

[Doosan](#) Doosan MX series M-Codes – Doosan CNC Turning Center Programming

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Doosan MX series M-code list for cnc machinists/programmers. M-Codes for both Upper unit and lower unit are given.

Contents

- [Doosan MX Series CNC](#)
- [Doosan MX Series M-Code List](#)

Doosan MX Series CNC

This list of M-codes works for the following cnc machines,
Doosan PUMA series

- [MX2000, MX2000L/T/LT/S/LS/LST](#)
- [MX2500, MX2500L/T/LT/S/LS/LST](#)
- [MX3000, MX3000S](#)



Doosan MX Series M-Code List

M-Code	UPPER UNIT	LOWER UNIT
M00	PROGRAM STOP	PROGRAM STOP
M01	OPTIONAL PROGRAM STOP	OPTIONAL PROGRAM STOP
M02	PROGRAM END	PROGRAM END
M03	LEFT SPINDLE FORWARD ROTATION	LEFT SPINDLE FORWARD ROTATION
M04	LEFT SPINDLE REVERSE ROTATION	LEFT SPINDLE REVERSE ROTATION
M05	LEFT SPINDLE STOP & SELECTION	LEFT SPINDLE STOP & SELECTION
M06	ATC TOOL CHANGE COMMAND	
M07	BED SHOER COOLANT ON	BED SHOER COOLANT ON
M08	COOLANT ON (UPPER SIDE)	COOLANT ON (UPPER SIDE)
M09	COOLANT OFF (UPPER SIDE)	COOLANT OFF (UPPER SIDE)
M10	PARTS UNLOADER DOWN TO CHUCK	PARTS UNLOADER DOWN TO CHUCK
M11	PARTS UNLOADER RETURN TO HOME	PARTS UNLOADER RETURN TO HOME
M12	COOLJECT ON (UPPER SIDE)	COOLJECT ON (UPPER SIDE)

M13	LEFT SPINDLE COOLANT BLOWER OFF	LEFT SPINDLE COOLANT BLOWER OFF
M14	LEFT SPINDLE AIR BLOW ON	LEFT SPINDLE AIR BLOW ON
M15	LEFT SPINDLE AIR BLOW OFF	LEFT SPINDLE AIR BLOW OFF
M16	BED SHOER COOLANT OFF	BED SHOER COOLANT OFF
M17	MACHINE LOCK ACT	MACHINE LOCK ACT
M18	MACHINE LOCK CANCEL	MACHINE LOCK CANCEL
M19	LEFT SPINDLE ORIENTATION	LEFT SPINDLE ORIENTATION
M20	GANTRY LOADER CALL	GANTRY LOADER CALL
M21	OPTIONAL BLOCK SKIP ACT	
M22	OPTIONAL BLOCK SKIP CANCEL	
M23	PROGRAM START CHECK	PROGRAM START CHECK
M24	CHIP CONVEYOR RUN	CHIP CONVEYOR RUN
M25	CHIP CONVEYOR STOP	CHIP CONVEYOR STOP
M26	T.S.C COOLANT ON (MILLING SPINDLE)	
M27	T.S.C COOLANT OFF (MILLING SPINDLE)	
M28	POLYGON MODE SELECT	POLYGON MODE SELECT
M29	RIGID TAPPING MODE SELECT	RIGID TAPPING MODE SELECT
M30	PROGRAM END & REWIND	PROGRAM END & REWIND
M31	LEFT CHUCKING INTERLOCK BY-PASS	LEFT CHUCKING INTERLOCK BY-PASS
M33	MILLING SPINDLE FORWARD ROTATION	REVOLVING SPINDLE FORWARD ROTATION
M34	MILLING SPINDLE REVERSE ROTATION	REVOLVING SPINDLE REVERSE ROTATION
M35	MILLING SPINDLE STOP & C1-AXIS SELECT	REVOLVING SPINDLE STOP & C1-AXIS SELECT
M45	MILLING SPINDLE HEAD TOOL NO, EXTERNAL SET	
M46	P.T.S.BODY CLAMP & BAR ADVANCE	
M47	P.T.S.BODY UNCLAMP & BAR RETRACT	
M48		
M49	MILLING SPINDLE ORIENTATION	
M50	BAR-FEEDER COMMAND 1	BAR-FEEDER COMMAND 1
M51	BAR-FEEDER COMMAND 2	BAR-FEEDER COMMAND 2
M52	FRONT SPLASH GUARD DOOR OPEN	FRONT SPLASH GUARD DOOR OPEN
M53	FRONT SPLASH GUARD DOOR CLOSE	FRONT SPLASH GUARD DOOR CLOSE

