

# Rodless Actuator LM80-H

## 12 and 24 Vdc - load up to 2000 N



### Standard Features and Benefits

- Rodless actuator for horizontal operation
- For use in domestic, office or medical applications
- Rigid self supporting extruded aluminum profile
- Durable and corrosion free
- Lightweight and quiet operation
- Safety nut on ball screw versions
- Easy and fast T-slot mounting
- Maintenance free

### General Specifications

Parameter	LM80-H
Screw type	trapezoidal or ball
Internally restrained	yes
Manual override	no
Dynamic braking	no
Holding brake	no
End of stroke protection	spring loaded soft stop
Mid stroke protection	no
Motor protection	no
Motor connection with motor enclosure no motor enclosure	cable no cable, clips on motor
Motor connector with motor enclosure no motor enclosure	DIN 41524 8 pin plug clips on motor
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• no motor enclosure</li> <li>• manual override</li> <li>• alternative motor positions</li> <li>• stroke over 1500 mm*</li> <li>• encoder *</li> </ul>

\* Contact customer support

» Ordering Key - see page 70

» Glossary - see page 72

» Electric Wiring Diagram - see page 45

### Performance Specifications

Parameter		LM80-H
Maximum load (Fb)	[N]	2000
Maximum load torque (Mb)	[Nm]	
DT••-T68M ••••• H		250
DT••-B61M ••••• H		400
DT••-B62M ••••• H		180
DT••-B65M ••••• H		750
Speed, at no load / at maximum load	[mm/s]	
DT••-T68M ••••• H		44 / 37
DT••-B61M ••••• H		55 / 50
DT12 -B62M ••••• H		110 / 73
DT24 -B62M ••••• H		110 / 87
DT••-B65M ••••• H		28 / 28
Available input voltages	[Vdc]	12, 24
Standard stroke lengths	[mm]	500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500
Operating temperature limits	[°C]	0 – +40
Full load duty cycle @ 20 °C	[%]	15
Maximum on time	[s]	120
End play, maximum	[mm]	1,0
Restraining torque	[Nm]	0
Lead cross section with / without motor enclosure	[mm <sup>2</sup> ]	1,5 / –
Cable length with / without motor enclosure	[mm]	2000 / –
Protection class with / without motor enclosure		IP44 / IP33

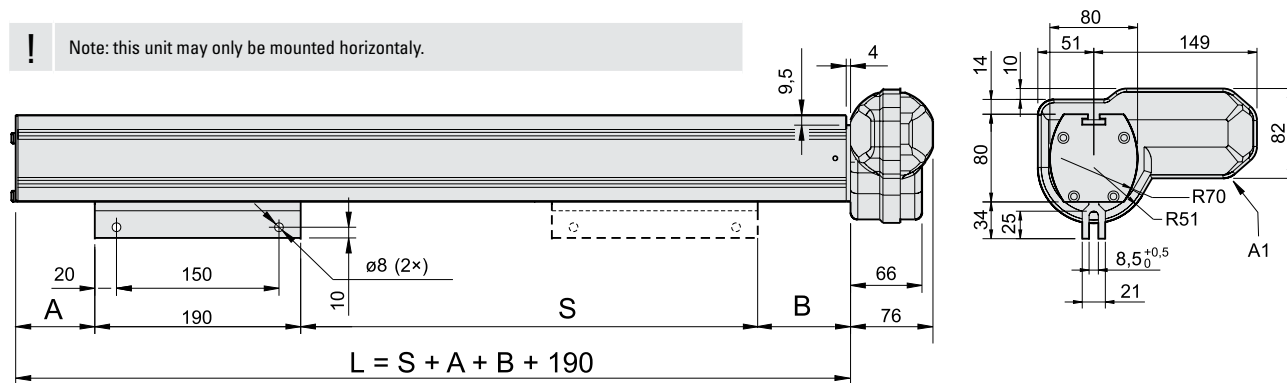
### Compatible Controls

Control model	See page
DPDT switch	48
DPDT switch box	49
DCG-170	54
AC-247 ELS	52

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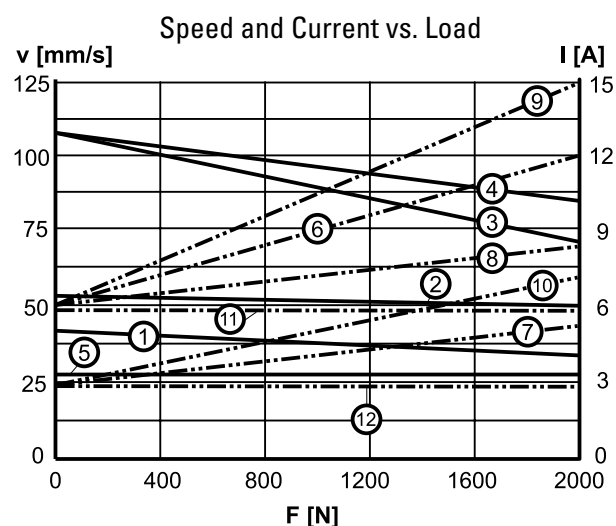
**!** Note: this unit may only be mounted horizontally.



