

Vernier-Assist™ Throttle Controls for Mooney Aircraft

Precision control with our roller action vernier provides smooth jam-proof coarse and fine adjustment!

- 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

Throttle, Mixture and Propeller Controls for Mooney

- 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

Ram-Air Controls

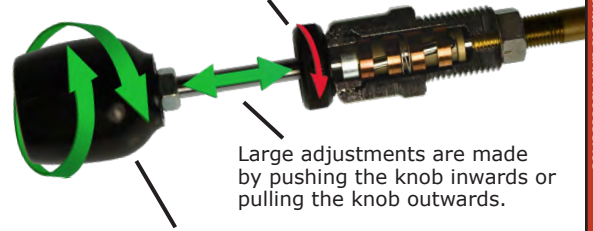
FAA-PMA Approved Controls!

- 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.



Large adjustments are made by pushing the knob inwards or pulling the knob outwards.

Fine adjustments are made by rotating the knob clockwise or counterclockwise. The McFarlane 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 G MCVA660190-003 4 G	N/A		
	680001 thru 680198	N/A	MC660166-003 1 MC660189-005 3		
	690001 thru 690098 700001 thru 700091	MC660166-009	N/A MC660166-003 1		
M20D	252 thru 260	MC660190-003 2 G MCVA660190-003 4 G	N/A	N/A	N/A
M20E	21-0001 thru 21-0037 21-0039 thru 21-0060 21-0061 thru 21-1180	MC660166-007 1	MC660166-003 1 N/A	MC660166-005 1	MC640257-017 5 G
	470 thru 1308	MC660190-005 2 G MCVA660190-005 4 G	MC660189-005 3	MC660189-003 3	N/A
	690001 thru 700061	MC660166-007 1	MC660166-003 1	MC660166-005 1	MC640257-017 5 G
	22-0001 thru 22-0078 22-0079 thru 22-1178 22-1179 thru 22-1439	N/A MC660166-007 1	MC660166-003 1 N/A	MC660166-005 1	N/A MC640257-017 5 G
M20F	660002 thru 680206	MC660190-005 2 G MCVA660190-005 4 G	MC660189-005 3	MC660189-003 3	N/A
	680001 thru 700072	MC660166-007 1	MC660166-003 1	MC660166-005 1	MC640257-017 5 G
	680001 thru 680164	MC660190-003 2 G MCVA660190-003 4 G	MC660189-005 3	N/A	N/A
	690001 thru 700006	MC660166-009 1	MC660166-003 1	N/A	N/A
M20J	24-0002 thru 24-0037	MC660166-007 1	MC660166-003 1	MC660166-005 1	MC640257-017 5 G
	24-0378 thru 24-3431	MC660226-001 2 G MCVA660226-001 4 G	MC660226-003 3	MC660226-005 3	N/A
		MC660226-007 2 G			
M20K	25-0001 thru 25-0841	MCVA660226-007 4 G	MC660226-009 3	MC660226-011 3	N/A
	25-0842 thru 25-0999	MC660226-013 2 G			
		MCVA660226-013 4 G			
	25-1000 thru 25-1066	MC660226-015 2 G			
		MCVA660226-015 4 G			
	25-1067 thru 25-2032	MC660226-017 2 MCVA660226-017 4			
M20M	27-0001 thru 27-0355	MC660226-019 2 G MCVA660226-019 4 G	MC660226-023 3	MC660226-025 3	N/A
M20R	29-0001 thru 29-0525	MC660226-027 2 G	MC660226-023 3	MC660226-005 3	N/A
M20S	30-0001 thru 30-0065	MCVA660226-027 4 G			
M20TN	31-0001 thru 31-143				
M20U	32-0001 and On	MC660226-027 2 G	MC660226-029 3	MC660226-005 3	N/A
M20V	33-0001 and On	MCVA660226-027 4 G			

Notes:
Control Style
1 Quadrant
2 Friction Lock
3 Vernier
4 Vernier-Assist
5 Push-Pull
6 Contains Microswitch cut out, comes with Microswitch Dust Boot and ICA