M54	PARTS COUNT	PARTS COUNT
M55	REPEAT PROGRAM AFTER M02 / M30	REPEAT PROGRAM AFTER M02 / M30
M56	TAPPING MODE SELECT	TAPPING MODE SELECT
M57	TAPPING MODE CANCEL	TAPPING MODE CANCEL
M58		STEADY REST CLAMP
M59		STEADY REST UNCLAMP
M60		TOOL CHANGE WITH MOVING AXES
M61	LEFT SPINDLE WINDING CHANGE LOW SPEED	LEFT SPINDLE WINDING CHANGE LOW SPEED
M62	LEFT SPINDLE WINDING CHANGE HIGH SPEED	LEFT SPINDLE WINDING CHANGE HIGH SPEED
M63	LEFT SPINDLE FORWARD & UPPER COOLANT ON	LEFT SPINDLE FORWARD & UPPER COOLANT ON
M64	LEFT SPINDLE REVERSE & UPPER COOLANT ON	LEFT SPINDLE REVERSE & UPPER COOLANT ON
M65	LEFT SPINDLE STOP & UPPER COOLANT OFF	LEFT SPINDLE STOP & UPPER COOLANT OFF
M66	LEFT CHUCKING LOW PRESSURE	RIGHT CHUCKING LOW PRESSURE
M67	LEFT CHUCKING HIGH PRESSURE	RIGHT CHUCKING HIGH PRESSURE
M68	LEFT CHUCK CLAMP	LEFT CHUCK CLAMP
M69	LEFT CHUCK UNCLAMP	LEFT CHUCK UNCLAMP
M70	TAIL STOCK QUILL LOW PRESSURE ADVANCE	TAIL STOCK QUILL LOW PRESSURE ADVANCE
M72	SPINDLE CONVERT ROTATION DIRECTION	SPINDLE CONVERT ROTATION DIRECTION
M73	SPINDLE NORMAL ROTATION DIRECTION	SPINDLE NORMAL ROTATION DIRECTION
M74	ERROR DETECT ON	ERROR DETECT ON
M75	ERROR DETECT OFF	ERROR DETECT OFF
M76	CHAMFERING ON	CHAMFERING ON
M77	CHAMFERING OFF	CHAMFERING OFF
M78	TAIL STOCK QUILL ADVANCE	TAIL STOCK QUILL ADVANCE
M79	TAIL STOCK QUILL RETRACT	TAIL STOCK QUILL RETRACT
M80	Q-SETTER SWING ARM DOWN	Q-SETTER SWING ARM DOWN
M81	Q-SETTER SWING ARM UP	Q-SETTER SWING ARM UP
M82	TOUCH PROBE ON	TOUCH PROBE ON
M83	TOUCH PROBE OFF	TOUCH PROBE OFF
M84		TURRET C.W. ROTATION
M85		TURRET C.C.W. ROTATION
M86		LOWER A-AXIS TORQUE SKIP