S: stroke  
L: length of profile  
A1: motor shown in position A (standard position)

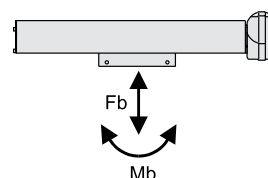
Stroke (S)	[mm]	500	600	700	800	900	1000	1100	1200	1300	1400	1500
<b>Dimensions (A) / (B)</b>	[mm]											
DT••-T68M ••••• H		54,0 / 77,0										
DT••-B61M ••••• H		102,0 / 77,0										
DT••-B62M ••••• H		102,0 / 77,0										
DT••-B65M ••••• H		79,0 / 77,0										
<b>Weight</b>	[kg]											
DT••-T68M ••••• H		11,2	13,1	14,8	16,6	18,1	20,2	22,0	23,8	25,5	27,4	29,1
DT••-B61M ••••• H		12,1	13,9	15,7	17,5	19,3	21,0	22,9	24,6	26,3	28,2	30,0
DT••-B62M ••••• H		12,1	13,9	15,7	17,5	19,3	21,0	22,9	24,6	26,3	28,2	30,0
DT••-B65M ••••• H		11,7	13,5	15,3	17,1	18,9	20,6	22,4	24,2	26,0	27,8	29,6

## Performance Diagrams

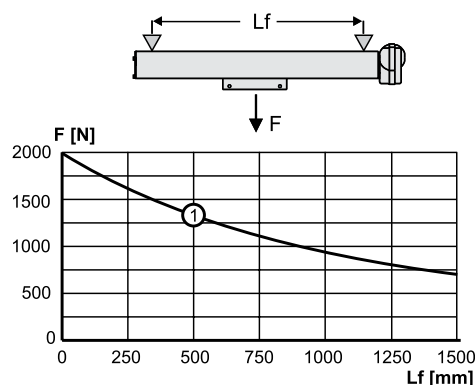


- V: speed I: current F: load
- 1: speed DT••-T68M ••••• H
  - 2: speed DT••-B61M ••••• H
  - 3: speed DT12-B62M ••••• H
  - 4: speed DT24-B62M ••••• H
  - 5: speed DT••-B65M ••••• H
  - 6: current DT12-T68M ••••• H
  - 7: current DT24-T68M ••••• H and DT24-B61M ••••• H
  - 8: current DT12-B61M ••••• H
  - 9: current DT12-B62M ••••• H
  - 10: current DT24-B62M ••••• H
  - 11: current DT12-B65M ••••• H
  - 12: current DT24-B65M ••••• H

## Definition of Forces



## Deflection of Profile



F: load Lf: distance between mounting points  
1: maximum allowed deflection

# Rodless Actuator LM80-V

## 12 and 24 Vdc - load up to 2000 N



» Ordering Key - see page 70

» Glossary - see page 72

» Electric Wiring Diagram - see page 45

### Standard Features and Benefits

- Rodless actuator for vertical operation with motor down
- For use in domestic, office or medical applications
- Rigid self supporting extruded aluminum profile
- Durable and corrosion free
- Holding brake prevents downward motion at power off
- Lightweight and quiet operation
- Safety nut on ball screw versions
- Easy and fast T-slot mounting
- Optional spline safety function
- Maintenance free

### General Specifications

Parameter	LM80-V
Screw type	trapezoidal or ball
Internally restrained	yes
Manual override	no
Dynamic braking	no
Holding brake	yes
End of stroke protection	spring loaded soft stop
Mid stroke protection	no
Motor protection	no
Motor connection with motor enclosure no motor enclosure	cable no cable, clips on motor
Motor connector with motor enclosure no motor enclosure	DIN 41524 8 pin plug clips on motor
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• no motor enclosure</li> <li>• manual override</li> <li>• alternative motor positions</li> <li>• spline safety function</li> <li>• stroke over 1500 mm*</li> <li>• encoder *</li> </ul>

