DATA FLUTE® | HERITAGE CUTTER

Recommended Speeds — High Performance Carbide

Workpiece Material	ISO Code	Material Hardness	Slotting/Roughing S/R	Heavy Peripheral HP	Peripheral P	Light Peripheral LP	Finishing F
			100%>_≥ 80%DC	80%DC>_≥40%DC	40%DC>_≥25%DC	25%DC>_≥5%DC	_<5%DC
Carbon Steels 10XX, 11xx, 12xx, 13xx	P	Rc≤42 [HRC] 35<Rc≤42 [HRC]	230 -	305 -	360 -	475 -	550 -
Alloy Steels 40xx, 41xx, 42xx, 43xx, 86xx	P	Rc≤35 [HRC] 35<Rc≤42 [HRC]	200 150	265 185	310 220	405 275	465 315
Tool Steels (Annealed) A2, D2, H13, P20, B7	P	Rc<35 [HRC] 35<Rc<42 [HRC]	160 120	210 150	245 180	320 225	370 260
Hardened Steels	H	35<Rc<42 [HRC] 42<Rc<59 [HRC]	90 40	135 75	160 90	225 145	260 165
Cobalt Chrome	H	Rc≤35 [HRC] 35<Rc≤42 [HRC]	140 90	180 125	215 145	275 195	315 225
Austenitic (300) Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	200 130	260 170	305 200	395 260	455 295
Ferritic/Martensitic (400 Series) Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	220 130	280 170	330 200	420 255	480 295
Precipitation Hardened Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	180 -	235 -	280 -	365 -	420 -
Austenitic/Ferritic (Duplex) Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	180 -	235 -	280 -	365 -	420 -
Iron Base Alloys	S	Rc≤35 [HRC] 35<Rc≤42 [HRC]	70 -	90 -	105 -	135 -	160 -
Cobalt Base Alloys	S	Rc≤35 [HRC] 35<Rc≤42 [HRC]	50 -	70 -	80 -	115 -	130 -
Nickel Base Alloys	S	Rc≤35 [HRC] 35<Rc≤42 [HRC]	70 40	90 55	105 65	135 90	160 105
Titanium Cast/Wrought	S	Rm≤950 [MPa] Rm>950 [MPa]	160 100	215 140	250 165	335 225	390 260
Gray Cast Irons	K	Rc≤35 [HRC] 35<Rc≤42 [HRC]	200 -	250 -	295 -	370 -	425 -
Malleable Cast Irons	K	Rc<35 [HRC] 35<Rc<42 [HRC]	220 -	275 -	320 -	405 -	465 -
Nodular Cast Irons	K	Rc≤35 [HRC] 35<Rc≤42 [HRC]	180 -	230 -	270 -	340 -	390 -