M87		LOWER A-AXIS TORQUE SKIP CANCEL
M88	C1-AXIS LOW PRESSURE CLAMP	C1-AXIS LOW PRESSURE CLAMP
M89	C1-AXIS HIGH PRESSURE CLAMP	C1-AXIS HIGH PRESSURE CLAMP
M90	C1-AXIS UNCLAMP	C1-AXIS UNCLAMP
M91	EXTERNAL M-CODE M91	EXTERNAL M-CODE M91
M92	EXTERNAL M-CODE M92	EXTERNAL M-CODE M92
M93	EXTERNAL M-CODE M93	EXTERNAL M-CODE M93
M94	EXTERNAL M-CODE M94	EXTERNAL M-CODE M94
M98	SUB PROGRAM CALL	SUB PROGRAM CALL
M99	END OF SUB PROGRAM	END OF SUB PROGRAM
M100	MILLING SPINDLE CLAMP	
M101	MILLING SPINDLE UNCLAMP	
M103	RIGHT SPINDLE FORWARD ROTATION	RIGHT SPINDLE FORWARD ROTATION
M104	RIGHT SPINDLE REVERSE ROTATION	RIGHT SPINDLE REVERSE ROTATION
M105	RIGHT SPINDLE STOP & SELECTION	RIGHT SPINDLE STOP & SELECTION
M106	B-AXIS CURVIC COUPLING CLAMP	
M107	B-AXIS CURVIC COUPLING UNCLAMP	
M108	T.S.C COOLANT ON (LEFT SPINDLE)	T.S.C COOLANT ON (LEFT SPINDLE)
M109	T.S.C COOLANT OFF(LEFT SPINDLE)	T.S.C COOLANT OFF(LEFT SPINDLE)
M110	B-AXIS DISC CLAMP	
M111	B-AXIS DISC UNCLAMP	
M112	B-AXIS CURVIC & DISC CLAMP	
M113	B-AXIS CURVIC & DISC UNCLAMP	
M114	RIGHT SPINDLE AIR BLOW ON	RIGHT SPINDLE AIR BLOW ON
M115	RIGHT SPINDLE AIR BLOW OFF	RIGHT SPINDLE AIR BLOW OFF
M116	WORK EJECTOR OPERATION COMMAND	WORK EJECTOR OPERATION COMMAND
M117		LOWER A-AXIS TORQUE CONTROL ON
M118		LOWER A-AXIS TORQUE CONTROL RESET
M119	RIGHT SPINDLE ORIENTATION	RIGHT SPINDLE ORIENTATION
M121		LOWER Z2-AXIS TORQUE CONTROL ON
M124		LOWER Z2-AXIS TORQUE CONTROL RESET
M125	SYNCHRO CONTROL WITH Z2-AXIS	

M126	SYNCHRO CONTROL CANCEL	
M131	RIGHT CHUCKING INTERLOCK BY-PASS	RIGHT CHUCKING INTERLOCK BY-PASS
M135	MILLING SPINDLE STOP & C2 AXIS SELECTION	REVOLVING SPINDLE STOP & C2 AXIS SELECTION
M138	ROOF SHOWER COOLANT ON	
M139	ROOF SHOWER COOLANT OFF	
M144	ATC WAITING POT RETRACT	
M145	ATC WAITING POT ADVANCE	
M146	ATC WAITING POT CHANGE POSITION	
M147	ATC WAITING POT HOME POSITION	
M148	ATC WAITING POT HOME POSITION CHECK	
M149	ATC MAINTENANCE MODE ON	
M150	ATC MAINTENANCE MODE OFF	
M151	ATC CHANGER START FLAG	
M152	ATC 1 CYCLE	
M153	ATC DOOR OPEN	
M154	ATC DOOR CLOSE	
M155	AUTO MILLING SPINDLE ORIENTATION	
M156	V-GROOVE AIR ON	
M157	ATC CHANGER MOTOR BRAKE RELEASE	
M158	ATC CHANGER MOTOR BRAKE ENGAGE	
M159		
M160		
M161	RIGHT SPINDLE WINDING CHANGE LOW SPEED	RIGHT SPINDLE WINDING CHANGE LOW SPEED
M162	RIGHT SPINDLE WINDING CHANGE HIGH SPEED	RIGHT SPINDLE WINDING CHANGE HIGH SPEED
M163	RIGHT SPINDLE FORWARD & UPPER COOLANT ON	RIGHT SPINDLE FORWARD & LOWER COOLANT ON
M164	RIGHT SPINDLE REVERSE & UPPER COOLANT ON	RIGHT SPINDLE REVERSE & LOWER COOLANT ON
M165	RIGHT SPINDLE STOP & UPPER COOLANT OFF	RIGHT SPINDLE STOP & LOWER COOLANT OFF
M168	RIGHT CHUCK CLAMP	RIGHT CHUCK CLAMP