\* Contact customer support

### Performance Specifications

Parameter	LM80-V
Maximum load (Fa) [N]	
DT••-T68M ••••• V(F)	650
DT••-B61M ••••• V(F)	1000
DT••-B62M ••••• V(F)	450
DT••-B65M ••••• V(F)	2000
Maximum load torque (Ma) [Nm]	
DT••-T68M ••••• V(F)	250
DT••-B61M ••~•• V(F)	400
DT••-B62M ••~•• V(F)	180
DT••-B65M ••~•• V(F)	750
Speed, at no load / at maximum load [mm/s]	
DT12 -T68M ••~•• V(F)	44 / 29
DT24 -T68M ••~•• V(F)	44 / 35
DT12 -B61M ••~•• V(F)	55 / 37
DT24 -B61M ••~•• V(F)	55 / 43
DT12 -B62M ••~•• V(F)	110 / 67
DT24 -B62M ••~•• V(F)	110 / 83
DT12 -B65M ••~•• V(F)	28 / 19
DT24 -B65M ••~•• V(F)	28 / 22
Available input voltages [Vdc]	12, 24
Standard stroke lengths [mm]	500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500
Operating temperature limits [°C]	0 – +40
Full load duty cycle @ 20 °C [%]	15
Maximum on time [s]	120
Restraining torque [Nm]	0
Lead cross section [mm <sup>2</sup> ] with / without motor enclosure	1,5 / –
Cable length [mm] with / without motor enclosure	2000 / –
Protection class with / without motor enclosure	IP44 / IP33

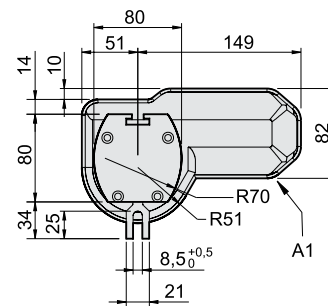
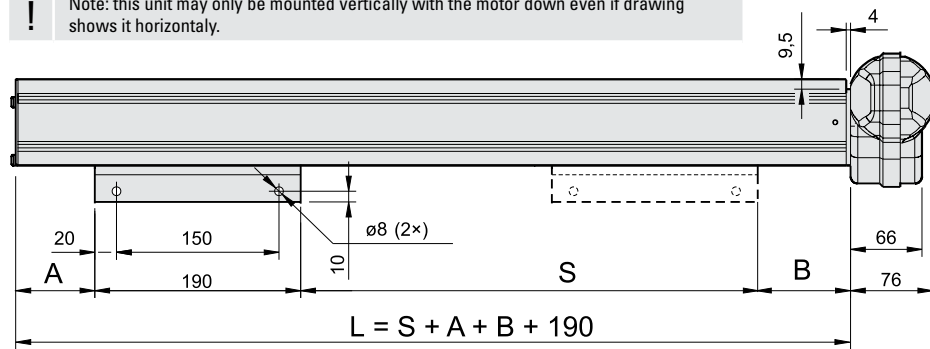
### Compatible Controls

Control model	See page
DPDT switch	48
DPDT switch box	49
DCG-160	54
AC-247 ELS	52

# Rodless Actuator LM80-V

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**!** Note: this unit may only be mounted vertically with the motor down even if drawing shows it horizontally.



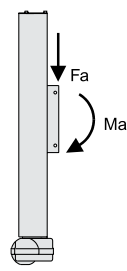
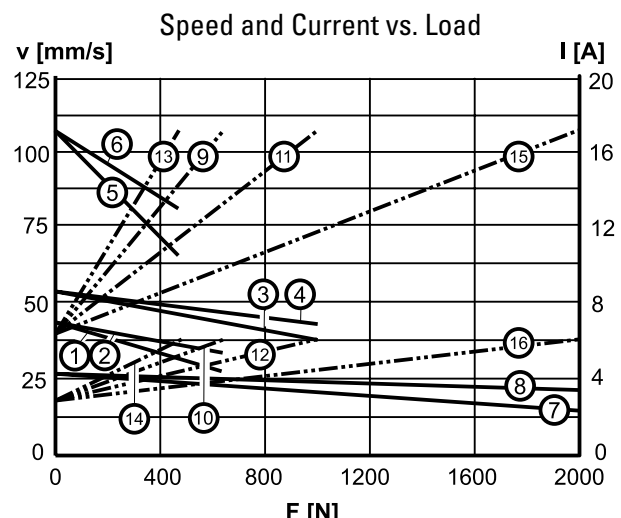
S: stroke  
L: length of profile  
A1: motor shown in position A (standard position)

