G	90-110	G	
	Cast iron with spheroidal graphite	Ferritic		155	400	110-120	G	120-130	G	
		Pearlitic		265	700	60-80	F	60-80	F	
	GGV (CGI)			230	400	60-80	F	60-80	F	
N	Wrought aluminium alloys	non-aging		30	-	200-300	G	300-400	G	
		aged		100	340	200-300	G	300-400	G	
	Cast aluminium alloys	≤ 12% Si, non-aging		75	260	160-220	H	180-240	H	
		≤ 12% Si, aged		90	310	160-200	H	180-200	H	
		> 12% Si, non-aging		130	450	130-160	G	140-180	G	
	Magnesium alloys			70	250					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	120-160	C	120-160	C	
		Brass, bronze, red brass		90	310	110-140	E	110-140	E	
Cu alloys, short-chip			110	380	120-150	F	120-150	F		
High tensile, Ampco alloy			300	1010	45-60	B	45-60	B		
S	Heat-resistant alloys	Fe-based	Annealed	200	680					
			Hardened	280	940					
		Ni or Co based	Annealed	250	840					
			Hardened	350	1180					
	Titanium alloys	Cast	320	1080						
		Pure titanium		200	680	30-40	B	30-40	B	
		α and β alloys, hardened		375	1260	20-30	A	20-30	A	
	Tungsten alloys	β alloys		410	1400					
				300	1010					
	Molybdenum alloys			300	1010					
H	Hardened steel	Hardened and tempered			50HRC	20-35	A	20-35	A	
		Hardened and tempered			55HRC					
		Hardened and tempered			60HRC					
	Chilled cast iron	Hardened and tempered			55HRC					

The specified cutting data are average recommended values. For special applications, adjustment is needed.

Feed Reference Table

		Feed rate f (mm/ rev)							
Dia.-mm		A	B	C	D	E	F	G	H
	3.0	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.14
	4.0	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.16
	5.0	0.05	0.06	0.07	0.09	0.10	0.12	0.16	0.18
	6.0	0.05	0.07	0.08	0.10	0.12	0.15	0.18	0.20
	8.0	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.23
	10.0	0.08	0.10	0.12	0.14	0.18	0.20	0.24	0.28
	12.0	0.10	0.12	0.14	0.18	0.20	0.24	0.28	0.32
	14.0	0.10	0.14	0.18	0.20	0.24	0.28	0.32	0.34
	16.0	0.12	0.15	0.18	0.20	0.25	0.30	0.34	0.36
20.0	0.15	0.16	0.20	0.25	0.30	0.34	0.37	0.40	

Solid Carbide Drill Failure Mode and Solutions

Failures	Picture	Analysis	Solution
Flank wear 		<ul style="list-style-type: none"> • Abrasion between the work piece and the flank surface leads to flank wear. 	<ul style="list-style-type: none"> • Reduce cutting speed • Raise feed rate • Raise coolant flow (e.g. raise coolant pressure)
Built-up edge 		<ul style="list-style-type: none"> • The work piece material stick on the cutting edge leads to built-up edge. 	<ul style="list-style-type: none"> • Raise cutting speed • Raise coolant flow (e.g. raise coolant pressure)
Fracture 		<ul style="list-style-type: none"> • Perpendicular cracks along the edges, chip eroding, vibration and extremely high wear resistance lead to fractures. 	<ul style="list-style-type: none"> • Replace and recondition the tool sooner • Improve stability (work piece/tool)
Plastic deformation 		<ul style="list-style-type: none"> • High heat and mechanical stress cause plastic deformation. 	<ul style="list-style-type: none"> • Reduce cutting speed • Raise coolant flow (e.g. raise coolant pressure)
Crater wear 		<ul style="list-style-type: none"> • Tool Material is too soft. • Too high cutting speed. • Too high feed rate. 	<ul style="list-style-type: none"> • Choose more wear resistant grade • Reduce cutting speed • Reduce feed • Raise coolant pressure



• Thread Pilot Hole Diameters Before Tapping

M			
Metric ISO coarse pitch thread DIN 13 and DIN ISO 965-1			
D	D1		
Diameter	Min (mm)	Max (mm) 5H/6H	Diameter
M4	3.242	3.422	3.30
M4.5	3.688	3.878	3.70
M5	4.134	4.334	4.20
M6	4.917	5.153	5.00
M7	5.917	6.153	6.00
M8	6.647	6.912	6.80
M9	7.647	7.912	7.80
M10	8.376	8.676	8.50
M11	9.376	9.676	9.50
M12	10.106	10.441	10.20
M14	11.835	12.210	12.00
M16	13.835	14.210	14.00
M18	15.294	15.744	15.50
M20	17.294	17.744	17.50
M22	19.294	19.744	19.50


