

Throttle, Propeller, and Mixture Controls for Mooney Aircraft

- Solid Metal construction
- Pilot friendly knobs
- Lifetime lubrication
- Superior low friction conduit
- Controls featuring cutout for Microswitch comes with McFarlane FAA approved Dust Boot and ICA for control debris protection



Vernier-Assist™ Throttle Controls

Precision control

- Jam-proof safety
- Precision power adjustments
- Smooth friction control
- Light and compact
- Standard vernier action, without the button!
- Microswitch Dust Boot and ICA included with microswitch cutout controls

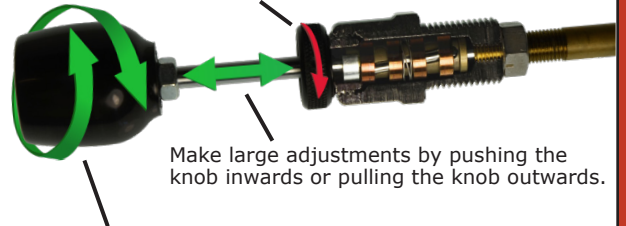
Ram Air Controls

FAA-PMA approved!

- High temperature Teflon lined conduit
- Push-pull design
- Direct cable connection between control knob and ram air flaps
- Comes with McFarlane FAA approved Microswitch Dust Boot and ICA for control debris protection

New MCVA Throttle Series
Vernier and friction lock - The best of both!

Tension and vernier action is increased by tightening the tension nut.



Make large adjustments by pushing the knob inwards or pulling the knob outwards.

Make fine adjustments by rotating the knob clockwise or counterclockwise. Our **Vernier-Assist™** throttle control uses a patented roller action and does not use a positive lock thread engagement. For extreme conduit routing or heavy carburetor load installations, slight inward or outward assist pressure could be required during rotation.

Patent No. 8,485,057 B1

Model	Serial Number	Throttle Control	Propeller Control	Mixture Control	Ram Air
M20C	20-0001 thru 20-0009	MC660166-009 ¹	MC660166-003 ¹	N/A	N/A
	20-0011 thru 20-0046		N/A		
	20-0047 thru 20-1258		N/A		
	2807 thru 670149	MC660190-003 ^{2 4 6}	MC660166-003 ¹		
	680001 thru 680198	N/A	MC660189-005 ³		
	690001 thru 690098 700001 thru 700091	MC660166-009 ¹	N/A MC660166-003 ¹		
M20D	252 thru 260	MC660190-003 ^{2 4 6}	N/A	N/A	N/A
M20E	21-0001 thru 21-0037	MC660166-007 ¹	MC660166-003 ¹	MC660166-005 ¹	MC640257-017 ^{5 6}
	21-0039 thru 21-0060		N/A	N/A	N/A
	21-0061 thru 21-1180	MC660190-005 ^{2 4 6}	MC660189-005 ³	MC660189-003 ³	N/A
	470 thru 1308		MC660166-003 ¹	MC660166-005 ¹	MC640257-017 ^{5 6}
M20F	22-0001 thru 22-0078	N/A	MC660166-003 ¹	MC660166-005 ¹	N/A
	22-0079 thru 22-1178		N/A		
	22-1179 thru 22-1439	MC660166-007 ¹	MC660189-005 ³	MC660166-005 ¹	MC640257-017 ^{5 6}
	660002 thru 680206	MC660190-005 ^{2 4 6}			MC660189-003 ³
M20G	680001 thru 700072	MC660166-007 ¹	MC660166-003 ¹	MC660166-005 ¹	MC640257-017 ^{5 6}
	680001 thru 680164 690001 thru 700006	MC660190-003 ^{2 4 6} MC660166-009 ¹	MC660189-005 ³	N/A	N/A
M20J	24-0002 thru 24-0037	MC660166-007 ¹	MC660166-003 ¹	MC660166-005 ¹	MC640257-017 ^{5 6}
	24-0378 thru 24-3431	MC660226-001 ^{2 4 6}	MC660226-003 ³	MC660226-005 ³	N/A
M20K	25-0001 thru 25-0841	MC660226-007 ^{2 4 6}	MC660226-009 ³	MC660226-011 ³	N/A
	25-0842 thru 25-0999	MC660226-013 ^{2 4 6}			
	25-1000 thru 25-1066	MC660226-015 ^{2 4 6}			
	25-1067 thru 25-2032	MC660226-017 ^{2 4}			
M20M	27-0001 thru 27-0355	MC660226-019 ^{2 4 6}	MC660226-023 ³	MC660226-025 ³	N/A
M20R M20S M20TN	29-0001 thru 29-0525, 30-0001 thru 30-0065, 31-0001 thru 31-143	MC660226-027 ^{2 4 6}	MC660226-023 ³	MC660226-005 ³	N/A
M20U	32-0001 and On	MC660226-027 ^{2 4 6}	MC660226-029 ³	MC660226-005 ³	N/A
M20V	33-0001 and On				

Notes:

- 1 Quadrant control style
- 2 Friction Lock control style
- 3 Vernier control style
- 4 To order **Vernier-Assist™** throttle controls change "MC" prefix to "MCVA" prefix.
- 5 Push-Pull control style
- 6 Contains Microswitch cut out, comes with Microswitch Dust Boot and ICA