1215 DRILL MILL - IMPERIAL



1215 Series 2-Flute Drill Mill - 90°

The parameters listed for tool series that are stocked uncoated are based on running an uncoated tool. If a coating is applied to the tools, the SFM can be increased by approximately 25%. All speed and feed recommendations should be considered only as a starting point. Start with conservative speeds and feeds while analyzing the rigidity of the process. Then cautiously progress incrementally to achieve optimum performance.

	Low Si Aluminum (<10%) (1100-1500) SFM (ft/min)					Brass & Copper (400-600) SFM (ft/min)					Cast Iron (250-400) SFM (ft/min)				
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.35)xD	(.115)xD	(.010015)	full	full	(.35)xD	(.115)xD	(.010015)	full	full	(.35)xD	(.115)xD	(.010015)
1/8"	.0039	.0051	.0039	.0039	.0051	.0004	.0006	.0004	.0004	.0006	.0004	.0008	.0004	.0004	.0008
1/4"	.0042	.0059	.0042	.0042	.0059	.0008	.0012	.0008	.0008	.0012	.0008	.0020	.0008	.0008	.0020
3/8"	.0046	.0068	.0046	.0046	.0068	.0020	.0025	.0020	.0020	.0025	.0018	.0036	.0018	.0018	.0036
1/2"	.0050	.0077	.0050	.0050	.0077	.0033	.0036	.0033	.0033	.0036	.0025	.0049	.0025	.0025	.0049
3/4"	.0055	.0088	.0055	.0055	.0088	.0045	.0049	.0045	.0045	.0049	.0033	.0060	.0033	.0033	.0060
1"	.0059	.0098	.0059	.0059	.0098	.0059	.0062	.0059	.0059	.0062	.0039	.0071	.0039	.0039	.0071
			ened Steels > 130) SFM (ft/r				(230	Steels)-350) SFM (ft/	min)				Stainless Steel 1–260) SFM (ft/		
	Slotting				Finish	Slotting	(230 Plunge Ramp		min) HEM	Finish	Slotting				Finish
Axial Depth	Slotting < (1xD)	(80- Plunge	-130) SFM (ft/i Rough	min)	Finish < (1xD)	Slotting < (1xD)	Plunge)-350) SFM (ft/ Rough	·	Finish < (1xD)	Slotting < (1xD)	(130 Plunge	1-260) SFM (ft/ Rough	min)	Finish < (1xD)
Axial Depth Radial Width		(80- Plunge Ramp	-130) SFM (ft/i Rough Profile	nin) HEM			Plunge Ramp)-350) SFM (ft/ Rough Profile	HEM			(130 Plunge Ramp	7-260) SFM (ft/ Rough Profile	min) HEM	
	< (1xD)	(80- Plunge Ramp < (1xD)	-130) SFM (ft/i Rough Profile 1.5xD	nin) HEM 1xD	< (1xD)	< (1xD)	Plunge Ramp < (1xD)	7-350) SFM (ft/ Rough Profile 1.5xD	HEM 1xD	< (1xD)	< (1xD)	Plunge Ramp < (1xD)	Rough Profile 1.5xD	min) HEM 1xD	< (1xD)
Radial Width	< (1xD) full	(80- Plunge Ramp < (1xD) full	Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD	< (1xD) (.010015)	< (1xD) full	Plunge Ramp < (1xD) full	Rough Profile 1.5xD (.35)xD	1xD (.115)xD	< (1xD) (.010015)	< (1xD) full	Plunge Ramp < (1xD) full	Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD	< (1xD) (.010015)
Radial Width 1/8"	< (1xD) full .0005	(80- Plunge Ramp < (1xD) full .0009	Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD .0008	< (1xD) (.010015) .0009	< (1xD) full .0004	Plunge Ramp < (1xD) full .0006	Rough Profile 1.5xD (.35)xD	1xD (.115)xD .0004	< (1xD) (.010015) .0006	< (1xD) full .0002	Plunge Ramp < (1xD) full .0004	Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD	< (1xD) (.010015) .0004
Radial Width 1/8" 1/4"	< (1xD) full .0005	(80- Plunge Ramp <(1xD) full .0009 .0016	Rough Profile 1.5xD (.35)xD .0008	HEM 1xD (.115)xD .0008	< (1xD) (.010015) .0009 .0016	< (1xD) full .0004 .0012	Plunge Ramp < (1xD) full .0006 .0017	0-350) SFM (ft/ Rough Profile 1.5xD (.35)xD .0004 .0012	1xD (.115)xD .0004 .0012	< (1xD) (.010015) .0006 .0018	< (1xD) full .0002 .0006	Plunge Ramp < (1xD) full .0004	Rough Profile 1.5xD (.35)xD .0002	HEM 1xD (.115)xD .0002	< (1xD) (.010015) .0004 .0008
Radial Width 1/8" 1/4" 3/8"	< (1xD) full .0005 .0015	(80- Plunge Ramp < (1xD) full .0009 .0016	Rough Profile 1.5xD (.35)xD .0008 .0015	HEM 1xD (.115)xD .0008 .0015 .0020	< (1xD) (.010015) .0009 .0016 .0022	< (1xD) full .0004 .0012 .0022	Plunge Ramp < (1xD) full .0006 .0017 .0030	Rough Profile 1.5xD (.35)xD .0004 .0012 .0022	HEM 1xD (.115)xD .0004 .0012 .0022	< (1xD) (.010015) .0006 .0018	< (1xD) full .0002 .0006	Plunge Ramp < (1xD) full .0004 .0008	Rough Profile 1.5xD (.35)xD .0002 .0006	HEM 1xD (.115)xD .0002 .0006 .0010	< (1xD) (.010015) .0004 .0008 .0012

