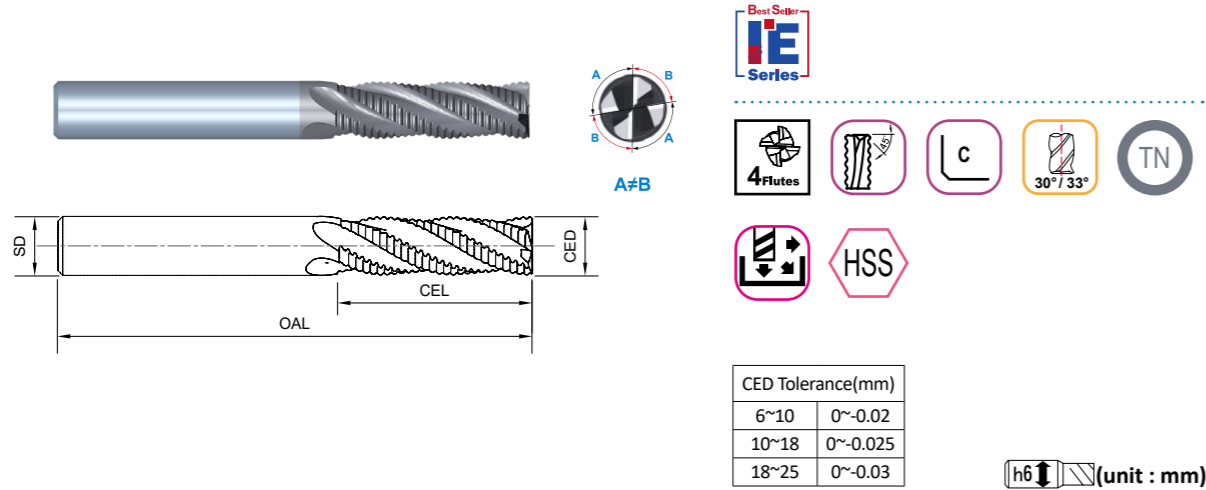


HSS - Fine Pitch Roughing Square End Mill

HS400IE⁺ - 11304TN

- ◆ Square / 4-Flute Fine Pitch Roughing
- ◆ Uneven Flute / Variable Helix 30° / 33°



Code No.	CED	CEL	SD	OAL	Flute
HS400IE ⁺ -11304TN	6	20	6	60	4
	7	20	10	70	
	8	25	10	75	
	9	30	10	75	
	10	35	10	85	
	12	40	12	100	
	14	40	12	100	
	16	50	16	110	
	18	50	16	110	
	20	60	20	125	
	22	45	20	110	
	25	50	25	120	

Code No.	CED	CEL	SD	OAL	Flute
HS400IE ⁺ -11304TN	EU 6	19	6	63	4
	EU 8	28	10	72	
	EU 10	34	10	84	
	EU 12	40	12	97	

※ Customized Special sizes, Coating type and Inches are available to order.

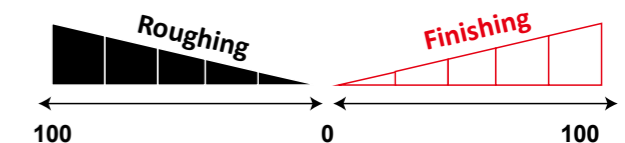
Recommended Cutting Condition

Side Milling

Work Material	Mild Steel Carbon Steel		Alloyed Steel ~30HRC		Gray Cast Iron Malleable cast iron	
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min
CED	$a_p: 1.5D$	$a_e: 0.5D$	$a_p: 1.5D$	$a_e: 0.3D$	$a_p: 1.5D$	$a_e: 0.3D$
6	2,400	185	1,920	130	1,920	130
7	2,080	185	1,600	130	1,600	130
8	1,800	185	1,440	130	1,440	130
9	1,600	190	1,280	130	1,280	130
10	1,400	205	1,120	145	1,120	145
12	1,200	215	960	150	960	150
14	1,020	230	820	160	820	160
16	900	255	725	180	725	180
18	800	265	640	185	640	185
20	720	265	590	185	590	185
22	650	250	520	175	520	175
25	550	220	440	155	440	155
Depth of cut						

