

SPEEDS & FEEDS

STORM

Storm Series Application Guide - Speeds & Feeds (Inch)

Material Information			Feed (Inches per tooth)								
Work Material	HRC	SFM	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
COBALT BASE ALLOYS											
Haynes 25/188, Stellite 21,	< 40	70 - 110	.0008" - .0020"	.0004" - .0010"	.0007" - .0012"	.0010" - .0018"	.0010" - .0020"	.0018" - .0028"	.0023" - .0031"	.0027" - .0034"	.0029" - .0036"
Cobalt Chrome	> 40	50 - 90	.0005" - .0015"	.0004" - .0007"	.0005" - .0011"	.0008" - .0014"	.0010" - .0017"	.0015" - .0025"	.0021" - .0028"	.0024" - .0030"	.0025" - .0031"
NICKEL BASE ALLOYS											
Inconel-625/718, Waspaloy, Invar	< 40	65 - 110	.0005" - .0009"	.0005" - .0009"	.0007" - .0013"	.0010" - .0017"	.0010" - .0020"	.0020" - .0028"	.0025" - .0032"	.0029" - .0036"	.0030" - .0038"
Rene, Hastelloy, Monel	> 40	55 - 90	.0003" - .0008"	.0004" - .0007"	.0007" - .0012"	.0009" - .0015"	.0010" - .0018"	.0015" - .0025"	.0022" - .0030"	.0026" - .0033"	.0029" - .0035"
IRON BASE ALLOYS											
A286, Dicalloy, Haynes 556,	< 40	65 - 110	.0005" - .0010"	.0008" - .0010"	.0006" - .0012"	.0007" - .0015"	.0011" - .0016"	.0018" - .0026"	.0025" - .0030"	.0026" - .0034"	.0032" - .0038"
Carpenter 22, Greek Ascology	> 40	55 - 90	.0003" - .0008"	.0004" - .0008"	.0005" - .0010"	.0006" - .0013"	.0008" - .0014"	.0013" - .0023"	.0022" - .0028"	.0025" - .0031"	.0030" - .0035"
TITANIUM ALLOYS											
Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si	-	125 - 175	.0005" - .0010"	.0005" - .0012"	.0008" - .0015"	.0010" - .0022"	.0018" - .0027"	.0023" - .0032"	.0025" - .0033"	.0027" - .0035"	.0028" - .0037"
5553 / Beta Titanium	-	100 - 150	.0004" - .0010"	.0004" - .0010"	.0006" - .0014"	.0008" - .0017"	.0015" - .0025"	.0022" - .0028"	.0024" - .0030"	.0026" - .0032"	.0028" - .0035"
STAINLESS STEELS											
13/8, 15/5, 17-4, PH Types	< 40	175 - 225	.0005" - .0007"	.0004" - .0008"	.0007" - .0010"	.0008" - .0012"	.0013" - .0018"	.0010" - .0020"	.0012" - .0025"	.0012" - .0020"	.0020" - .0028"
-	> 40	135 - 175	.0002" - .0004"	.0002" - .0006"	.0003" - .0007"	.0004" - .0008"	.0007" - .0012"	.0008" - .0015"	.0010" - .0016"	.0013" - .0017"	.0015" - .0020"
300 Series, 304L, Nitronic 50,	< 40	200 - 225	.0003" - .0007"	.0005" - .0010"	.0008" - .0015"	.0009" - .0013"	.0010" - .0018"	.0015" - .0020"	.0018" - .0022"	.0018" - .0035"	.0023" - .0036"
Duplex, Super-Austenitic	> 40	155 - 200	.0002" - .0005"	.0004" - .0007"	.0005" - .0010"	.0005" - .0010"	.0007" - .0010"	.0009" - .0015"	.0012" - .0018"	.0015" - .0025"	.0020" - .0030"
400 Series - 403, 405, 420, 455	< 40	200 - 225	.0007" - .0010"	.0009" - .0015"	.0009" - .0014"	.0011" - .0015"	.0013" - .0018"	.0015" - .0025"	.0020" - .0035"	.0022" - .0040"	.0030" - .0046"
-	> 40	150 - 200	.0004" - .0008"	.0006" - .0010"	.0007" - .0011"	.0008" - .0012"	.0009" - .0015"	.0012" - .0020"	.0018" - .0030"	.0020" - .0035"	.0024" - .0042"
MEDIUM ALLOY TOOL STEEL HIGH STRENGTH TOOL STEEL											
4140, 4340, 52100, 6150, 8620	< 40	225 - 325	.0005" - .0008"	.0008" - .0015"	.0015" - .0020"	.0015" - .0023"	.0015" - .0025"	.0020" - .0030"	.0020" - .0030"	.0025" - .0035"	.0030" - .0040"
A2, D2, P20, H13, S2, O1	> 40	150 - 225	.0003" - .0005"	.0005" - .0010"	.0008" - .0012"	.0010" - .0015"	.0010" - .0018"	.0015" - .0020"	.0015" - .0020"	.0018" - .0025"	.0020" - .0030"
CARBON STEELS											
1000's - 1018, 1020, 12L14	< 40	225 - 325	.0005" - .0008"	.0008" - .0015"	.0015" - .0020"	.0015" - .0023"	.0015" - .0025"	.0020" - .0030"	.0020" - .0030"	.0025" - .0035"	.0030" - .0040"
CAST MATERIAL											
Ductile Iron	-	225 - 325	.0010" - .0015"	.0015" - .0020"	.0020" - .0030"	.0025" - .0035"	.0025" - .0035"	.0030" - .0045"	.0040" - .0050"	.0040" - .0050"	.0050" - .0060"
Gray Iron	-	300 - 400	.0015" - .0025"	.0020" - .0030"	.0025" - .0035"	.0030" - .0040"	.0030" - .0040"	.0040" - .0050"	.0050" - .0060"	.0060" - .0070"	.0060" - .0070"

- Speed and feed recommendations are for **profile milling** (side cut) operations up to 20% of the cutter diameter
- Decrease values by 20% for **slotting operations**
- Rates based on **HIGH** values are for optimum working conditions