

# MULTIPURPOSE ACTUATORS



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# MULTIPURPOSE ACTUATORS

Joyce/Dayton Multipurpose Actuators (MA) are compact, versatile, and designed to lift dynamic loads ranging from 500N (112 lb) to 7000N (1574 lb). Each actuator is equipped with a potentiometer and preset limit switches and offers an IP65 rating that qualifies them for many wash-down and outdoor applications. A wide selection of models is available to meet your specific requirements.

## ORDERING INFORMATION

Instructions: Select a model number from this chart.

500N (112 lb) DC	1500N (337 lb) AC & DC	2500N (562 lb) AC & DC	3500N (787 lb) AC & DC	4500N (1012 lb) AC & DC	7000N (1574 lb) AC & DC
MA0513	MA1527	MA2547	MA3507 MA3527	MA4514	MA7007

Sample Part Number: MA1527-B-1-1-15

Type of switch
B = Potentiometer and preset limit switches

Stroke		
Code	MA0513	All Other Models
10	100 mm (3.9 in)	---
15	150 mm (5.9 in)	153 mm (6 in)
25	250 mm (9.8 in)	---
30	300 mm (11.8 in)	305 mm (12 in)
45	---	457 mm (18 in)

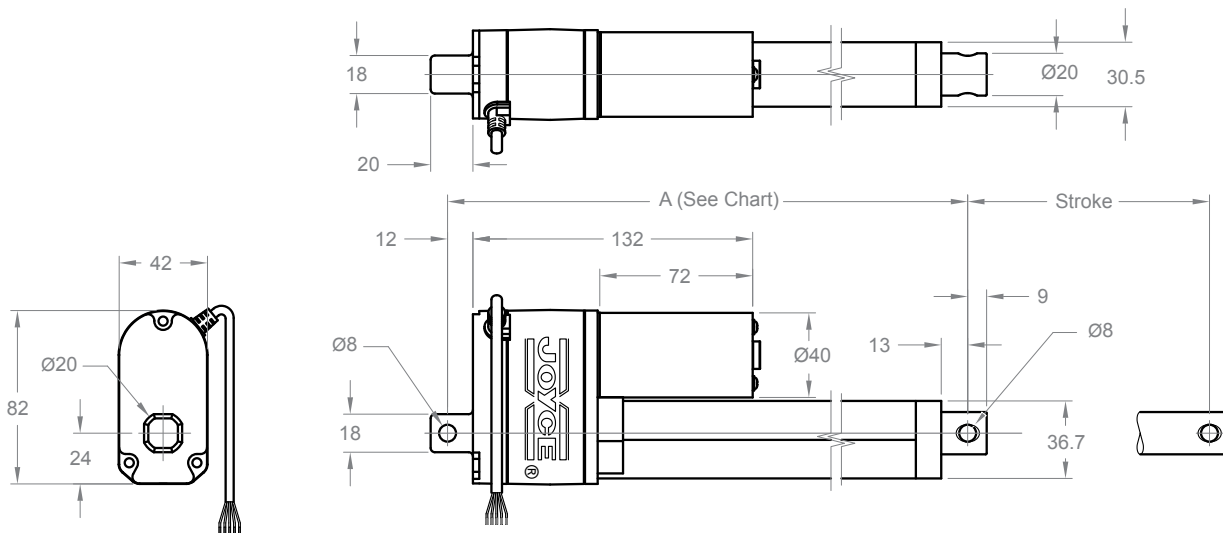
IP Rating
1 = IP65 Dust-tight and protected against water jets

Voltage		
1 = VDC		8 = VAC
12 VDC	12 VDC	120 VAC
 MA0513	 MA1527, MA2547, MA3507, MA3527, MA4514, MA7007	 MA1527, MA2547, MA3507, MA3527, MA4514, MA7007