Work Material

P	K	
G1	G2	G5
●	○	○

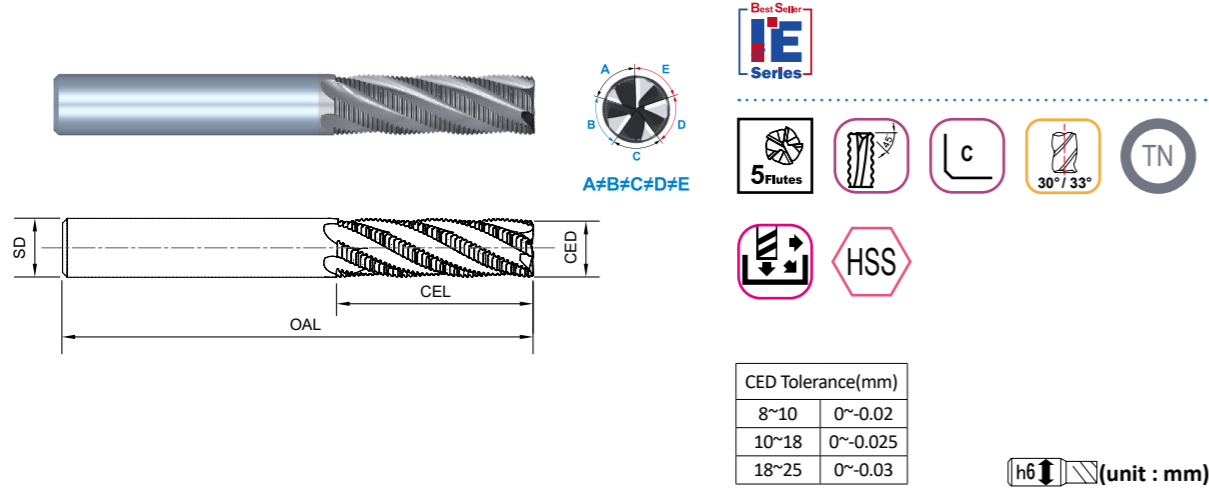


1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Fine Pitch Roughing Square End Mill

HS400IE⁺ - 11305TN

- ◆ Square / 5-Flute Fine Pitch Roughing
- ◆ Uneven Flute / Variable Helix 30° / 33°



Code No.	CED	CEL	SD	OAL	Flute
HS400IE ⁺ -11305TN	8	25	10	75	5
	10	35	10	85	
	12	40	12	100	
	16	50	16	110	
	18	50	16	110	
	20	60	20	125	
	25	50	25	120	

Code No.	CED	CEL	SD	OAL	Flute
HS400IE ⁺ -11305TN	EU 8	28	10	72	5
	EU 10	34	10	84	
	EU 12	40	12	97	

※ Customized Special sizes, Coating type and Inches are available to order.

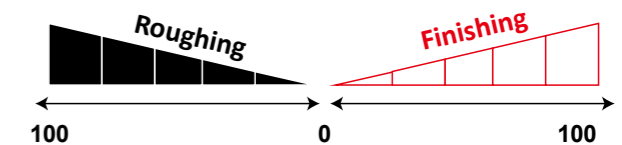
Recommended Cutting Condition

Side Milling

Work Material	Mild Steel Carbon Steel		Alloyed Steel ~30HRC		Gray Cast Iron Malleable cast iron													
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min												
CED	$a_p: 1.5D$	$a_e: 0.5D$	$a_p: 1.5D$	$a_e: 0.3D$	$a_p: 1.5D$	$a_e: 0.3D$												
8	1,800	185	1,440	130	1,440	130												
10	1,400	205	1,120	144	1,120	144												
12	1,200	215	960	151	960	151												
16	900	255	725	179	725	179												
18	800	265	640	186	640	186												
20	720	265	590	186	590	186												
25	550	220	440	154	440	154												
Depth of cut	<table border="1"> <tr> <td>a_p</td> <td>a_e</td> </tr> <tr> <td>1.5D</td> <td>0.5D</td> </tr> </table>		a_p	a_e	1.5D	0.5D	<table border="1"> <tr> <td>a_p</td> <td>a_e</td> </tr> <tr> <td>1.5D</td> <td>0.3D</td> </tr> </table>		a_p	a_e	1.5D	0.3D	<table border="1"> <tr> <td>a_p</td> <td>a_e</td> </tr> <tr> <td>1.5D</td> <td>0.3D</td> </tr> </table>		a_p	a_e	1.5D	0.3D
a_p	a_e																	
1.5D	0.5D																	
a_p	a_e																	
1.5D	0.3D																	
a_p	a_e																	
1.5D	0.3D																	

Work Material

P		K
G1	G2	G5
●	○	○

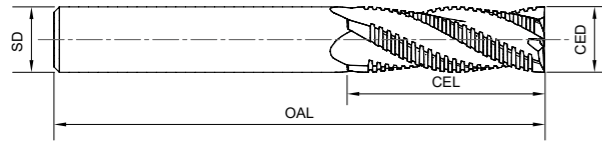


1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Coarse Pitch Roughing End Mill

HS400N⁺ - 11304TN

- ◆ Square / 4-Flute / Coarse Pitch Roughing / Sharp Edge
- ◆ Helix 30°



CED Tolerance(mm)	
8~10	0~-0.02
10~14	0~-0.025

h6 (unit : mm)

Code No.	CED	CEL	SD	OAL	Flute
HS400N ⁺ -11304TN	8	22	10	65	4
	10	28	12	75	
	11	35	12	80	
	12	35	12	80	
	12.5	36	16	90	
	14	42	16	90	

Code No.	CED	CEL	SD	OAL	Flute
HS400N ⁺ -11304TN	EU 8	28	10	72	4
	EU 10	34	10	84	
	EU 12	40	12	97	

※ Customized Special sizes, Coating type and Inches are available to order.

