



Material Classification	Ae x D ₁	Ap x D ₁	Vc (m / min)	Diameter (D ₁) mm					
				3	6	8	10		
CFRP, AFRP (Carbon Fiber, Aramid Fiber)	Slot	1	≤ 1	120 (96-164)	RPM	12722	6361	4771	3817
					Fr	0.061	0.122	0.163	0.203
					Feed (mm/min)	776	776	776	776
	Profile	≤ 0.5	≤ 1.5	150 (120-180)	RPM	15903	7951	5963	4771
					Fr	0.061	0.122	0.163	0.203
					Feed (mm/min)	970	970	970	970
	HSM	≤ 0.05	≤ 2	250 (200-300)	RPM	26504	13252	9939	7951
					Fr	0.140	0.280	0.373	0.467
					Feed (mm/min)	3710	3710	3710	3710
GFRP (Fiberglass)	Slot	1	≤ 1	100 (80-120)	RPM	10602	5301	3976	3181
					Fr	0.061	0.122	0.162	0.203
					Feed (mm/min)	646	646	646	646
	Profile	≤ 0.5	≤ 1.5	120 (96-164)	RPM	12722	6361	4771	3817
					Fr	0.061	0.122	0.163	0.203
					Feed (mm/min)	776	776	776	776
	HSM	≤ 0.05	≤ 2	200 (160-240)	RPM	21203	10602	7951	6361
					Fr	0.140	0.280	0.374	0.467
					Feed (mm/min)	2970	2970	2970	2970
Carbon, Graphite	Slot	1	≤ 1	145 (116-174)	RPM	15372	7686	5765	4612
					Fr	0.095	0.190	0.253	0.317
					Feed (mm/min)	1460	1460	1460	1460
	Profile	≤ 0.5	≤ 1.5	185 (148-222)	RPM	19613	9807	7355	5884
					Fr	0.095	0.190	0.253	0.317
					Feed (mm/min)	1863	1863	1863	1863
	HSM	≤ 0.05	≤ 2	300 (240-360)	RPM	31805	15903	11927	9542
					Fr	0.219	0.437	0.583	0.729
					Feed (mm/min)	6957	6957	6957	6957
Plastics	Slot	1	≤ 1	245 (196-294)	RPM	25974	12987	9740	7792
					Fr	0.037	0.075	0.100	0.125
					Feed (mm/min)	974	974	974	974
	Profile	≤ 0.5	≤ 1.5	305 (244-366)	RPM	32335	16168	12126	9701
					Fz	0.038	0.075	0.100	0.125
					Feed (mm/min)	1213	1213	1213	1213
	HSM	≤ 0.05	≤ 2	505 (404-606)	RPM	53538	26769	20077	16062
					Fr	0.088	0.175	0.233	0.292
					Feed (mm/min)	4685	4685	4685	4685

rpm = (1000 x m / min) / (3.14 x D₁)
 mm / min = (mm / revolution) x rpm
 HSM (high speed machining)
 Adjust parameters based on resin type and fiber structure

Reduce speed when overheating causes melting or damage to resin
 Reduce feed if delamination or fraying occur
 Finish cuts typically require reduced feed and cutting depths

Rates shown are for use without coolant; rates may be increased with coolant
 Dust collection is vital when machining dry
 Diamond coating will increase tool life in graphite and composite materials

SERIES 29

PLASTIC COMPOSITE ROUTER

