Amana Tool®

INDUSTRIAL

Carbide Tipped Straight Plunge Router Bits

CNC Operating Spindle Speed: 18,000 RPM / Depth of Cut: 1 x Tool Diameter †

Tool No.	Diameter	Shank	Flute	Softwood IPM* / Chip Load Per Tooth	Hardwood IPM* / Chip Load Per Tooth	MDF IPM* / Chip Load Per Tooth	Plywood IPM* / Chip Load Per Tooth
45100	1/8"	1/4"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45102	3/16"	1/4"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45104	1/4"	1/4"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45106	1/4"	1/4"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45108	1/4"	1/4"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45110	1/4"	1/4"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45300	3/8"	3/8"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45304	1/4"	1/2"	1	30" / 0.0017"	30" / 0.0017"	60" / 0.0017"	30" / 0.0017"
45302	3/8"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
NOT AVAILABLE ~~45306~~	5/16"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45307	1/2"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45308	1/2"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45310	1/2"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45312	1/2"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45313	1/2"	1/2"	1	180" / 0.0099"	75" / 0.0041"	150" / 0.0083"	90" / 0.0048"
45314	9/16"	1/2"	1	140" / 0.0079"	60" / 0.0033"	120" / 0.0066"	70" / 0.0039"
NOT AVAILABLE ~~45260~~	1.3mm	1/4"	2	60" / 0.0017"	60" / 0.0017 "	120" / 0.0034"	60" / 0.0017"
46460	1/16"	1/8"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45190	1/16"	1/4"	2	110" / 0.0031"	110" / 0.0031"	220" / 0.0062"	110" / 0.0031"
45191	5/64"	1/4"	2	110" / 0.0031"	110" / 0.0031"	220" / 0.0062"	110" / 0.0031"
46482	3/32"	1/8"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45192	3/32"	1/4"	2	110" / 0.0031"	110" / 0.0031"	220" / 0.0062"	110" / 0.0031"
45199	1/8"	1/8"	2	110" / 0.0031"	110" / 0.0031"	220" / 0.0062"	110" / 0.0031"
45200	1/8"	1/4"	2	110" / 0.0031"	110" / 0.0031"	220" / 0.0062"	110" / 0.0031"
45201	5/32"	1/4"	2	110" / 0.0031"	110" / 0.0031 "	220" / 0.0062"	110" / 0.0031"
NOT AVAILABLE ~~45198~~	3/16"	1/8"	2	50" / 0.0014"	50" / 0.0014"	100" / 0.0027"	50" / 0.0014"
45202	3/16"	1/4"	2	110" / 0.0031"	110" / 0.0031"	220" / 0.0062"	110" / 0.0031"
45239	3/16"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45217	13/64"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45206	7/32"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45203	15/64"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45208	15/64"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45210	1/4"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45210-01	1/4"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
NOT AVAILABLE ~~45210-03~~	1/4"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45210-03.75	—	—	—	—	—	—	—
45211	1/4"	1/4"	2	—	—	—	—
45205	1/4"	1/4	2	—	—	—	—
45204	1/4"	1/4"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45212	9/32"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45212-01	9/32"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45242	5/16"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45214	5/16"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45214-01	5/16"	1/4"	2	280" / 0.0079"	120" / 0.0033 "	240" / 0.0066"	140" / 0.0040 "
45216	3/8"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040 "
45218S	3/8"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040 "
45218	3/8"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040 "
45220	3/8"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040 "
45193	13/32"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040 "
45222	7/16"	1/4"	2	280" / 0.0079"	120" / 0.0033 "	240" / 0.0066 "	140" / 0.0040 "
45223	15/32"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040 "
NOT AVAILABLE ~~45194~~	31/64"	1/4"	2	280" / 0.0079"	120" / 0.0033 "	240" / 0.0066"	140" / 0.0040 "
45224	1/2"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066 "	140" / 0.0040 "
45224-01	1/2"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066 "	140" / 0.0040 "
45226	1/2"	1/4"	2	280" / 0.0079"	120" / 0.0033 "	240" / 0.0066 "	140" / 0.0040 "
45244	1/2"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066 "	140" / 0.0040 "
45245	1/2"	1/4"	2	280" / 0.0079"	120" / 0.0033"	240" / 0.0066 "	140" / 0.0040 "
45227	9/16"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058 "	120" / 0.0035 "
45238-01	19/32"	1/4"	2	250" / 0.0069"	100" / 0.0029 "	200" / 0.0058 "	120" / 0.0035 "
45228	5/8"	1/4"	2	250" / 0.0069"	100" / 0.0029 "	200" / 0.0058 "	120" / 0.0035 "
45247	5/8"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058 "	120" / 0.0035 "

45249	5/8"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45229	11/16"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45231	23/32"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45230	3/4"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45251	3/4"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45251-01	3/4"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45232	13/16"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45234	7/8"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45236	1"	1/4"	2	250" / 0.0069"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45408	1/4"	1/2"	2	120" / 0.0033"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45408-3	1/4"	1/2"	2	120" / 0.0033"	100" / 0.0029"	200" / 0.0058"	120" / 0.0035"
45486	1/4"	1/2"	2	60" / 0.0017"	60" / 0.0017"	120" / 0.0034"	60" / 0.0017"
45409	9/32"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45410	5/16"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45412	5/16"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45413	3/8"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45414	3/8"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45415	3/8"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45401	13/32"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45416	7/16"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45255	11mm	12mm	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45425	15/32"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
NOT AVAILABLE ~~45180~~	31/64"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45419	1/2"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45418	1/2"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45420	1/2"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45422	1/2"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45424	1/2"	1/2"	2	360" / 0.0099"	150" / 0.0041"	300" / 0.0083"	180" / 0.0050"
45426S	1/2"	1/2"	2	—	—	—	—
45426	1/2"	1/2"	2	—	—	—	—
45427	1/2"	1/2"	2	—	—	—	—
45427-01	1/2"	1/2"	2	—	—	—	—
45477	1/2"	1/2"	2	—	—	—	—
45429	17/32"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45428	9/16"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45437	19/32"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45430	5/8"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45432	5/8"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45434	5/8"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45433	5/8"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45435	21/32"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45436	11/16"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45445	23/32"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45181	3/4"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45438	3/4"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45440	3/4"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45442	3/4"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45441	3/4"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45443	25/32"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45444	13/16"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45446	7/8"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45182	15/16"	1/2"	2	290" / 0.0079"	120" / 0.0033"	240" / 0.0066"	140" / 0.0040"
45448	1"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45403	1"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45447	1"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45459	1-1/16"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45449	1-1/8"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45450	1-1/4"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45452	1-1/2"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45453	1-3/4"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"
45480	2"	1/2"	2	70" / 0.0020"	30" / 0.0008"	60" / 0.0017"	40" / 0.0010"

***IPM:** Inches Per Minute

† Depth of Cut: 1 x D Use recommended chip load
2 x D Reduce chip load by 25%
3 x D Reduce chip load by 50%

Simple Machining Calculations:
To find **RPM:** (SFM x 3.82) / diameter of tool
To find **SFM:** 0.262 x diameter of tool x RPM
To find **Feed Rate IPM:** RPM x # of flutes x chip load
To find **Chip Load:** Feed Rate IPM / (RPM x # of flutes)
To find **Ramp Down:** Feed Rate IPM / # of flutes

Disclaimer: It is important to understand that these values are only recommendations.

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