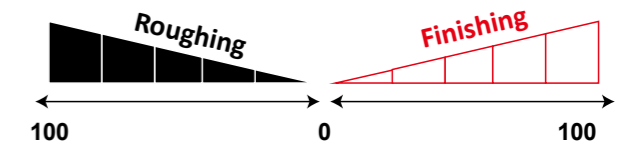
Recommended Cutting Condition

Side Milling

Work Material	Mild Steel Carbon Steel		Alloyed Steel ~30HRC		Gray Cast Iron Malleable cast iron	
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min
CED	$a_p: 1.5D$	$a_e: 0.5D$	$a_p: 1.5D$	$a_e: 0.3D$		
8	1,800	185	1,440	130	1,440	130
10	1,450	190	1,200	130	1,200	130
11	1,300	205	1,120	145	1,120	145
12	1,200	215	960	150	960	150
12.5	1,160	215	940	150	940	150
14	1,020	230	820	160	820	160
Depth of cut						

Work Material

P		K
G1	G2	G5
●	○	○

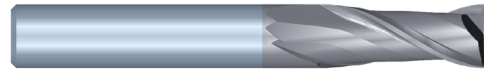


1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Anti-Vibration End Mill

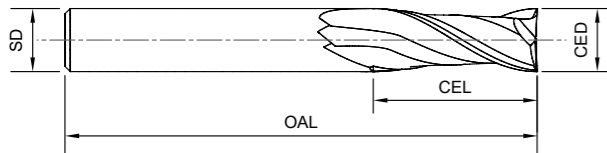
HS100E⁺ - 11302TN

- ◆ Square / 2-Flute
- ◆ Variable Helix 30° / 33°



CED Tolerance(mm)	
6~10	0~-0.02
10~18	0~-0.025
18~20	0~-0.03

$h6$ (unit : mm)



Code No.	CED	CEL	SD	OAL	Flute
HS100E ⁺ -11302TN	6	15	8	65	2
	7	20	10	75	
	8	20	10	75	
	9	25	10	80	
	10	25	10	80	
	12	30	12	90	
	14	35	12	95	
	16	40	16	105	
	18	40	16	105	
	20	45	20	115	

Code No.	CED	CEL	SD	OAL	Flute
HS100E ⁺ -11302TN	EU 6	13	6	57	2
	EU 8	19	8	63	
	EU 10	22	10	72	
	EU 12	26	12	83	

※ Customized Special sizes, Coating type and Inches are available to order.

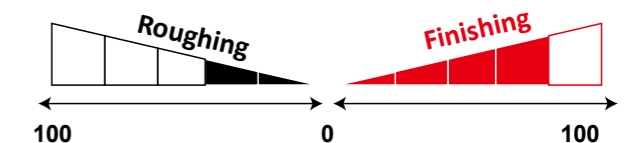
Recommended Cutting Condition

Side Milling

Work Material	Mild Steel Carbon Steel		Alloyed Steel ~30HRC		Gray Cast Iron Malleable cast iron													
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min												
CED	$a_p: 1.5D$	$a_e: 0.5D$	$a_p: 1.5D$	$a_e: 0.3D$	$a_p: 1.5D$	$a_e: 0.3D$												
6	2,160	150	1,720	105	1,720	105												
7	1,870	150	1,440	105	1,440	105												
8	1,620	150	1,300	105	1,300	105												
9	1,440	155	1,150	105	1,150	105												
10	1,260	165	1,000	115	1,000	115												
12	1,080	170	860	120	860	120												
14	920	180	740	130	740	130												
16	815	190	650	140	650	140												
18	725	200	670	150	670	150												
20	650	200	530	150	530	150												
Depth of cut	<table border="1"> <tr> <td>a_p</td> <td>a_e</td> </tr> <tr> <td>1.5D</td> <td>0.5D</td> </tr> </table>		a_p	a_e	1.5D	0.5D	<table border="1"> <tr> <td>a_p</td> <td>a_e</td> </tr> <tr> <td>1.5D</td> <td>0.3D</td> </tr> </table>		a_p	a_e	1.5D	0.3D	<table border="1"> <tr> <td>a_p</td> <td>a_e</td> </tr> <tr> <td>1.5D</td> <td>0.3D</td> </tr> </table>		a_p	a_e	1.5D	0.3D
a_p	a_e																	
1.5D	0.5D																	
a_p	a_e																	
1.5D	0.3D																	
a_p	a_e																	
1.5D	0.3D																	