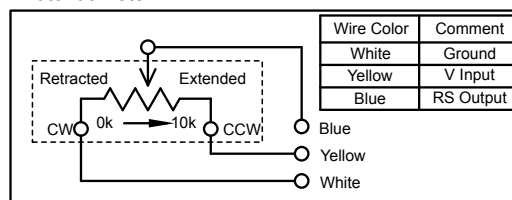
# MA0513 (12 VDC)

- 12 VDC
- Dynamic loads up to 500N (112 lb)
- Static load capacity of 2000N (450 lb)
- Maximum travel speed of 13 mm/sec (31 in/min)
- 25% duty cycle
- Clevis-to-clevis mounting
- Self-locking
- Preset limit switches (non-adjustable)
- Potentiometer
- IP65 protection rating
- Aluminum extension tube and outer tube
- Optional DC controls (see back cover)

MA0513 Multipurpose Actuators (12 VDC)				
Part Number	Capacity N (lb)	Stroke mm (in)	Travel Speed mm/sec (in/min)	Retracted (A) mm (in)
MA0513B1110	500 (112)	100 (3.9)	13 (31)	246 (9.7)
MA0513B1115	500 (112)	150 (5.9)	13 (31)	297 (11.7)
MA0513B1125	500 (112)	250 (9.8)	13 (31)	399 (15.7)
MA0513B1130	500 (112)	300 (11.8)	13 (31)	450 (17.7)



All dimensions are in millimeters.



Motor 12 VDC

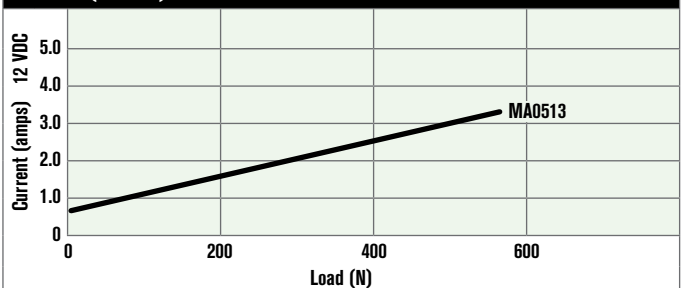
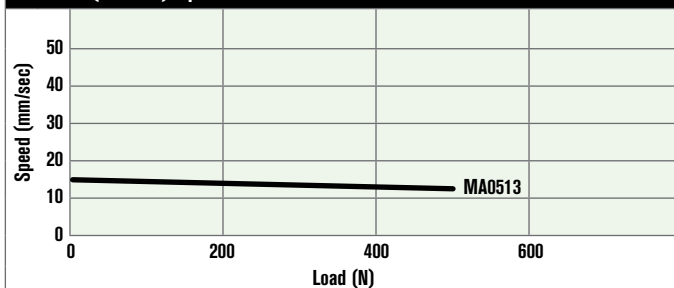
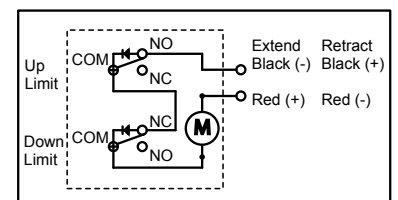


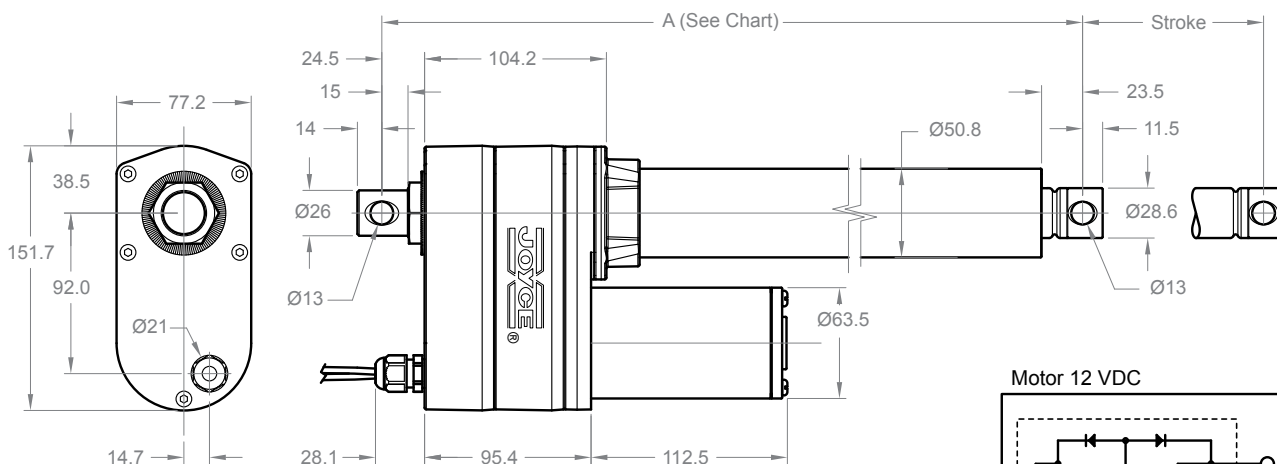
Chart values based on 18°C (64°F).