DRILL MILL USES

Recommended For	Included Angle 90°				
Chamfering	Yes				
Side Milling	Yes				
Drilling	Non-Ferrous Only				
Spotting	Limited				

CHAMFERING

Use general milling speeds and feeds. Use tool diameter at top of part to determine chip load. (i.e.; if using 1/4" diameter, 90° point and depth is 1/8", calculate the chip load based on 1/8" diameter.) For finer finishes and improved ascetics, increase SFM and reduce feed rate.

SIDE MILLING

Use general milling speeds and feeds. All the benefits of our 3215 series end mills with additional reduction in machine carousel requirements. Designed for all tool room applications limiting tool changes and increasing productivity.

1215 DRILL MILL - METRIC



1215 Series 2-Flute Drill Mill - 90°

The parameters listed for tool series that are stocked uncoated are based on running an uncoated tool. If a coating is applied to the tools, the SFM can be increased by approximately 25%. All speed and feed recommendations should be considered only as a starting point. Start with conservative speeds and feeds while analyzing the rigidity of the process. Then cautiously progress incrementally to achieve optimum performance.

	Low Si Aluminum (<10%) (335-457) SMM (m/min)					Brass & Copper (121-182) SMM (m/min)				Cast Iron (76-121)SMM (m/min)					
	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish	Slotting	Plunge Ramp	Rough Profile	HEM	Finish
Axial Depth	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)	< (1xD)	< (1xD)	1.5xD	1xD	< (1xD)
Radial Width	full	full	(.35)xD	(.115)xD	(.2540)	full	full	(.35)xD	(.115)xD	(.2540)	full	full	(.35)xD	(.115)xD	(.2540)
3	.0991	.1295	.0991	.0991	.1295	.0102	.0152	.0102	.0102	.0152	.0102	.0203	.0102	.0102	.0203
6	.1067	.1499	.1067	.1067	.1499	.0203	.0305	.0203	.0203	.0305	.0203	.0508	.0203	.0203	.0508
10	.1168	.1727	.1168	.1168	.1727	.0508	.0635	.0508	.0508	.0635	.0457	.0914	.0457	.0457	.0914
12	.1270	.1956	.1270	.1270	.1956	.0838	.0914	.0838	.0838	.0914	.0635	.1245	.0635	.0635	.1245
20	.1397	.2235	.1397	.1397	.2235	.1143	.1245	.1143	.1143	.1245	.0838	.1524	.0838	.0838	.1524
25	.1499	.2489	.1499	.1499	.2489	.1499	.1575	.1499	.1499	.1575	.0991	.1803	.0991	.0991	.1803
			ened Steels > 4 39) SMM (m/r				(70-	Steels -106) SMM (m/i	min)				Stainless Steel -85) SMM (m/ı		
	Slotting				Finish	Slotting	(70 Plunge Ramp		nin) HEM	Finish	Slotting				Finish
Axial Depth	Slotting < (1xD)	(24- Plunge	39) SMM (m/r Rough	nin)	Finish < (1xD)	Slotting < (1xD)	Plunge	-106) SMM (m/i Rough		Finish < (1xD)	Slotting < (1xD)	(39 Plunge	-85) SMM (m/i Rough	min)	Finish < (1xD)