Work Material

P	K
G1	G5
●	○

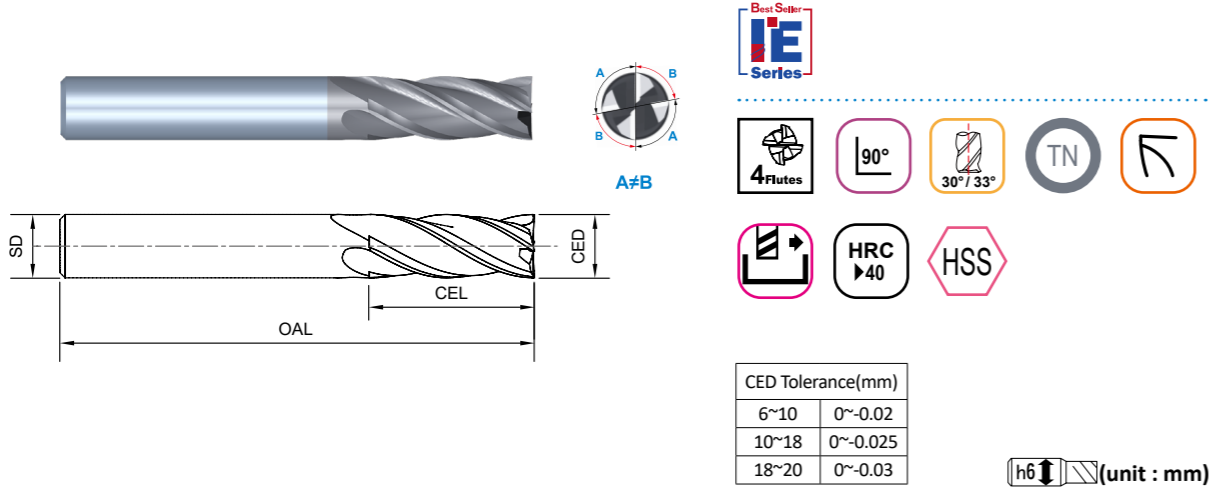


1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Anti-Vibration End Mill

HS100IE⁺ - 11304TN

- ◆ Square / 4-Flute
- ◆ Uneven Flute / Variable Helix 30° / 33°



Code No.	CED	CEL	SD	OAL	Flute
HS100IE ⁺ -11304TN	6	15	8	65	4
	7	20	10	75	
	8	20	10	75	
	9	25	10	80	
	10	25	10	80	
	12	30	12	90	
	14	35	12	95	
	16	40	16	105	
	18	40	16	105	
	20	45	20	115	

Code No.	CED	CEL	SD	OAL	Flute
HS100IE ⁺ -11304TN	EU 6	13	6	57	4
	EU 8	19	8	63	
	EU 10	22	10	72	
	EU 12	26	12	83	

※ Customized Special sizes, Coating type and Inches are available to order.

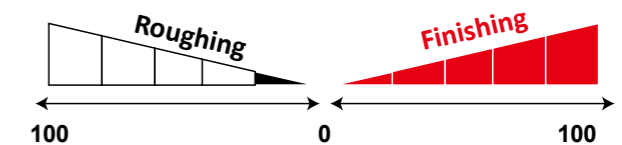
Recommended Cutting Condition

Side Milling

Work Material	Mild Steel Carbon Steel		Alloyed Steel ~30HRC		Gray Cast Iron Malleable cast iron	
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min
CED	$a_p: 1.5D$	$a_e: 0.5D$	$a_p: 1.5D$	$a_e: 0.3D$	$a_p: 1.5D$	$a_e: 0.3D$
6	2,160	165	1,700	120	1,700	120
7	1,870	165	1,440	120	1,440	120
8	1,620	165	1,300	120	1,300	120
9	1,440	170	1,150	120	1,150	120
10	1,260	185	1,000	129	1,000	129
12	1,080	195	860	135	860	135
14	920	210	740	145	740	145
16	815	230	650	160	650	160
18	725	240	570	165	570	165
20	650	240	530	165	530	165
Depth of cut						

Work Material

P	K	
G1	G2	G5
●	○	○

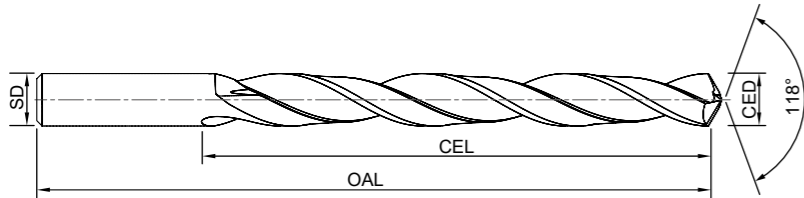


1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Drills

HDR300⁺ - 41302TN

- ◆ HSS - Twist Drills / 2-Flute / Straight Shank
- ◆ Helix 30° / Drill Point 118°



h6
(unit : mm)