# MA1527/MA3507 (12 VDC)

- 12 VDC
- Dynamic loads up to 3500N (787 lb)
- Static load capacity of 4500N (1012 lb)
- Maximum travel speeds (see chart)
- 25% duty cycle
- Clevis-to-clevis mounting
- Self-locking
- Preset limit switches can be adjusted
- Potentiometer
- IP65 protection rating
- Steel extension tube and outer tube
- Optional DC controls (see back cover)

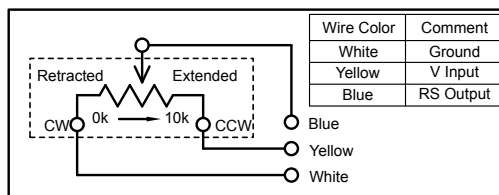
**MA1527 / MA3507 Multipurpose Actuators (12 VDC)**

Part Number	Capacity N (lb)	Stroke mm (in)	Travel Speed mm/sec (in/min)	Retracted (A) mm (in)
MA1527B1115	1500 (337)	153 (6.0)	27 (64)	410 (16.1)
MA1527B1130	1500 (337)	305 (12.0)	27 (64)	613 (24.1)
MA1527B1145	1500 (337)	457 (18.0)	27 (64)	765 (30.1)
MA3507B1115	3500 (787)	153 (6.0)	7 (17)	410 (16.1)
MA3507B1130	3500 (787)	305 (12.0)	7 (17)	613 (24.1)
MA3507B1145	3500 (787)	457 (18.0)	7 (17)	765 (30.1)

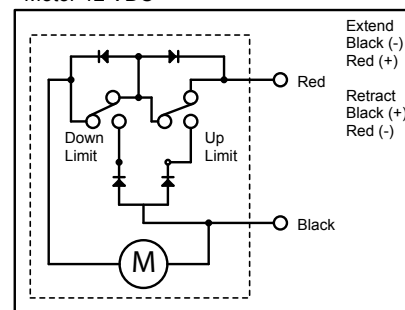


All dimensions are in millimeters.

