

# MSC 700™ DC Motor Adjustable Speed Controls

## Introducing the industry's most innovative DC motor speed controls. MSC 700 controls from A. O. Smith.

The fact is, no other speed control even comes close. Because no other control offers as much convenience, as much quality or as much affordability.

### Convenience and control all in one compact unit.

Whatever your application, count on our MSC 700 units for all the control you need.

The way they work is simple. They statically convert single phase AC power to regulated DC. So you get adjustable, reliable speed control for either permanent magnet or wound field DC motors.

Our controls have adjustable trimpots for easy access to a wide range of horsepower settings. You won't have to stock an assortment of shunt resistors to accommodate various horsepower needs. You can operate our enclosed, dual-voltage models on either 115V or 230V AC.

There's more. You can choose from chassis and enclosed models, with single or dual voltage operation. And for added versatility, there's more than a dozen optional accessories.

### A. O. Smith means quality you can count on.

But perhaps the best feature in our control line is the name that's behind it. A. O. Smith. Simply put, our more than 90 years of experience makes us a world leader in motors and motor accessories. And, we put coast-to-coast service behind everything we sell with expert assistance, availability and delivery from a network of Authorized Service Centers throughout the U.S. So whether you're producing original equipment or simply replacing an existing drive, we've got the perfect pick. MSC 700 speed controls, only from A. O. Smith.

### Features

- Inexpensive, compact speed control for PMDC and wound field DC motors (up to 3 HP).
- Three chassis and five enclosed models, single and dual-voltage units available (115V or 115/230V).
- No plug-in shunts needed for HP calibration.
- Automatic AC input voltage selection-without jumpers or switches on dual voltage chassis models.
- Inhibit feature for automatic operation by switch, relay, or programmable control.
- 5K Ohm speed potentiometer included with all controls.
- All chassis units feature quick-connect terminals.
- Interchangeable with many competitive units.
- Wide array of options for optimum design versatility.
- NEMA Code K, full-wave power conversion.

### Typical Applications

- Packing equipment
- Exercise equipment
- Conveyors
- Material handling
- Printing and screening machinery
- Food processing equipment
- Pumps and fans
- Textile machinery
- Metal-forming equipment
- Agricultural equipment
- Machine tools
- Feeders
- Positioners
- Door openers



### Operating Conditions

Line Voltage	115 VAC <10% 115/230 VAC <10%
Line Frequency	50/60 Hz <2 Hz
Ambient Temp. Range	0°C to 40° C
Altitude	3300 feet maximum
Service Factor	1.0
Duty	Continuous
Environment	Industrial/Commercial

### Performance Characteristics

Overload capacity	150% for 1 minute
Speed Range	50:1 armature feedback
(Controlled)	100:1 with tachometer feedback
Speed Regulation	1% of base speed (typical)
Minimum speed trimpot	0 to 40% of full speed (0 to 30% on W706 & W770)
Maximum speed trimpot	60 to 100% of full speed (50 to 110% on W706 & W770)
Current/Torque Limit (% of full load)	0 to 150% on W755, W756, W760, W761 50 TO 150% on W706 0 to 200% on W770 1 to 125% only @ 1.5 HP (115)/3HP; (230V) on W715
Acceleration/ Deceleration Time	0.8 to 10 seconds (0.5 to 4 on W706, 0.2 to 10 seconds on W770*)
IR Compensation	0 to 100 % (of rated load)

\*Acceleration/Deceleration times are independent on W770