Code No.	CED	CEL	SD	OAL	Flute
HDR300 ⁺ - 41302TN	0.2	3	0.2	19	2
	0.3	3.5	0.3	20	
	0.4	5.5	0.4	24	
	0.5	7.5	0.5	27	
	0.6	8.5	0.6	30	
	0.7	10	0.7	32	
	0.8	11	0.8	34	
	0.9	13	0.9	36	
	1.0	18	1.0	40	
	1.1	20	1.1	42	
	1.2	20	1.2	42	
	1.3	22	1.3	45	
	1.4	23	1.4	48	
	1.5	23	1.5	48	
	1.6	25	1.6	50	
	1.7	25	1.7	50	
	1.8	28	1.8	52	
	1.9	28	1.9	52	
	2.0	29	2.0	55	
	2.1	29	2.1	55	
2.2	33	2.2	58		
2.3	33	2.3	58		
2.4	35	2.4	61		
2.5	35	2.5	61		
2.6	37	2.6	64		
2.7	37	2.7	64		
2.8	39	2.8	67		
2.9	42	2.9	71		

Code No.	CED	CEL	SD	OAL	Flute
HDR300 ⁺ - 41302TN	3.0	42	3.0	71	2
	3.1	42	3.1	71	
	3.2	42	3.2	71	
	3.3	45	3.3	73	
	3.4	45	3.4	73	
	3.5	45	3.5	73	
	3.6	48	3.6	76	
	3.7	48	3.7	76	
	3.8	48	3.8	76	
	3.9	51	3.9	79	
	4.0	54	4.0	83	
	4.1	54	4.1	83	
	4.2	54	4.2	83	
	4.3	54	4.3	83	
	4.4	56	4.4	86	
	4.5	56	4.5	86	
	4.6	56	4.6	86	
	4.7	59	4.7	89	
	4.8	59	4.8	89	
	4.9	62	4.9	92	
5.0	62	5.0	92		
5.1	62	5.1	92		
5.2	64	5.2	95		
5.3	64	5.3	95		
5.4	64	5.4	95		
5.5	64	5.5	95		
5.6	67	5.6	98		
5.7	67	5.7	98		

HSS - Drills

Code No.	CED	CEL	SD	OAL	Flute
HDR300 ⁺ - 41302TN	5.8	67	5.8	98	2
	5.9	67	5.9	98	
	6.0	70	6.0	102	
	6.1	70	6.1	102	
	6.2	70	6.2	102	
	6.3	70	6.3	102	
	6.4	73	6.4	105	
	6.5	73	6.5	105	
	6.6	73	6.6	105	
	6.7	73	6.7	105	
	6.8	73	6.8	105	
	6.9	73	6.9	105	
	7.0	73	7.0	105	
	7.1	75	7.1	108	
	7.2	75	7.2	108	
	7.3	75	7.3	108	
	7.4	78	7.4	111	
	7.5	78	7.5	111	
	7.6	78	7.6	111	
	7.7	81	7.7	114	
7.8	81	7.8	114		
7.9	81	7.9	114		
8.0	81	8.0	114		
8.1	84	8.1	117		
8.2	84	8.2	117		
8.3	84	8.3	117		
8.4	87	8.4	121		
8.5	87	8.5	121		
8.6	87	8.6	121		
8.7	87	8.7	121		
8.8	89	8.8	124		
8.9	89	8.9	124		
9.0	89	9.0	124		
9.1	89	9.1	124		
9.2	92	9.2	127		
9.3	92	9.3	127		
9.4	92	9.4	127		
9.5	92	9.5	127		
9.6	95	9.6	130		
9.7	95	9.7	130		
9.8	95	9.8	130		
9.9	95	9.9	130		
10.0	95	10.0	130		
10.1	98	10.1	133		

Code No.	CED	CEL	SD	OAL	Flute
HDR300 ⁺ - 41302TN	10.2	98	10.2	133	2
	10.3	98	10.3	133	
	10.4	98	10.4	133	
	10.5	100	10.5	137	
	10.6	100	10.6	137	
	10.7	100	10.7	137	
	10.8	103	10.8	140	
	10.9	103	10.9	140	
	11.0	103	11.0	140	
	11.1	103	11.1	140	
	11.2	106	11.2	143	
	11.3	106	11.3	143	
	11.4	106	11.4	143	
	11.5	106	11.5	143	
	11.6	109	11.6	146	
	11.7	109	11.7	146	
	11.8	109	11.8	146	
	11.9	109	11.9	146	
	12.0	111	12.0	149	
	12.1	111	12.1	149	
12.2	111	12.2	149		
12.3	111	12.3	149		
12.4	114	12.4	152		
12.5	114	12.5	152		
12.6	114	12.6	152		
12.7	114	12.7	152		
12.8	114	12.8	152		
12.9	114	12.9	152		
13.0	114	13.0	152		
13.5	108	13.5	160		
14.0	108	14.0	160		
14.5	114	14.5	169		
15.0	114	15.0	169		
15.5	120	15.5	178		
16.0	120	16.0	178		
16.5	125	16.5	184		
17.0	125	17.0	184		
17.5	130	17.5	191		
18.0	130	18.0	191		
18.5	135	18.5	198		
19.0	135	19.0	198		
19.5	140	19.5	205		
20.0	140	20.0	205		

※ Customised Special sizes, Coating type and Inches are available to order.

