



# L-Series Rodless Pneumatic Cylinders

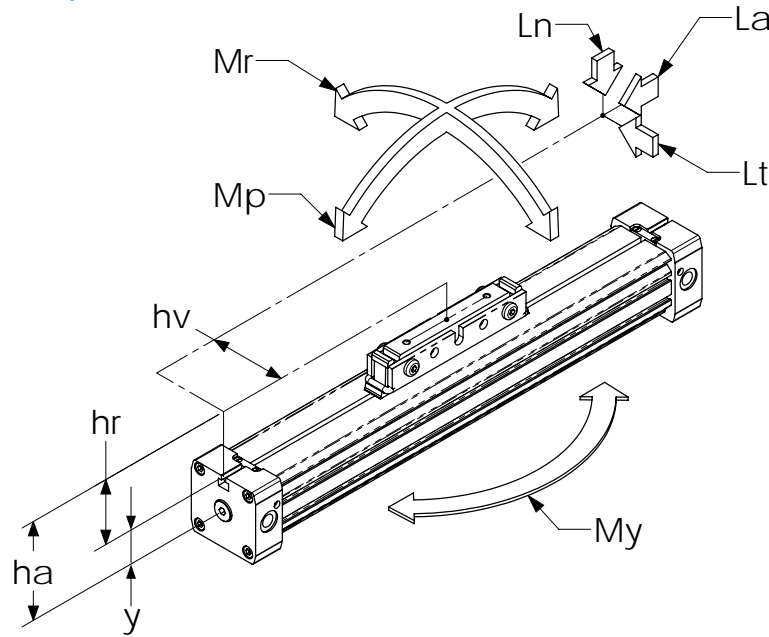


NITRA L-Series Rodless Cylinders offer a robust design in a compact package. Rodless cylinders can offer the same stroke as rodded cylinders in a smaller space. All sizes have magnetic pistons and are double acting. Mounting brackets and cylinder position switches are sold separately.

## Features

- Rodless cylinder design
- Double acting with magnetic piston
- Front and rear adjustable cushions
- Tapped end caps mount
- 16mm to 40mm bore sizes available
- 100mm to 1000mm stroke lengths available
- Operating pressure: 1 to 8 bar (14.5 to 116 psi)
- Temperature range: -10 to +80°C (14 to 176°F)
- 2-year warranty

## Torque Information



NITRA L-Series Rodless Pneumatic Cylinder Force and Torque Information							
Bore	Center Distance Y	Actual Force F at 6 bar [N]	Cushioning Stroke [mm]	Max. Load Ln [N]	Mp Max [Nm]	Mr Max [Nm]	My Max [Nm]
16	9	110	15	120	4	0.3	0.5
25	14	250	21	300	15	1	3
32	18	420	26	450	30	2	4
40	22	640	32	750	60	4	8

**Note:** When the cylinder is subjected simultaneously to torque and force, use the following equations, where the lengths have to be given in meters.