Stroke (S)	[mm]	500	600	700	800	900	1000	1100	1200	1300	1400	1500
<b>Dimensions (A) / (B)</b>												
DT••-T68M•••••V		50,0 / 71,0										
DT••-B61M•••••V		53,0 / 120,0										
DT••-B62M•••••V		53,0 / 120,0										
DT••-B65M•••••V		53,0 / 97,0										
DT••-T68M•••••F		50,0 / 90,0										
DT••-B61M•••••F		53,0 / 144,0										
DT••-B62M•••••F		53,0 / 144,0										
DT••-B65M•••••F		53,0 / 126,0										
<b>Weight*</b>												
DT••-T68M•••••V		11,1	12,9	14,7	16,5	18,2	20,0	21,8	23,6	25,4	27,2	28,9
DT••-B61M•••••V		11,6	13,4	15,2	17,0	18,7	20,5	22,3	24,1	25,9	27,7	29,5
DT••-B62M•••••V		11,6	13,4	15,2	17,0	18,7	20,5	22,3	24,1	25,9	27,7	29,5
DT••-B65M•••••V		12,0	13,8	15,6	17,6	19,3	21,1	22,9	24,7	26,5	28,2	30,1

\* Add 0,5 kg to the below weights to get the weights for DT••-T68M•••••F, DT••-B61M•••••F, DT••-B62M•••••F and DT••-B65M•••••F.

## Performance Diagrams

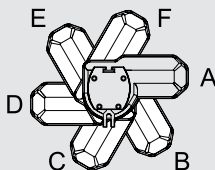
## Definition of Forces



- V: speed I: current F: load
- 1: speed DT12-T68M•••••V(F)
  - 2: speed DT24-T68M•••••V(F)
  - 3: speed DT12-B61M•••••V(F)
  - 4: speed DT24-B61M•••••V(F)
  - 5: speed DT12-B62M•••••V(F)
  - 6: speed DT24-B62M•••••V(F)
  - 7: speed DT12-B65M•••••V(F)
  - 8: speed DT24-B65M•••••V(F)
  - 9: current DT12-T68M•••••V(F)
  - 10: current DT24-T68M•••••V(F)
  - 11: current DT12-B61M•••••V(F)
  - 12: current DT24-B61M•••••V(F)
  - 13: current DT12-B62M•••••V(F)
  - 14: current DT24-B62M•••••V(F)
  - 15: current DT12-B65M•••••V(F)
  - 16: current DT24-B65M•••••V(F)

# Ordering Keys

## Rodless Actuators

LM80-H						
1	2	3	4	5	6	7
DT24 -	B62M -	140	A	C	H	X
<b>1. Model and input voltage</b> DT12 - = LM80, 12 Vdc DT24 - = LM80, 24 Vdc  <b>2. Load torque capacity and screw type</b> T68M - = 250 Nm, trapezoidal B61M - = 400 Nm, ball B62M - = 180 Nm, ball B65M - = 750 Nm, ball		<b>3. Stroke</b> 050 = 500 mm 060 = 600 mm 070 = 700 mm 080 = 800 mm 090 = 900 mm 100 = 1000 mm 110 = 1100 mm 120 = 1200 mm 130 = 1300 mm 140 = 1400 mm 150 = 1500 mm	<b>4. Motor position</b> A = 0° (standard) B = 60° C = 120° D = 180° E = 240° F = 300°  <b>5. Motor enclosure</b> C = with enclosure (IP44) U = no enclosure (IP33)  <b>6. Mounting position</b> H = horizontal  <b>7. Options</b> X = no option H = manual override			

LM80-V						
1	2	3	4	5	6	7
DT24 -	B62M -	140	A	C	V	X
<b>1. Model and input voltage</b> DT12 - = LM80, 12 Vdc DT24 - = LM80, 24 Vdc  <b>2. Load torque capacity and screw type</b> T68M - = 250 Nm, trapezoidal B61M - = 400 Nm, ball B62M - = 180 Nm, ball B65M - = 750 Nm, ball		<b>3. Stroke</b> 050 = 500 mm 060 = 600 mm 070 = 700 mm 080 = 800 mm 090 = 900 mm 100 = 1000 mm 110 = 1100 mm 120 = 1200 mm 130 = 1300 mm 140 = 1400 mm 150 = 1500 mm	<b>4. Motor position</b> A = 0° (standard) B = 60° C = 120° D = 180° E = 240° F = 300°  <b>5. Motor enclosure</b> C = with enclosure (IP44) U = no enclosure (IP33)  <b>6. Mounting position and spline safety function</b> V = vertical with motor down, no spline safety function F = vertical with motor down, with spline safety function  <b>7. Options</b> X = no option H = manual override			