M169	RIGHT CHUCK UNCLAMP	RIGHT CHUCK UNCLAMP
M170	INTERFERENCE CHECK RELEASE	INTERFERENCE CHECK RELEASE
M171	INTERFERENCE CHECK RELEASE CANCEL	INTERFERENCE CHECK RELEASE CANCEL
M172	Y-AXIS REFERENCE INTERLOCK RELEASE	
M173	Y-AXIS REFERENCE INTERLOCK RELEASE CANCEL	
M174	AUTO B-AXIS UN/CLAMP OFF & B- AXIS UNCLAMP	
M175	AUTO B-AXIS UN/CLAMP ON & B- AXIS CLAMP	
M188	C2-AXIS LOW PRESSURE CLAMP	C2-AXIS LOW PRESSURE CLAMP
M189	C2-AXIS HIGH PRESSURE CLAMP	C2-AXIS HIGH PRESSURE CLAMP
M190	C2-AXIS UNCLAMP	C2-AXIS UNCLAMP
M192	SIMUL.FEEDRATE ON(BALANCE CUTTING)	SIMUL.FEEDRATE ON(BALANCE CUTTING)
M193	SIMUL.FEEDRATE OFF(BALANCE CUTTING)	SIMUL.FEEDRATE OFF(BALANCE CUTTING)
M194		
M200	TOOL LOAD MONITOR OFF	TOOL LOAD MONITOR OFF
M201	TOOL LOAD MONITOR ON	TOOL LOAD MONITOR ON
M203	SPINDLE FORWARD SPEED SYNCHRO COMMAND	SPINDLE FORWARD SPEED SYNCHRO COMMAND
M204	SPINDLE REVERSE SPEED SYNCHRO COMMAND	SPINDLE REVERSE SPEED SYNCHRO COMMAND
M205	SPINDLE SYNCHRO STOP COMMAND	SPINDLE SYNCHRO STOP COMMAND
M206	SPINDLE SYNCHRO RELEASE COMMAND	SPINDLE SYNCHRO RELEASE COMMAND
M208	SPINDLE SPEED & PHASE CONFRIM COMMAND	SPINDLE SPEED & PHASE CONFRIM COMMAND
M209	SPINDLE SPEED CONFIRM COMMAND	SPINDLE SPEED CONFIRM COMMAND
M210	PARTS UNLOADER WAITING IN LEFT CHUCK	PARTS UNLOADER WAITING IN LEFT CHUCK
M211	COMPOSITE CONTROL ACT	COMPOSITE CONTROL ACT
M212	COMPOSITE CONTROL CANCEL	COMPOSITE CONTROL CANCEL
M213	SPINDLE FORWARD PHASE SYNCHRO COMMAND	SPINDLE FORWARD PHASE SYNCHRO COMMAND
M214	SPINDLE REVERSE PHASE SYNCHRO COMMAND	SPINDLE REVERSE PHASE SYNCHRO COMMAND