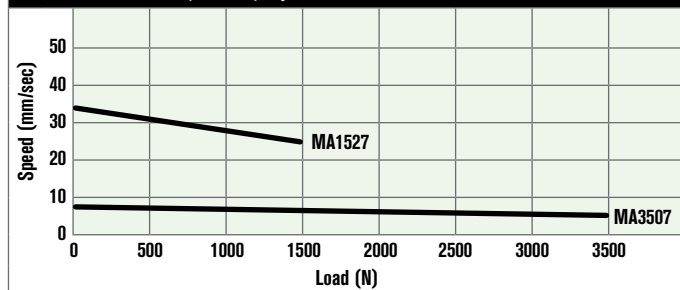
**Potentiometer**



**Motor 12 VDC**



**MA1527 / MA3507 (12 VDC) Speed vs Load**



**MA1527 / MA3507 (12 VDC) Current vs Load**

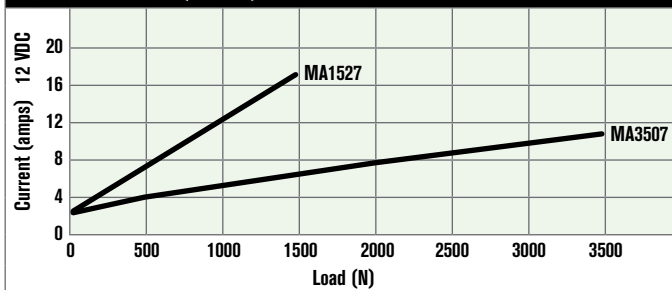


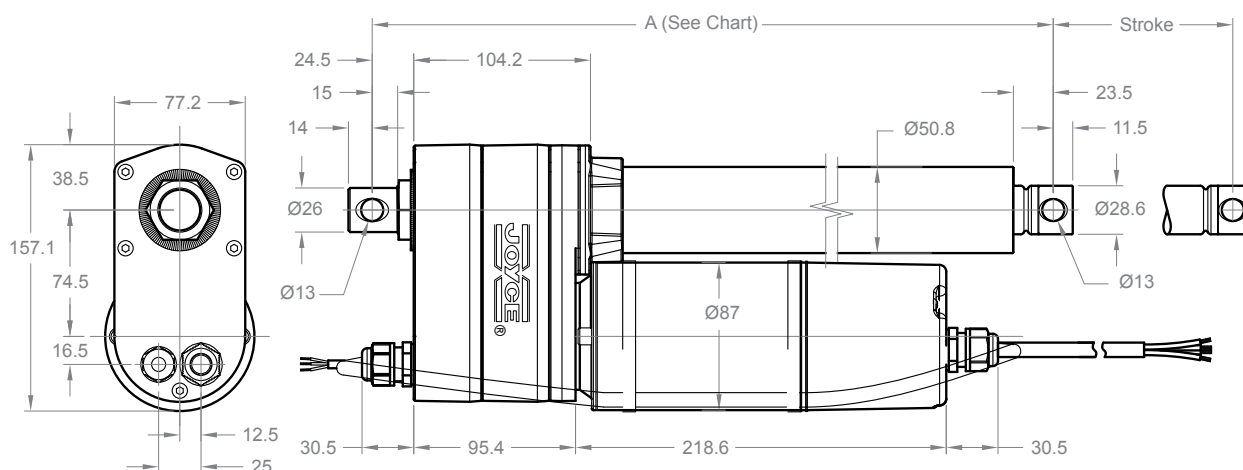
Chart values based on 18°C (64°F).

# MA1527/MA3507 (120 VAC)

- 120 VAC
- Dynamic loads up to 3500N (787 lb)
- Static load capacity of 4500N (1012 lb)
- Maximum travel speeds (see chart)
- 25% duty cycle
- Clevis-to-clevis mounting
- Self-locking
- Preset limit switches can be adjusted
- Potentiometer
- IP65 protection rating
- Steel extension tube and outer tube
- Optional AC controls (see back cover)

**MA1527 / MA3507 Multipurpose Actuators (120 VAC)**

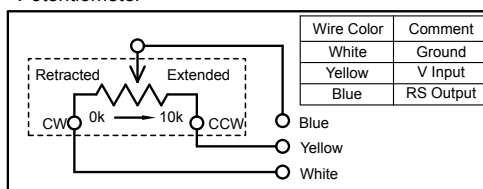
Part Number	Capacity N (lb)	Stroke mm (in)	Travel Speed mm/sec (in/min)	Retracted (A) mm (in)
MA1527B8115	1500 (337)	153 (6.0)	23 (54)	410 (16.1)
MA1527B8130	1500 (337)	305 (12.0)	23 (54)	613 (24.1)
MA1527B8145	1500 (337)	457 (18.0)	23 (54)	765 (30.1)
MA3507B8115	3500 (787)	153 (6.0)	6 (14)	410 (16.1)
MA3507B8130	3500 (787)	305 (12.0)	6 (14)	613 (24.1)
MA3507B8145	3500 (787)	457 (18.0)	6 (14)	765 (30.1)



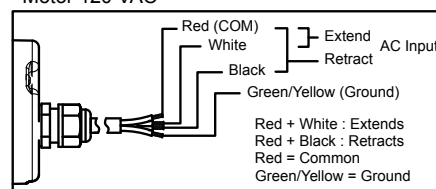
All dimensions are in millimeters.