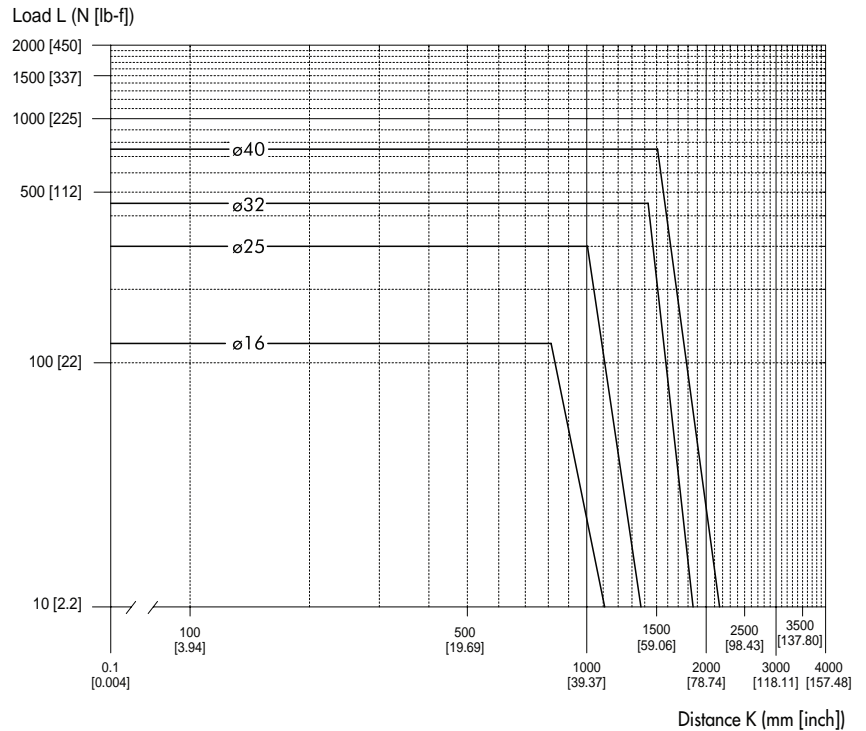
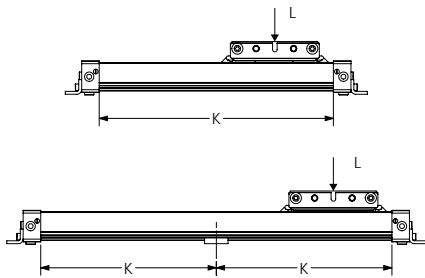
$$M_p = F \times h_a \quad M_r = L \times h_v + L_t \times h_r \quad M_y = F \times h_v$$

$$\frac{M_y}{M_{y \max}} \leq 1; \quad \frac{L_n}{L_{n \max}} \leq 1; \quad \frac{M_p}{M_{p \max}} + \frac{M_r}{M_{r \max}} + 0.22 \times \frac{M_y}{M_{y \max}} + 0.4 \frac{L_n}{L_{n \max}} \leq 1$$



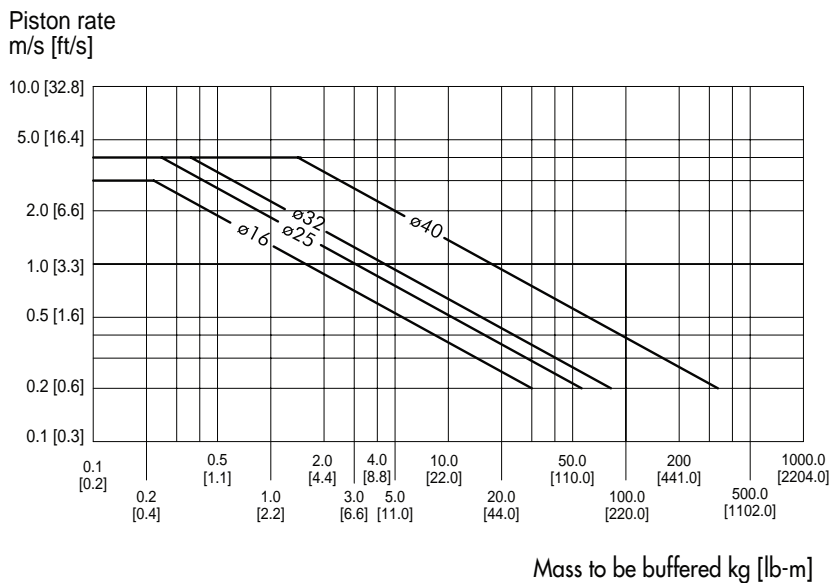
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## Load Information



## Speed and Maximum Cushionable Load

For the cylinder to reach the end-of-stroke position without intense or repeated impact which would damage it, it is necessary to annul the kinetic energy of the moving mass and the work generated. The maximum cushionable load depends on the traversing speed and the absorption of the air buffer supplied standard with the various cylinders. The diagram shows the speeds and cushionable mass for the various diameters at a pressure of 6 bar (87psi).





