DURA-HOG® SPEED & FEED CHART

Legend
IPR = **I**nches **P**er **R**evolution
IPM = **I**nches **P**er **M**inute
RPM = **R**evolutions **P**er **M**inute
SFM = **S**urface **F**eet per **M**inute

Formulas

To calculate RPM

$$RPM = \frac{SFM \times 3.82}{Diameter}$$

To calculate IPM

$$IPM = RPM \times IPR$$

To calculate SFM

$$SFM = RPM \times .262 \times Diameter$$

To calculate IPR

$$IPR = IPM \div RPM$$

Note: Feed rates given on this sheet assume a 20 horsepower spindle on a rigid CNC turning center. Feed rates may need to increase or decrease depending upon the machine capabilities.

MATERIALS	SFM	DRILLS .984-1.125 IPR	DRILLS 1.187-1.375 IPR	DRILLS 1.437-1.687 IPR	DRILLS 1.750-2.000 IPR	DRILLS 2.120-2.500 IPR	HELPFUL TIPS
1010, 1018, 1020	500	.003	.0045	.006	.007	.006	Stringy chips. May need to clear O.D. of tool for chip relief.
1040, 1045, 1144	450	.0025	.004	.005	.006	.006	
12L14, 1117L	600	.0035	.005	.007	.008	.007	
8620	450	.003	.0045	.006	.007	.006	
4140, 4142	400	.0025	.004	.005	.006	.006	
4150PHT, P20	325	.0025	.004	.005	.006	.006	
H13	350	.0025	.004	.005	.006	.006	Stringy chips. May need to clear O.D. of tool for chip relief.
O6, L6	400	.0025	.004	.005	.006	.006	
D2, M2	275	.0015	.0025	.0035	.0045	.0045	
CAST IRON	600	.005	.007	.010	.013	.013	If drilling through, slow feed last .100 depth to reduce material chipping.
ALUMINUM	1500	.005	.010	.012	.015	.015	Large amount of chips Use thru-tool-coolant to evacuate them.
AMPCO 18	900	.004	.008	.010	.012	.010	Start with fresh inserts.
303 ST. STEEL	450	.003	.0045	.006	.007	.006	
304 ST. STEEL	225	.002	.003	.003	.004	.003	
416 ST. STEEL	550	.003	.0045	.006	.007	.007	
S-1, S-7, W-1	350	.003	.0045	.006	.007	.006	
DELRIN, PLASTIC	1500	.005	.01	.012	.015	.015	Must use coolant.
BRASS	1000	.004	.008	.010	.012	.012	
COPPER	800	.004	.008	.010	.012	.012	