

# G-CODES AND M-FUNCTIONS - MILLING

G00	Rapid positioning
G01	Linear interpolation
G02	Circular interpolation - clockwise
G03	Circular interpolation - counterclockwise
G04	Dwell function (as a separate block)
G07	Hypothetical axis interpolation
G09	Exact stop check - one block only
G10	Programmable data input (Data setting)
G11	Data setting mode cancel
G15	Polar coordinate command cancel
G16	Polar coordinate command
G17	XY plane designation
G18	ZX plane designation
G19	YZ plane designation
G20	English units of input
G21	Metric units of input
G22	Stored stroke check - on
G23	Stored stroke check - off
G25	Spindle fluctuation detection - on
G26	Spindle fluctuation detection - off
G27	Machine zero position check
G28	Machine zero return (reference point 1)
G29	Return from machine zero
G30	Machine zero return (reference point 2)
G31	Skip function
G33	Threading function
G37	Tool length automatic measurement
G40	Cutter radius compensation - cancel
G41	Cutter radius compensation - left
G42	Cutter radius compensation - right
G43	Tool length offset - positive
G44	Tool length offset - negative
G45	Position compensation - single increase
G46	Position compensation - single decrease
G47	Position compensation - double increase
G48	Position compensation - double decrease
G49	Tool length offset cancel
G50	Scaling function cancel
G51	Scaling function
G52	Local coordinate offset
G53	Machine coordinate system
G54	Work coordinate offset 1
G54.1	Additional work coordinate offset (with P)
G55	Work coordinate offset 2
G56	Work coordinate offset 3
G57	Work coordinate offset 4
G58	Work coordinate offset 5
G59	Work coordinate offset 6
G60	Single direction positioning
G61	Exact stop mode
G62	Automatic corner override mode

G63	Tapping mode
G64	Cutting mode
G65	Custom macro call
G68	Coordinate system rotation - active
G69	Coordinate system rotation - cancel
G73	High speed peck drilling cycle
G74	Left hand tapping cycle
G76	Fine (precision) boring cycle
G80	Fixed cycle cancel
G81	Drilling cycle
G82	Spot drilling cycle
G83	Peck drilling cycle
G84	Right hand tapping cycle
G84.2	Rigid tap cycle - right hand
G84.3	Rigid tap cycle - left hand
G85	Boring cycle
G86	Boring cycle
G87	Back boring cycle
G88	Boring cycle
G89	Boring cycle
G90	Absolute input of dimensional values
G91	Incremental input of dimensional values
G92	Tool position register
G93	Inverse time feedrate
G94	Feed per minute ( <i>in/min</i> or <i>mm/min</i> )
G95	Feed per revolution ( <i>in/rev</i> or <i>mm/rev</i> )
G96	Constant surface speed control - CSS
G97	Constant surface speed control cancel - RPM
G98	Return to the initial level in a fixed cycle
G99	Return to the R-level level in a fixed cycle
M00	Compulsory program stop
M01	Optional program stop
M02	End of program (usually no reset and rewind)
M03	Spindle rotation normal – CW
M04	Spindle rotation reverse - CCW
M05	Spindle rotation stop
M06	Automatic tool change (ATC)
M07	Coolant mist - on
M08	Coolant pump motor - on
M09	Coolant pump motor - off
M19	Programmable spindle orientation
M30	End of program (with reset and rewind)
M48	Feedrate override cancel - off (deactivated)
M49	Feedrate override cancel - on (activated)
M60	Automatic pallet change (APC)
M78	B-axis clamp (non-standard)
M79	B-axis unclamp (non-standard)
M98	Subprogram call (with program number P)
M99	Subprogram end