Recommended Cutting Condition

Drilling

Work Material	Mild Steel Low Carbon Steel		Alloyed Steel 20~30HRC		Gray Cast Iron Malleable cast iron	
	Speed RPM/min	Feed (mm/rev)	Speed RPM/min	Feed (mm/rev)	Speed RPM/min	Feed (mm/rev)
CED						
0.2	23,000	0.002~0.004	18,400	0.002~0.003	23,000	0.002~0.004
0.6	8,000	0.006~0.013	6,400	0.005~0.01	8,000	0.006~0.013
1	4,800	0.01~0.02	3,800	0.009~0.17	4,800	0.01~0.02
2	2,900	0.02~0.04	2,300	0.017~0.34	2,900	0.02~0.04
3	2,100	0.036~0.07	1,700	0.03~0.06	2,100	0.036~0.07
4	1,590	0.04~0.08	1,270	0.04~0.08	1,590	0.04~0.08
5	1,300	0.05~0.1	1,000	0.05~0.09	1,300	0.05~0.1
6	1,060	0.06~0.12	835	0.05~0.11	1,060	0.06~0.12
7	910	0.07~0.14	720	0.06~0.12	910	0.07~0.14
8	800	0.08~0.15	640	0.06~0.13	800	0.08~0.15
9	710	0.08~0.17	570	0.07~0.14	710	0.08~0.17
10	640	0.09~0.17	510	0.07~0.15	640	0.09~0.17
11	580	0.09~0.18	465	0.08~0.16	580	0.09~0.18
12	530	0.09~0.19	420	0.08~0.16	530	0.09~0.19
13	490	0.1~0.2	390	0.09~0.17	490	0.1~0.2
14	455	0.11~0.21	365	0.09~0.18	455	0.11~0.21
15	425	0.11~0.22	340	0.09~0.19	425	0.11~0.22
16	400	0.12~0.23	320	0.1~0.2	400	0.12~0.23
17	375	0.12~0.23	300	0.1~0.21	375	0.12~0.23
18	355	0.12~0.24	280	0.11~0.21	355	0.12~0.24
19	335	0.12~0.25	265	0.11~0.22	335	0.12~0.25
20	320	0.13~0.26	250	0.11~0.22	320	0.13~0.26

Work Material

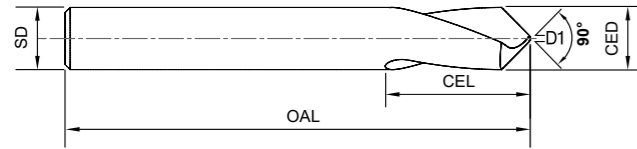
P			K
G1	G2	G3	G5
●	●	●	●

1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Spot Drill

HRD100⁺ - 40902TN

- ◆ 2-Flute / V 90° / Spot Drill
- ◆ 45° Chamfering



CED Tolerance(mm)	
4~6	0~-0.018
6~10	0~-0.02
10~16	0~-0.025
16~20	0~-0.03

h6 (unit : mm)

Code No.	CED	CEL	SD	OAL	D1	Flute
HRD100 ⁺ -40902TN	4	8	4	50	0.4	2
	5	10	5	60	0.5	
	6	12	6	70	0.6	
	8	16	8	80	0.8	
	10	20	10	90	1	
	12	24	12	110	1.2	
	16	32	16	120	1.6	
	20	40	20	120	2	

Code No.	CED	CEL	SD	OAL	D1	Flute
HRD100 ⁺ -40902TN	EU 4	12	4	55	0.4	2
	EU 6	16	6	66	0.6	
	EU 8	21	8	79	0.8	
	EU 10	25	10	89	1.0	
	EU 12	30	12	102	1.2	

※ Customized Special sizes, Coating type and Inches are available to order.

Recommended Cutting Condition

Drilling

Work Material	Mild Steel		Carbon Steel		Alloyed Steel		Gray Cast Iron Malleable cast iron	
	Speed RPM/min	Feed (mm/rev)	Speed RPM/min	Feed (mm/rev)	Speed RPM/min	Feed (mm/rev)	RPM/min	FEED mm/min
CED								
4	2,700	0.03~0.06	2,700	0.03~0.06	2,230	0.02~0.05	3,100	120
5	2,300	0.04~0.08	2,300	0.04~0.08	1,780	0.03~0.06	2,500	120
6	1,900	0.05~0.1	1,900	0.05~0.1	1,490	0.04~0.8	2,090	110
8	1,500	0.06~0.12	1,500	0.06~0.12	1,110	0.05~0.1	1,600	115
10	1,200	0.07~0.15	1,200	0.07~0.15	890	0.06~0.12	1,260	115
12	980	0.08~0.18	980	0.08~0.18	740	0.07~0.15	1,050	115
16	750	0.1~0.2	750	0.1~0.2	560	0.09~0.18	795	100
20	600	0.13~0.25	600	0.13~0.25	450	0.11~0.22	635	95