Axial Depth Radial Width		(24- Plunge Ramp	39) SMM (m/r Rough Profile	nin) HEM			Plunge Ramp	-106) SMM (m/ Rough Profile	HEM			(39 Plunge Ramp	-85) SMM (m/i Rough Profile	nin) HEM	
	< (1xD)	(24- Plunge Ramp < (1xD)	39) SMM (m/r Rough Profile 1.5xD	nin) HEM 1xD	< (1xD)	< (1xD)	Plunge Ramp < (1xD)	-106) SMM (m/i Rough Profile 1.5xD	HEM 1xD	< (1xD)	< (1xD)	Plunge Ramp < (1xD)	-85) SMM (m/i Rough Profile 1.5xD	nin) HEM 1xD	< (1xD)
Radial Width	< (1xD) full	Plunge Ramp < (1xD) full	39) SMM (m/r Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD	< (1xD) (.2540)	< (1xD) full	Plunge Ramp < (1xD) full	Rough Profile 1.5xD (.35)xD	1xD (.115)xD	< (1xD) (.2540)	< (1xD) full	Plunge Ramp < (1xD) full	Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD	< (1xD) (.2540)
Radial Width	< (1xD) full .0127	Plunge Ramp < (1xD) full .0229	39) SMM (m/r Rough Profile 1.5xD (.35)xD .0203	HEM 1xD (.115)xD	< (1xD) (.2540) .0229	< (1xD) full .0102	Plunge Ramp < (1xD) full .0152	Rough Profile 1.5xD (.35)xD	1xD (.115)xD .0102	< (1xD) (.2540) .0152	< (1xD) full .0051	Plunge Ramp < (1xD) full .0102	-85) SMM (m/i Rough Profile 1.5xD (.35)xD	HEM 1xD (.115)xD .0051	< (1xD) (.2540) .0102
Radial Width 3	< (1xD) full .0127	(24- Plunge Ramp < (1xD) full .0229 .0406	39) SMM (m/r Rough Profile 1.5xD (.35)xD .0203 .0381	HEM 1xD (.115)xD .0203 .0381	< (1xD) (.2540) .0229 .0406	< (1xD) full .0102 .0305	Plunge Ramp < (1xD) full .0152 .0432	-106) SMM (m/c Rough Profile 1.5xD (.35)xD .0102 .0305	1xD (.115)xD .0102 .0305	< (1xD) (.2540) .0152 .0457	< (1xD) full .0051	(39 Plunge Ramp < (1xD) full .0102 .0203	-85) SMM (m/r Rough Profile 1.5xD (.35)xD .0051	HEM 1xD (.115)xD .0051	< (1xD) (.2540) .0102 .0203
Radial Width 3 6 10	< (1xD) full .0127 .0381 .0508	(24- Plunge Ramp < (1xD) full .0229 .0406 .0559	39) SMM (m/r Rough Profile 1.5xD (.35)xD .0203 .0381 .0508	HEM 1xD (.115)xD .0203 .0381 .0508	< (1xD) (.2540) .0229 .0406 .0559	< (1xD) full .0102 .0305 .0559	Plunge Ramp < (1xD) full .0152 .0432 .0762	Rough Profile 1.5xD (.35)xD .0102 .0305 .0559	HEM 1xD (.115)xD .0102 .0305 .0559	< (1xD) (.2540) .0152 .0457 .0762	< (1xD) full .0051 .0152 .0254	(39 Plunge Ramp < (1xD) full .0102 .0203 .0305	-85) SMM (m/r Rough Profile 1.5xD (.35)xD .0051 .0152 .0254	HEM 1xD (.115)xD .0051 .0152 .0254	< (1xD) (.2540) .0102 .0203 .0305

DRILL MILL USES

Recommended For	Included Angle 90°
Chamfering	Yes
Side Milling	Yes
Drilling	Non-Ferrous Only
Spotting	Limited

CHAMFERING

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