M215		TURRET UNCLAMP BEFORE T-CODE COMMAND
M217		Z2-AXIS INTERLOCK(A-AXIS REF) RELEASE
M218		Z2-AXIS INTERLOCK(A-AXIS REF) RELEASE CANCEL
M220		UPPER X-AXIS INTERLOCK RELEASE
M221		UPPER X-AXIS INTERLOCK RELEASE CANCEL
M226	WORK EJECTER ADVANCE	WORK EJECTER ADVANCE
M227	WORK EJECTER RETRACT	WORK EJECTER RETRACT
M230	PARTS UNLOADER STOPPER RETURN	PARTS UNLOADER STOPPER RETURN
M231	PARTS UNLOADER STOPPER ADVANCE	PARTS UNLOADER STOPPER ADVANCE
M232	PARTS UNLOADER BODY ADVANCE	PARTS UNLOADER BODY ADVANCE
M233	PARTS UNLOADER BODY RETURN	PARTS UNLOADER BODY RETURN
M234	PARTS UNLOADER BUCKET DOWN	PARTS UNLOADER BUCKET DOWN
M235	PARTS UNLOADER BUCKET RETURN	PARTS UNLOADER BUCKET RETURN
M236	PARTS UNLOADER ARM DOWN	PARTS UNLOADER ARM DOWN
M237	PARTS CATCHER ARM RETURN	PARTS CATCHER ARM RETURN
M250	MACHINE MAINTENANCE MODE ON	MACHINE MAINTENANCE MODE ON
M251	MACHINE MAINTENANCE MODE OFF	MACHINE MAINTENANCE MODE OFF
M252		TOOL CHANGE AREA INTERLOCK OFF
M253		TOOL CHANGE AREA INTERLOCK OFF CANCEL
M254		A-AXIS INTERLOCK IGNORE
M255		A-AXIS INTERLOCK IGNORE CANCEL
M256	PARTS UNLOADER CONTINUOS ACT W/RIGHT CHUCK	PARTS UNLOADER CONTINUOS ACT W/RIGHT CHUCK
M289	CANNED CYCLE ON WITH M89,M90 OF LEFT C1-AXIS	CANNED CYCLE ON WITH M89,M90 OF LEFT C1-AXIS
M296	DYNAMIC RADIUS/DIAMETER CONVERT ON	DYNAMIC RADIUS/DIAMETER CONVERT ON
M297	DYNAMIC RADIUS/DIAMETER CONVERT CANCEL	DYNAMIC RADIUS/DIAMETER CONVERT CANCEL
M300	Z-AXIS MIRROR IMAGE ON	Z-AXIS MIRROR IMAGE ON
M301	Z-AXIS MIRROR IMAGE OFF	Z-AXIS MIRROR IMAGE OFF
M308	T.S.C COOLANT ON (RIGHT SPINDLE)	T.S.C COOLANT ON (RIGHT SPINDLE)
M309	T.S.C COOLANT OFF(RIGHT SPINDLE)	T.S.C COOLANT OFF(RIGHT SPINDLE)

M310	PARTS UNLOADER WAITING IN RIGHT CHUCK	PARTS UNLOADER WAITING IN RIGHT CHUCK
M311	PARTS UNLOADER RETRACT FROM RIGHT CHUCK	PARTS UNLOADER RETRACT FROM RIGHT CHUCK
M312	LEFT SPINDLE COOLANT BLOWER ON	LEFT SPINDLE COOLANT BLOWER ON
M313	RIGHT SPINDLE COOLANT BLOWER OFF	RIGHT SPINDLE COOLANT BLOWER OFF
M314	RIGHT SPINDLE COOLANT BLOWER ON	RIGHT SPINDLE COOLANT BLOWER ON
M315	LEFT SPINDLE STOP (NOT CONFIRM)	LEFT SPINDLE STOP (NOT CONFIRM)
M316		Z2-AXIS CURRENT LOAD READ (MINUS)
M317		Z2-AXIS CURRENT LOAD READ (PLUS)
M320	GANTRY LOADER CALL	GANTRY LOADER CALL
M325	RIGHT SPINDLE STOP (NOT CONFIRM)	RIGHT SPINDLE STOP (NOT CONFIRM)
M326		A-AXIS CURRENT LOAD READ
M389	CANNED CYCLE ON WITH M189,M190 OF RIGHT C2-AXIS	CANNED CYCLE ON WITH M189,M190 OF RIGHT C2-AXIS
M900	WAITING M-CODE	WAITING M-CODE