UNC			
Coarse thread ASME B1.1 standard			
D	D1		
Diameter P Gg/1"	Min (mm) 2B/3B	Max (mm) 2B	Diameter
8-32 UNC	3.302	3.531	3.50
10-24 UNC	3.683	3.962	3.90
12-24 UNC	4.343	4.597	4.50
1/4-20 UNC	4.976	5.268	5.10
5/16-18 UNC	6.411	6.734	6.60
3/8-16 UNC	7.805	8.164	8.00
7/16-14 UNC	9.149	9.550	9.40
1/2-13 UNC	10.584	11.013	10.28
9/16-12 UNC	11.996	12.456	12.20
5/8-11 UNC	13.376	13.868	13.50
3/4-10 UNC	16.299	16.833	16.50
7/8-9 UNC	19.169	19.748	19.50


UNF			
Fine thread ASME B1.1 standard			
D	D1		
Diameter P Gg/1"	Min (mm) 2B/3B	Max (mm) 2B	Diameter
8-36 UNF	3.404	3.607	3.50
10-32 UNF	3.962	4.166	4.10
12-28 UNF	4.496	4.724	4.60
1/4-28 UNF	5.367	5.580	5.50
5/16-24 UNF	6.792	7.038	6.90
3/8-24 UNF	8.379	8.626	8.50
7/16-20 UNF	9.738	10.030	9.90
1/2-20 UNF	11.326	11.618	11.50
9/16-18 UNF	12.761	13.084	12.90
5/8-18 UNF	14.348	14.671	14.50
3/4-16 UNF	17.330	17.689	17.50


MF		
Metric ISO fine pitch thread DIN 13 and DIN ISO 965-1		
D	D1	
Diameter x P	Max (mm) 5H/6H	Diameter
M3.5x0.35	3.221	3.15
M4x0.35	3.721	3.65
M4x0.5	3.599	3.50
M4.5x0.5	4.099	4.00
M5x0.35	4.721	4.65
M5x0.5	4.599	4.50
M5x0.75	4.378	4.20
M5x0.5	5.599	5.50
M6x0.75	5.378	5.25
M7x0.5	6.599	6.50
M7x0.75	6.378	6.25
M8x0.5	7.599	7.50
M8x0.75	7.378	7.25
M8x1	7.153	7.00
M9x0.75	8.378	8.25
M9x1	8.153	8.00
M10x0.5	9.599	9.50
M10x0.75	9.378	9.25
M10x1	9.153	9.00
M10x1.25	8.912	8.75
M11x1	10.153	10.00
M12x0.5	11.599	11.50
M12x1	11.153	11.00
M12x1.25	10.912	10.75
M12x1.5	10.676	10.50
M13x1	12.153	12.00
M14x0.75	13.378	13.20
M14x1	13.153	13.00
M14x1.25	12.912	12.75
M14x1.5	12.676	12.50
M15x1	14.153	14.00
M15x1.5	13.676	13.50
M16x0.75	15.378	15.20
M16x1	15.153	15.00
M16x1.25	14.912	14.80
M16x1.5	14.676	14.50
M17x1	16.153	16.00
M18x1	17.153	17.00
M18x1.5	16.676	16.50
M18x2	16.21	16.00
M20x1	19.153	19.00
M20x1.5	18.676	18.50
M20x2	18.21	18.00




• Thread Pilot Hole Diameters Before Forming

M	Metric ISO coarse pitch thread DIN 13 and DIN ISO 965-1
D	
Diameter	Diameter
M3.5	3.25
M4	3.70
M5	4.65
M6	5.55
M8	7.40
M10	9.30
M12	11.20
M14	13.10
M16	15.10
M18	16.90
M20	18.90

MF	Metric ISO fine pitch thread DIN 13 and DIN ISO 965-1
D	
Diameter x P	Diameter
M4x0.5	3.80
M5x0.5	4.80
M6x0.5	5.80
M6x0.75	5.65
M7x0.75	6.65
M8x0.75	7.65
M8x1	7.55
M10x0.75	9.65
M10x1	9.55
M10x1.25	9.40
M12x1	11.55
M12x1.25	11.40
M12x1.5	11.30
M14x1	13.55
M14x1.5	13.30
M16x1	15.55
M16x1.5	15.30
M18x1	17.55
M18x1.5	17.30
M20x1.5	19.30
M20x2	19.10
M22x1.5	21.30

UNC	Coarse thread ASME B1.1 standard
D	
Diameter	Diameter
6-32 UNC	3.15
8-32 UNC	3.80
10-24 UNC	4.30
12-24 UNC	5.00
1/4-20 UNC	5.75
5/16-18 UNC	7.25
3/8-16 UNC	8.75
7/16-14 UNC	10.30
1/2-13 UNC	11.80
9/16-12 UNC	13.30
5/8-11 UNC	14.80
3/4-10 UNC	17.90

UNF	Fine thread ASME B1.1 standard
D	
Diameter	Diameter
6-40 UNF	3.20
8-36 UNF	3.85
10-32 UNF	4.45
12-28 UNF	5.05
1/4-28 UNF	5.90
5/16-24 UNF	7.45
3/8-24 UNF	9.00
7/16-20 UNF	10.50
1/2-20 UNF	12.10
9/16-18 UNF	13.70
5/8-18 UNF	15.25
3/4-16 UNF	18.40