SSI-7 & SSI-7-C Recommended Chip Loads

DATA FLUTE® | HERITAGE CUTTER

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	Stainless Steels				High Temp Alloys				Cast Irons		
			P	P	P	H	H	M	M	M	M	S	S	S	S	K	K	K
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic	Austenitic	Precipitation Hardened	Duplex Austenitic/ Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
3/16	**Peripheral**	[P]	0.00097	0.00092	0.00080	0.00060	0.00068	0.00088	0.00075	0.00084	0.00084	0.00088	0.00072	0.00072	0.00068	0.00084	0.00084	0.00072
	Light Peripheral	[LP]	0.00116	0.00110	0.00095	0.00071	0.00081	0.00105	0.00090	0.00100	0.00100	0.00105	0.00086	0.00086	0.00081	0.00100	0.00100	0.00086
	Finishing	[F]	0.00204	0.00194	0.00168	0.00126	0.00142	0.00185	0.00159	0.00176	0.00176	0.00185	0.00151	0.00151	0.00142	0.00176	0.00176	0.00151
1/4	**Peripheral**	[P]	0.00129	0.00123	0.00106	0.00080	0.00090	0.00117	0.00101	0.00112	0.00112	0.00117	0.00096	0.00096	0.00090	0.00112	0.00112	0.00096
	Light Peripheral	[LP]	0.00154	0.00147	0.00127	0.00095	0.00108	0.00140	0.00120	0.00133	0.00133	0.00140	0.00114	0.00114	0.00108	0.00133	0.00133	0.00114
	Finishing	[F]	0.00272	0.00259	0.00223	0.00168	0.00190	0.00247	0.00212	0.00235	0.00235	0.00247	0.00201	0.00201	0.00190	0.00235	0.00235	0.00201
5/16	**Peripheral**	[P]	0.00161	0.00154	0.00133	0.00100	0.00113	0.00147	0.00126	0.00140	0.00140	0.00147	0.00120	0.00120	0.00113	0.00140	0.00140	0.00120
	Light Peripheral	[LP]	0.00193	0.00184	0.00158	0.00119	0.00135	0.00175	0.00150	0.00167	0.00167	0.00175	0.00143	0.00143	0.00135	0.00167	0.00167	0.00143
	Finishing	[F]	0.00339	0.00324	0.00279	0.00209	0.00237	0.00309	0.00265	0.00294	0.00294	0.00309	0.00251	0.00251	0.00237	0.00294	0.00294	0.00251
3/8	**Peripheral**	[P]	0.00194	0.00185	0.00159	0.00120	0.00135	0.00176	0.00151	0.00168	0.00168	0.00176	0.00143	0.00143	0.00135	0.00168	0.00168	0.00143
	Light Peripheral	[LP]	0.00231	0.00221	0.00190	0.00143	0.00162	0.00210	0.00180	0.00200	0.00200	0.00210	0.00171	0.00171	0.00162	0.00200	0.00200	0.00171
	Finishing	[F]	0.00407	0.00389	0.00335	0.00251	0.00285	0.00370	0.00317	0.00353	0.00353	0.00370	0.00302	0.00302	0.00285	0.00353	0.00353	0.00302
7/16	**Peripheral**	[P]	0.00226	0.00216	0.00186	0.00139	0.00158	0.00205	0.00176	0.00196	0.00196	0.00205	0.00167	0.00167	0.00158	0.00196	0.00196	0.00167
	Light Peripheral	[LP]	0.00270	0.00257	0.00222	0.00166	0.00189	0.00245	0.00210	0.00233	0.00233	0.00245	0.00200	0.00200	0.00189	0.00233	0.00233	0.00200
	Finishing	[F]	0.00475	0.00454	0.00391	0.00293	0.00332	0.00432	0.00370	0.00412	0.00412	0.00432	0.00352	0.00352	0.00332	0.00412	0.00412	0.00352
1/2	**Peripheral**	[P]	0.00258	0.00247	0.00212	0.00159	0.00181	0.00235	0.00201	0.00224	0.00224	0.00235	0.00191	0.00191	0.00181	0.00224	0.00224	0.00191
	Light Peripheral	[LP]	0.00308	0.00294	0.00253	0.00190	0.00215	0.00280	0.00240	0.00267	0.00267	0.00280	0.00228	0.00228	0.00215	0.00267	0.00267	0.00228
	Finishing	[F]	0.00543	0.00519	0.00447	0.00335	0.00380	0.00494	0.00423	0.00470	0.00470	0.00494	0.00402	0.00402	0.00380	0.00470	0.00470	0.00402
5/8	**Peripheral**	[P]	0.00323	0.00308	0.00266	0.00199	0.00226	0.00294	0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
	Light Peripheral	[LP]	0.00385	0.00368	0.00317	0.00238	0.00269	0.00350	0.00300	0.00333	0.00333	0.00350	0.00285	0.00285	0.00269	0.00333	0.00333	0.00285
	Finishing	[F]	0.00679	0.00648	0.00558	0.00419	0.00475	0.00617	0.00529	0.00588	0.00588	0.00617	0.00503	0.00503	0.00475	0.00588	0.00588	0.00503
3/4	**Peripheral**	[P]	0.00388	0.00370	0.00319	0.00239	0.00271	0.00352	0.00302	0.00336	0.00336	0.00352	0.00287	0.00287	0.00271	0.00336	0.00336	0.00287
	Light Peripheral	[LP]	0.00462	0.00441	0.00380	0.00285	0.00323	0.00420	0.00360	0.00400	0.00400	0.00420	0.00342	0.00342	0.00323	0.00400	0.00400	0.00342
	Finishing	[F]	0.00815	0.00778	0.00670	0.00503	0.00570	0.00741	0.00635	0.00705	0.00705	0.00741	0.00603	0.00603	0.00570	0.00705	0.00705	0.00603
1	**Peripheral**	[P]	0.00517	0.00493	0.00425	0.00319	0.00361	0.00470	0.00403	0.00447	0.00447	0.00470	0.00382	0.00382	0.00361	0.00447	0.00447	0.00382
	Light Peripheral	[LP]	0.00616	0.00588	0.00507	0.00380	0.00431	0.00560	0.00480	0.00534	0.00534	0.00560	0.00456	0.00456	0.00431	0.00534	0.00534	0.00456
	Finishing	[F]	0.01086	0.01037	0.00894	0.00670	0.00760	0.00988	0.00847	0.00941	0.00941	0.00988	0.00804	0.00804	0.00760	0.00941	0.00941	0.00804

SSI-7 & SSI-7-C