Limit switches are wired internally.

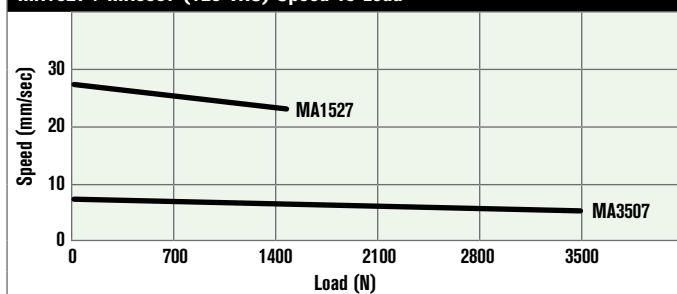
**Potentiometer**



**Motor 120 VAC**



**MA1527 / MA3507 (120 VAC) Speed vs Load**



**MA1527 / MA3507 (120 VAC) Current vs Load**

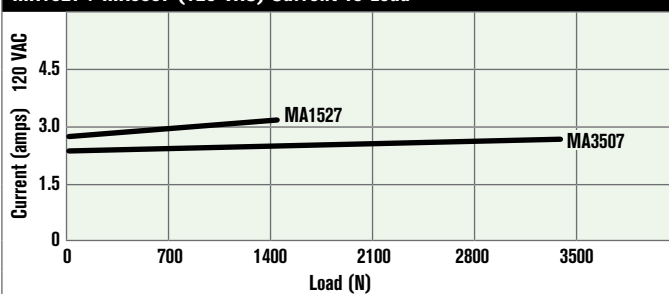


Chart values based on 18°C (64°F).

# MA2547/MA3527/MA4514/MA7007 (12 VDC)

- 12 VDC
- Dynamic loads up to 7000N (1574 lb)
- Static load capacity of 13,600N (3057 lb)
- Maximum travel speeds (see chart)
- 25% duty cycle
- Clevis-to-clevis mounting
- Self-locking
- Preset limit switches can be adjusted
- Potentiometer
- IP65 protection rating
- Stainless steel extension tube, steel outer tube
- Optional DC controls (see back cover)

Part Number	Capacity N (lb)	Stroke mm (in)	Travel Speed mm/sec (in/min)	Retracted (A) mm (in)
MA2547B1115	2500 (562)	153 (6.0)	47 (111)	450 (17.7)
MA2547B1130	2500 (562)	305 (12.0)	47 (111)	680 (26.8)
MA2547B1145	2500 (562)	457 (18.0)	47 (111)	832 (32.8)
MA3527B1115	3500 (787)	153 (6.0)	27 (64)	450 (17.7)
MA3527B1130	3500 (787)	305 (12.0)	27 (64)	680 (26.8)
MA3527B1145	3500 (787)	457 (18.0)	27 (64)	832 (32.8)
MA4514B1115	4500 (1012)	153 (6.0)	14 (33)	450 (17.7)
MA4514B1130	4500 (1012)	305 (12.0)	14 (33)	680 (26.8)
MA4514B1145	4500 (1012)	457 (18.0)	14 (33)	832 (32.8)
MA7007B1115	7000 (1574)	153 (6.0)	7 (17)	450 (17.7)
MA7007B1130	7000 (1574)	305 (12.0)	7 (17)	680 (26.8)
MA7007B1145	7000 (1574)	457 (18.0)	7 (17)	832 (32.8)

Refer to MA1527 / MA3507 (12 VDC) for photo.