Work Material

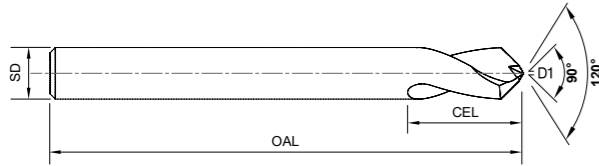
P		K
G1	G2	G5
●	○	○

1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Spot Drill

HPRD100⁺ - 90120TN

- ◆ 2-Flute / V120° / 90°
- ◆ Spot Drill



CED Tolerance(mm)	
4~6	0~-0.018
6~10	0~-0.02
10~16	0~-0.025
16~20	0~-0.03

h6 (unit : mm)

Code No.	CED	CEL	SD	OAL	D1	Flute
HPRD100 ⁺ -90120TN	4	8	4	50	1.5	2
	6	12	6	70	2	
	8	16	8	80	2.5	
	10	20	10	90	3	
	12	24	12	110	4	
	16	32	16	120	5	
	20	40	20	120	6	

Code No.	CED	CEL	SD	OAL	D1	Flute
HPRD100 ⁺ -90120TN	EU 4	12	4	55	1.5	2
	EU 6	16	6	66	2.0	
	EU 8	21	8	79	2.5	
	EU 10	25	10	89	3.0	
	EU 12	30	12	102	4.0	

※ Customized Special sizes, Coating type and Inches are available to order.

Recommended Cutting Condition

Drilling

Work Material	Mild Steel		Carbon Steel		Alloyed Steel		Gray Cast Iron Malleable cast iron	
	Speed RPM/min	Feed (mm/rev)	Speed RPM/min	Feed (mm/rev)	Speed RPM/min	Feed (mm/rev)	RPM/min	FEED mm/min
CED								
4	2,700	0.03~0.06	2,700	0.03~0.06	2,230	0.02~0.05	2,700	115
6	1,900	0.05~0.1	1,900	0.05~0.1	1,490	0.04~0.8	2,100	115
8	1,500	0.06~0.12	1,500	0.06~0.12	1,110	0.05~0.1	1,600	105
10	1,200	0.07~0.15	1,200	0.07~0.15	890	0.06~0.12	1,300	110
12	980	0.08~0.18	980	0.08~0.18	740	0.07~0.15	1,130	110
16	750	0.1~0.2	750	0.1~0.2	560	0.09~0.18	800	105
20	600	0.13~0.25	600	0.13~0.25	450	0.11~0.22	650	95

Work Material

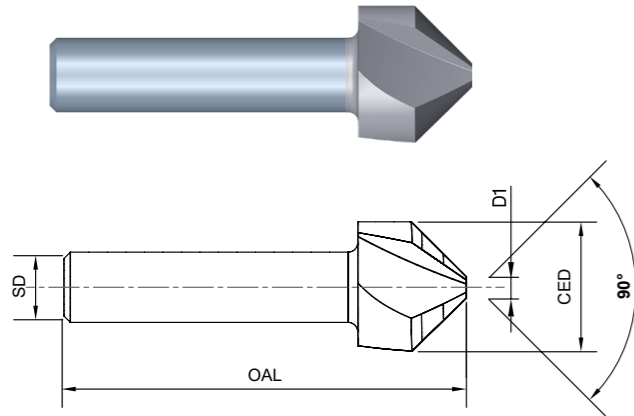
P		K
G1	G2	G5
●	○	○

1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - 3-Flute Chamfer Mill

HCF100⁺ - 40903TN

- ◆ 3-Flute / 90°
- ◆ 45° Chamfering



CED Tolerance(mm)	
6.3~8.3	0~-0.02
10.4~16.5	0~-0.025
20.5~25	0~-0.03

h6 (unit : mm)

Code No.	CED	SD	OAL	D1	Flute
HCF100 ⁺ -40903TN	6.3	5	45	1.5	3
	8.3	6	50	2	
	10.4	6	50	2.5	
	14.4	8	56	2.8	
	16.5	10	60	3.2	
	20.5	10	63	3.5	
	25	10	67	3.8	

※ Customized Special sizes, Coating type and Inches are available to order.

