

**9210-132
Reference booklet**

Sample

List of G Codes

G Code	Functions
G00	Positioning
G01	Linear Interpolation
G02	Circular Interpolation - Helical cutting CW
G03	Circular Interpolation - Helical cutting CCW
G04	Dwell
G09	Exact stop
G10	Cancel of G11
G11	Parallel and rotation shift of coordinate system
G15	Selection of work coordinate system (Model)
G16	Selection of work coordinate system (One-shot)
G17	Plane selection: XY
G18	Plane selection: ZX
G19	Plane selection: YZ
G20	Inch input confirmation
G21	Metric input confirmation
G22	Programmable travel limit ON
G23	Programmable travel limit cancel
G30	Positioning to home position
G31	Skip function
G40	Tool diameter compensation cancel
G41	Cutter radius compensation, Left
G42	Cutter radius compensation, Right
G43	Three dimensional compensation cancel
G44	Three dimensional compensation ON
G50	Enlargement and reduction of geometry cancel
G51	Enlargement and reduction of geometry ON
G53	Tool length offset cancel
G54	Tool length offset, X-axis
G55	Tool length offset, Y-axis
G56	Tool length offset, Z-axis
G57	Tool length offset, 4th-axis
G60	One-directional positioning
G61	Exact stop mode
G62	Programmable mirror image function
G64	Cutting mode
G68	Cancel of G69
G69	Setting of 3-D coordinate system conversion
G71	Fixed Cycle, Designation of return level for M53
G73	Fixed Cycle, High speed drilling cycle
G74	Fixed Cycle, Reverse tapping
G76	Fixed Cycle, Fine boring
G80	Fixed cycle, Mode cancel
G81	Fixed cycle, Drill/ spot boring
G82	Fixed cycle, Drill/ counter boring
G83	Fixed cycle, Deep hole drilling cycle
G84	Fixed cycle, Tapping
G85	Fixed cycle, Boring
G86	Fixed cycle, Boring
G87	Fixed cycle, Back Boring
G89	Fixed cycle, Boring
G90	Absolute dimensioning
G91	Incremental dimensioning
G92	Setting of work coordinate system
G94	Feed per min
G95	Feed per rev

List of M Codes

M Code	Function Element	Against Axis Movement	Model/ One-shot
M00	Program stop	After	One-shot
M01	Optional stop	After	One-shot
M02	End of Program	After	One-shot
M03	Spindle rotation CW	At the same time	Model
M04	Spindle rotation CCW	At the same time	Model
M05	Spindle stop	After	Model
M06	Vertical spindle tool change	After	One-shot
M07	Oil mist coolant ON	At the same time	Model
M08	Coolant pump ON	At the same time	Model
M09	Coolant system OFF	After	Model
M10	A-axis clamp	After	Model
M11	A-axis unclamp	After	Model
M12	Chip air blow ON	At the same time	Model
M15	Rotary Index Table CW (4 th axis)	At the same time	Model
M16	Rotary Index Table CCW (4 th axis)	At the same time	Model
M30	End of Tape	After	One-shot
M52	Return level in fixed Cycle: Upper limit	At the same time	One-shot
M53	Return level in fixed Cycle: Specified limit	At the same time	Model
M54	Return level in fixed Cycle: R level	At the same time	Model
M63	No next tool ATC Cycle	At the same time	One-shot
M64	Next tool return cycle	At the same time	One-shot
M65	ATC ready	At the same time	One-shot