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NITRA L-Series Rodless Pneumatic Cylinder Selection				
Part No.	Bore (mm)	Stroke (mm)	Weight (lbs)	Price
L16M0100MD-MC	16	100	1.84	\$215.00
L16M0200MD-MC		200	1.88	\$225.00
L16M0300MD-MC		300	2.68	\$230.00
L16M0400MD-MC		400	2.69	\$235.00
L16M0500MD-MC		500	2.71	\$240.00
L16M0600MD-MC		600	4.08	\$249.00
L16M0800MD-MC		800	4.11	\$255.00
L25M0200MD-MC	25	200	4.46	\$266.00
L25M0300MD-MC		300	4.64	\$272.00
L25M0400MD-MC		400	5.33	\$283.00
L25M0500MD-MC		500	6.2	\$289.00
L25M0600MD-MC		600	6.37	\$299.00
L25M0800MD-MC		800	7.42	\$306.00
L25M1000MD-MC		1000	8.45	\$314.00
L32M0200MD-MC	32	200	7.24	\$315.00
L32M0300MD-MC		300	7.74	\$323.00
L32M0400MD-MC		400	8.14	\$334.00
L32M0500MD-MC		500	9.96	\$354.00
L32M0600MD-MC		600	10.44	\$360.00
L32M0800MD-MC		800	12.16	\$374.00
L32M1000MD-MC		1000	13.56	\$382.00
L40M0200MD-MC	40	200	10.19	\$341.00
L40M0300MD-MC		300	10.75	\$361.00
L40M0400MD-MC		400	12.01	\$371.00
L40M0500MD-MC		500	14.36	\$393.00
L40M0600MD-MC		600	14.94	\$400.00
L40M0800MD-MC		800	17.44	\$431.00
L40M1000MD-MC		1000	19.44	\$460.00

Click on the thumbnail or go to  
<https://www.automationdirect.com/VID-PN-0045>  
 for a short video on NITRA Rodless Cylinders.

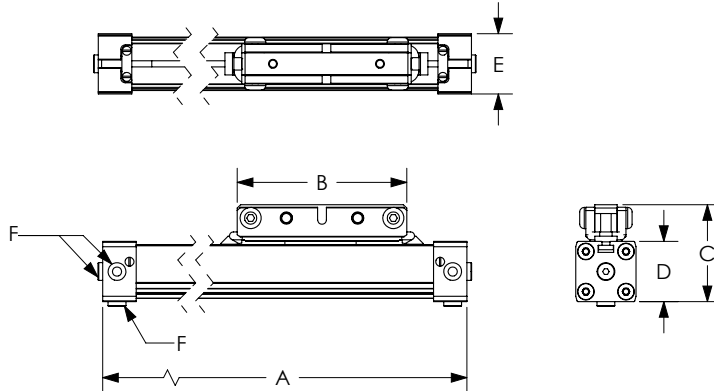




# L-Series Rodless Pneumatic Cylinders

## Dimensions

inches [mm]





L-Series Rodless Pneumatic Cylinder Dimensions											
Model	A		B		C		D		E		F
	mm	[inches]	mm	[inches]	mm	[inches]	mm	[inches]	mm	[inches]	G (BSPP)
L16M0100MD-MC	230.0	9.06	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L16M0200MD-MC	330.0	12.99	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L16M0300MD-MC	430.0	16.93	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L16M0400MD-MC	530.0	20.87	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L16M0500MD-MC	630.0	24.80	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L16M0600MD-MC	730.0	28.74	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L16M0800MD-MC	930.0	36.61	76.0	2.99	43.5	1.71	27.0	1.06	27.0	1.06	M5
L25M0200MD-MC	400.0	15.75	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L25M0300MD-MC	500.0	19.69	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L25M0400MD-MC	600.0	23.62	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L25M0500MD-MC	700.0	27.56	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L25M0600MD-MC	800.0	31.50	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L25M0800MD-MC	1000.0	39.37	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L25M1000MD-MC	1200.0	47.24	120.0	4.72	66.0	2.60	40.0	1.57	40.0	1.57	1/8
L32M0200MD-MC	450.0	17.72	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L32M0300MD-MC	550.0	21.65	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L32M0400MD-MC	650.0	25.59	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L32M0500MD-MC	750.0	29.53	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L32M0600MD-MC	850.0	33.46	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L32M0800MD-MC	1050.0	41.34	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L32M1000MD-MC	1250.0	49.21	150.0	5.91	86.0	3.39	56.0	2.20	42.0	1.65	1/4
L40M0200MD-MC	500.0	19.69	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4
L40M0300MD-MC	600.0	23.62	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4
L40M0400MD-MC	700.0	27.56	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4
L40M0500MD-MC	800.0	31.50	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4
L40M0600MD-MC	900.0	35.43	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4
L40M0800MD-MC	1100.0	43.31	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4
L40M1000MD-MC	1300.0	51.18	150.0	5.91	97.0	3.82	69.0	2.72	72.0	2.83	1/4