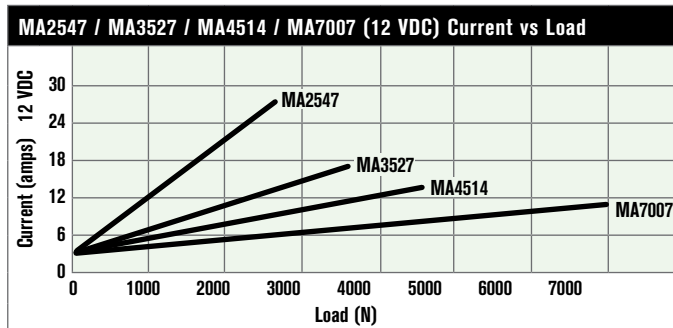
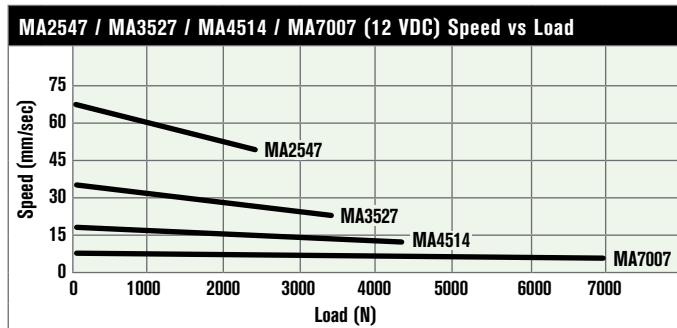
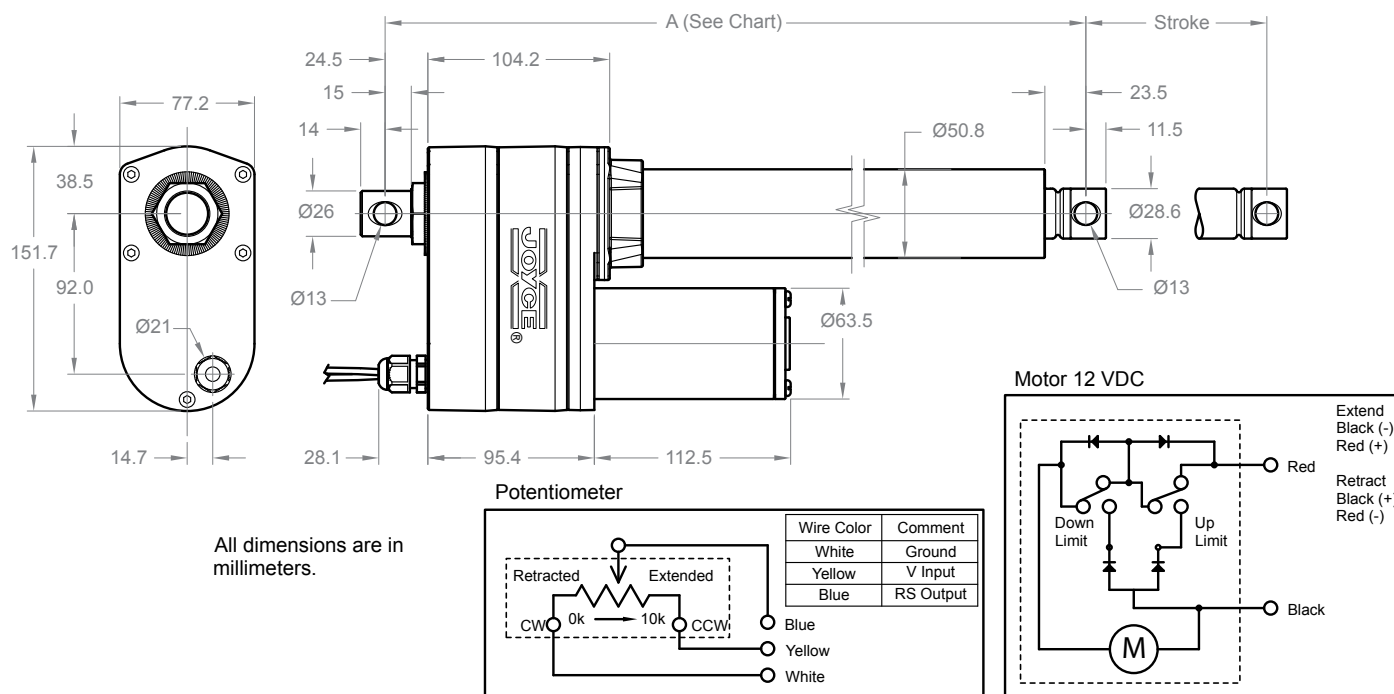


