

Miscellaneous Functions #2

➡ Answers to questions:

1. Machine specific M-functions are non-standard functions designed to operate a unique equipment or machine accessory, as determined by the machine tool builder.
2. If not sure, program only **one** M-function in a block.
Some newer Fanuc controls accept up to **three** non-conflicting M-functions in a single block.
3. M03 (Spindle rotation CW) - M04 (Spindle rotation CCW) - and M05 (Spindle stop)
4. M19 is **Spindle Orientation** - although it can be used in a CNC program, it is more often used in the MDI (**Manual Data Input**) mode.
5. Program related M-functions control the flow of the program (program execution) and include: M00, M01, M02, M30, M98, M99 - descriptions are listed in the handbook
6. Machine related M-functions control the operation related machine features and include: M03, M04, M05, M06, M07, M08, M09, M60 for the machining centers and several others for CNC lathe - descriptions are listed in the handbook
7. M06 and M6 are identical - they mean a tool change (physical activity of the tool changer).
M60 is a standard function for APC - Automatic Pallet Changer (if available)
8. The percent sign is used only when the program is sent to the control system from an external device. Its purpose is to send a signal to the control unit that the transmission from the source device has been completed during I/O - (input/output session). It can only be used at the end of the program.
9. M00, M01, M02, M06, M30, M60 - descriptions are listed in the handbook
10. M03, M04, M05, M07, M08, M09 - descriptions are listed in the handbook
11. Program stop function M00 should always be documented as to its purpose.
The CNC operator cannot be expected to know the reason for this function in the program without being informed.
12. Absolutely nothing else - it a single purpose function.