



new! **DS & GR Series: Technical Data**
Speeds and Feeds for a variety of materials.



Peripheral Milling: Full length of cut possible if radial depth \leq 10% of tool diameter.



Slotting: Based on axial depth < 20% of tool diameter.

- Tight diameter tolerances of \pm .0005 (0.013mm)
- Proprietary cemented carbide grades
- Both series feature extended lengths of cut without loss of strength
- If recommended speed is higher than machine tool's capacity, run at maximum RPM and reduce feed appropriately



Fractional Data	Peripheral Milling SFPM	Slotting SFPM	Feed Per Tooth based on End Mill Diameter						
			<1/16"	1/16"	1/8"	3/16"	1/4"	3/8"	1/2"
Non-Ferrous									
6061 T6 Aluminum	up to 2000	up to 1500	.0002	.0004	.0008	.0012	.0015	.002	.003
Copper, Brass, Bronze	up to 1200	up to 1000	.0002	.0004	.0008	.0012	.0015	.002	.003
Plastics	up to 2000	up to 1500	.0003	.0006	.001	.002	.003	.004	.005
Steels									
1018, 1020	150 to 300	125 to 250	.0002	.00025	.0005	.001	.0015	.002	.0025
4140, 4340, P20	125 to 250	125 to 225	.00015	.00025	.0005	.0007	.001	.0015	.002
A2, D2, H13 \leq 32HRC	125 to 225	100 to 150	.00015	.00025	.0005	.0007	.001	.0015	.002
A2, D2, H13 \geq 32HRC	100 to 125	100 to 125	.0001	.00015	.0003	.0005	.0008	.0010	.0015
Stainless Steels									
15-5, 17-4 \leq 32HRC	150 to 350	100 to 225	.00015	.00025	.0005	.0007	.001	.0015	.002
15-5, 17-4 \geq 32HRC	100 to 125	100 to 150	.0001	.00015	.0003	.0005	.0008	.0010	.0015
303, 304, 316	150 to 300	125 to 225	.00015	.00025	.0005	.0007	.001	.0012	.0015
420, 440C	150 to 250	125 to 225	.00015	.00025	.0005	.0007	.001	.0015	.0015
High Temp Alloys									
Inconel 625	75 to 150	75 to 125	.0001	.00015	.0005	.0007	.001	.0015	.002
Inconel 718	50 to 120	50 to 110	.0001	.00013	.0003	.0005	.001	.0015	.0015
6Al-4V Titanium	100 to 150	75 to 125	.0001	.00015	.0005	.0007	.001	.001	.0015
Cast Iron									
Gray Iron \leq 32HRC	150 to 300	125 to 250	.0002	.00025	.0005	.0007	.001	.0015	.002
Ductile Iron	150 to 250	125 to 250	.0002	.00025	.0005	.0007	.001	.0015	.002

Metric Data	Peripheral Milling M/Min	Slotting M/Min	Feed Per Tooth based on End Mill Diameter							
			<2.0mm	3.0 mm	4.0 mm	5.0 mm	6.0 mm	8.0 mm	10 mm	12 mm
Non-Ferrous										
6061 T6 Aluminum	up to 600	up to 450	0.007	0.025	0.025	0.030	0.038	0.050	0.050	0.076
Copper, Brass, Bronze	up to 365	up to 300	0.007	0.025	0.025	0.030	0.038	0.050	0.050	0.076
Plastics	up to 600	up to 450	0.009	0.025	0.025	0.050	0.076	0.100	0.100	0.130
Steels										
1018, 1020	45 to 90	38 to 76	0.005	0.015	0.018	0.025	0.038	0.050	0.050	0.065
4140, 4340, P20	38 to 76	38 to 68	0.005	0.012	0.014	0.018	0.025	0.038	0.038	0.050
A2, D2, H13 \leq 32HRC	38 to 68	30 to 45	0.005	0.012	0.014	0.018	0.025	0.038	0.038	0.050
A2, D2, H13 \geq 32HRC	30 to 38	30 to 38	0.005	0.010	0.010	0.012	0.020	0.025	0.025	0.038
Stainless Steels										
15-5, 17-4 \leq 32HRC	45 to 110	30 to 68	0.005	0.012	0.014	0.018	0.025	0.038	0.038	0.050
15-5, 17-4 \geq 32HRC	30 to 38	30 to 45	0.005	0.010	0.010	0.012	0.020	0.025	0.025	0.038
303, 304, 316	45 to 90	38 to 68	0.005	0.012	0.014	0.018	0.025	0.030	0.030	0.038
420, 440C	45 to 76	38 to 68	0.005	0.012	0.014	0.018	0.025	0.038	0.038	0.038
High Temp Alloys										
Inconel 625	22 to 45	22 to 38	0.005	0.012	0.012	0.018	0.025	0.038	0.038	0.050
Inconel 718	15 to 36	15 to 34	0.005	0.010	0.010	0.012	0.025	0.038	0.038	0.038
6Al-4V Titanium	30 to 45	22 to 38	0.005	0.012	0.012	0.018	0.025	0.025	0.025	0.038
Cast Iron										
Gray Iron \leq 32HRC	45 to 90	38 to 76	0.005	0.012	0.014	0.018	0.025	0.038	0.038	0.050
Ductile Iron	45 to 76	38 to 76	0.005	0.012	0.014	0.018	0.025	0.038	0.038	0.050