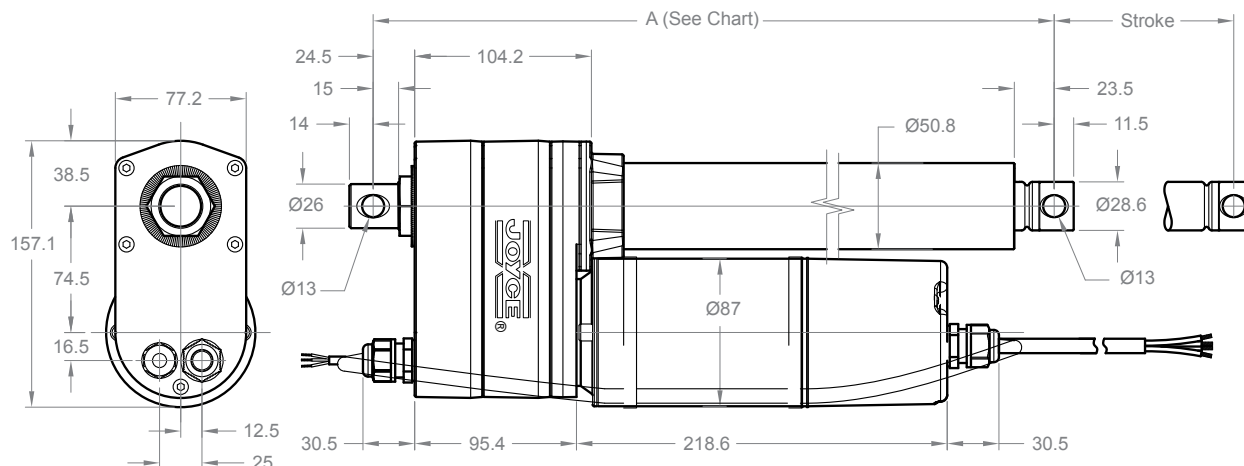
Chart values based on 18°C (64°F).

# MA2547/MA3527/MA4514/MA7007 (120 VAC)

- 120 VAC
- Dynamic loads up to 7000N (1574 lb)
- Static load capacity of 13,600N (3057 lb)
- Maximum travel speeds (see chart)
- 25% duty cycle
- Clevis-to-clevis mounting
- Self-locking
- Preset limit switches can be adjusted
- Potentiometer
- IP65 protection rating
- Steel extension tube and outer tube
- Optional AC controls (see back cover)

Part Number	Capacity N (lb)	Stroke mm (in)	Travel Speed mm/sec (in/min)	Retracted (A) mm (in)
MA2547B8115	2500 (562)	153 (6.0)	41 (96)	450 (17.7)
MA2547B8130	2500 (562)	305 (12.0)	41 (96)	680 (26.8)
MA2547B8145	2500 (562)	457 (18.0)	41 (96)	832 (32.8)
MA3527B8115	3500 (787)	153 (6.0)	23 (54)	450 (17.7)
MA3527B8130	3500 (787)	305 (12.0)	23 (54)	680 (26.8)
MA3527B8145	3500 (787)	457 (18.0)	23 (54)	832 (32.8)
MA4514B8115	4500 (1012)	153 (6.0)	12 (28)	450 (17.7)
MA4514B8130	4500 (1012)	305 (12.0)	12 (28)	680 (26.8)
MA4514B8145	4500 (1012)	457 (18.0)	12 (28)	832 (32.8)
MA7007B8115	7000 (1574)	153 (6.0)	6 (14)	450 (17.7)
MA7007B8130	7000 (1574)	305 (12.0)	6 (14)	680 (26.8)
MA7007B8145	7000 (1574)	457 (18.0)	6 (14)	832 (32.8)