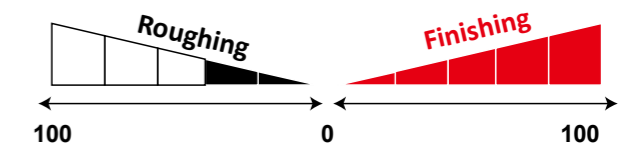
Recommended Cutting Condition

Chamfering

Work Material	Mild Steel Carbon Steel		Carbon Steel		Alloyed Steel		Gray Cast Iron Malleable cast iron	
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min
CED	a _p : 0.2D		a _p : 0.2D		a _p : 0.1D		a _p : 0.1D	
6.3	1,950	270	1,950	270	1,950	270	1,950	270
8.3	1,500	265	1,500	265	1,500	265	1,500	265
10.4	1,200	265	1,200	265	1,200	265	1,200	265
14.4	1,000	265	1,000	265	1,000	265	1,000	265
16.5	860	320	860	320	860	320	860	320
20.5	605	285	605	285	605	285	605	285
25	480	225	480	225	480	225	480	225
Depth of cut								

Work Material

P		K
G1	G2	G5
●	○	○

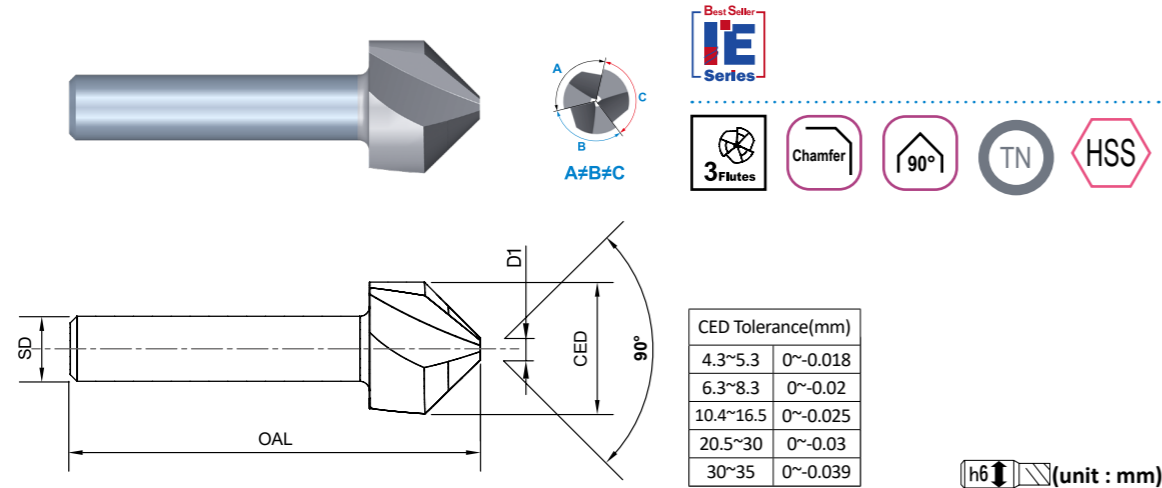


1. Please select high rigid tool holder and collet chuck during machining.
2. Please select the suitable coolant fluid.
3. For dry cutting, please use air blow for chip removal and cooling.
4. These cutting data are for reference only. Please adjust the cutting speed according to machine capability and working conditions.
5. If vibrations occur during cutting process, adjust and reduce the cutting speed.

HSS - Anti-Vibration 3-Flute Chamfer Mill

HCF100I⁺ - 40903TN

- ◆ 3-Flute / 90° / Uneven Flute
- ◆ 45° Chamfering



Code No.	CED	SD	OAL	D1	Flute
HCF100I ⁺ -40903TN	4.3	4	40	1	3
	5.3	4	40	1	
	6.3	5	45	1.5	
	8.3	6	50	2	
	10.4	8	50	2.5	
	12.4	10	56	2.8	
	16.5	10	60	3.2	
	20.5	10	63	3.5	
	25	10	67	3.8	
	30	10	70	4.2	
	35	12	70	4.5	
	12.4	8	150	2.8	
	16.5	10	180	3.2	
	20.5	10	200	3.5	

※ Customized Special sizes, Coating type and Inches are available to order.

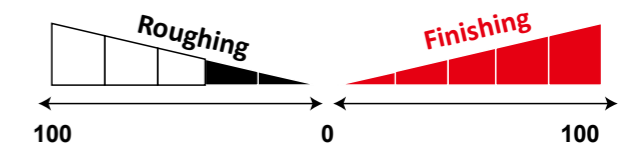
Recommended Cutting Condition

Chamfering

Work Material	Mild Steel Carbon Steel		Carbon Steel		Alloyed Steel		Gray Cast Iron Malleable cast iron	
	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min	RPM/min	FEED mm/min
CED	a _p : 0.2D		a _p : 0.2D		a _p : 0.1D		a _p : 0.1D	
4.3	2,860	255	2,860	255	2,280	150	2,860	255
5.3	2,340	265	2,340	265	1,870	160	2,340	265
6.3	1,950	270	1,950	270	1,560	160	1,950	270
8.3	1,500	265	1,500	265	1,200	160	1,500	265
10.4	1,200	265	1,200	265	960	160	1,200	265
12.4	1,000	265	1,000	265	800	160	1,000	265
16.5	860	320	860	320	680	190	860	320
20.5	600	285	600	285	480	170	600	285
25	480	225	480	225	380	135	480	225
30	390	220	390	220	310	130	390	220
35	340	200	340	200	270	120	340	200
Depth of cut								

Work Material

P	K	
G1	G2	G5
●	○	○



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