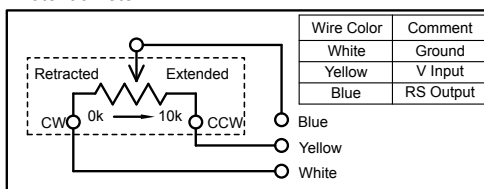
Refer to MA1527 / MA3507 (120 VAC) for photo.



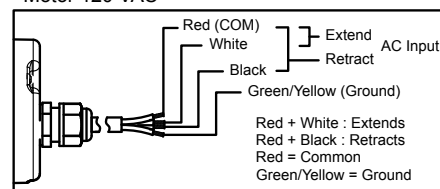
All dimensions are in millimeters.

Limit switches are wired internally.

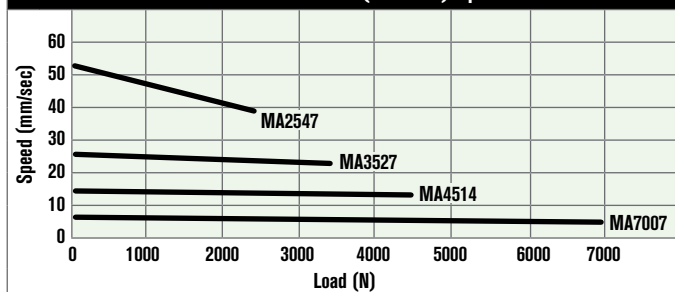
Potentiometer



Motor 120 VAC



MA2547 / MA3527 / MA4514 / MA7007 (120 VAC) Speed vs Load



MA2547 / MA3527 / MA4514 / MA7007 (120 VAC) Current vs Load

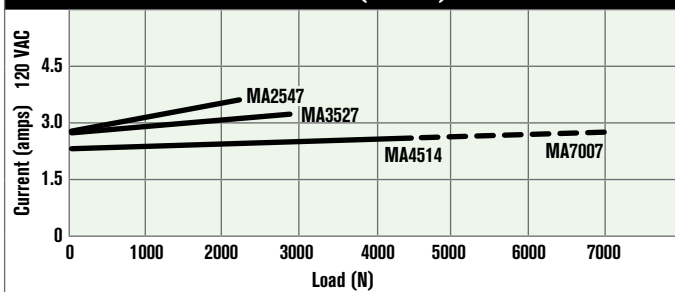


Chart values based on 18°C (64°F).

# MOTOR CONTROLS FOR MULTIPURPOSE ACTUATORS

## 12 VDC controls feature:

- 12 VDC input – 12 VDC output
- NEMA 12 CSA approved housing
- Nominal dimensions of control box – 8" x 8" x 4"
- Momentary rocker-type contact switch for extend/retract operation
- Terminal strip for motor and incoming power connection

## 120 VAC controls feature:

- 120 VAC input – 120 VAC output
- NEMA 12 CSA approved housing
- Nominal dimensions of control box – 6" x 6" x 4"
- Momentary rocker-type contact switch for extend/retract operation
- Terminal strip for motor and incoming power connection



12 VDC Controls		
DC Actuator	Output Rating	Part Number
MA0513B11XX	8.5 amp	07990938
MA1527B11XX	25 amp	07990939
MA3507B11XX		
MA3527B11XX		
MA4514B11XX		
MA7007B11XX		
MA2547B11XX	37.5 amp	07990940

120 VAC Controls		
AC Actuator	Output Rating	Part Number
MA1527B81XX	15 amp	07990964
MA2547B81XX		
MA3507B81XX		
MA3527B81XX		
MA4514B81XX		
MA7007B81XX		

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