See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings



# L-Series Rodless Pneumatic Cylinder Accessories

NITRA L-Series accessories include end mounting brackets and center support brackets for longer cylinders. Refer to load chart in this section to determine if a center support is required. Sensor clamp brackets are required for 16mm and 25mm bore cylinders.

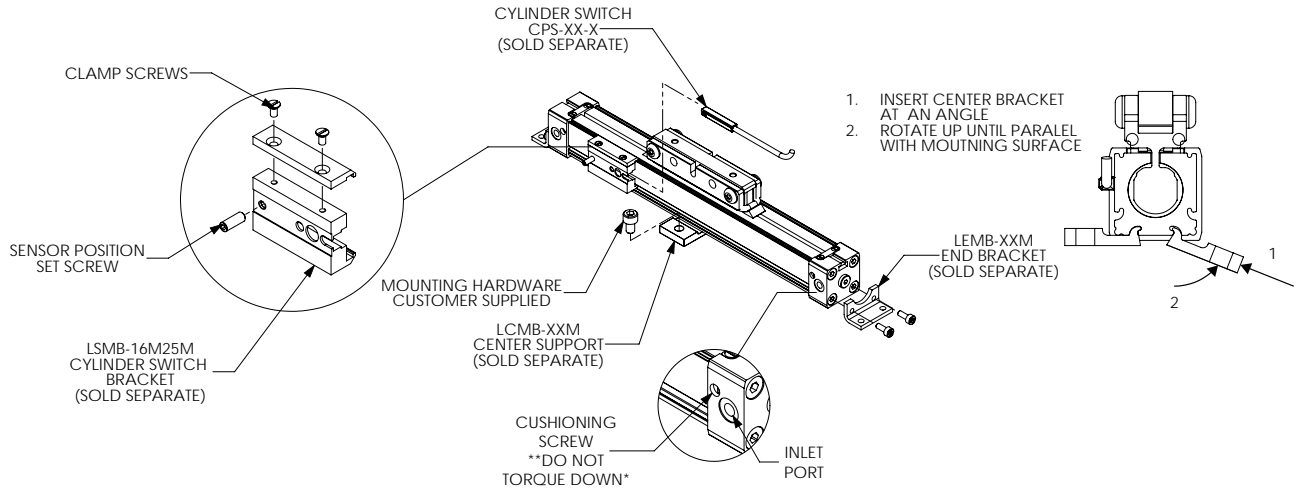
NITRA L-Series Rodless Pneumatic Cylinder Accessories				
Item	Part No.	Description	Weight (lbs)	Price
	<b>LEMB-16M</b>	NITRA mounting bracket, end, stainless steel. For use with L16M series rodless cylinders. Mounting screws included.	0.03	\$4.75
	<b>LEMB-25M</b>	NITRA mounting bracket, end, stainless steel. For use with L25M series rodless cylinders. Mounting screws included.	0.07	\$5.25
	<b>LEMB-32M</b>	NITRA mounting bracket, end, aluminum. For use with L32M series rodless cylinders. Mounting screws included.	0.2	\$19.00
	<b>LEMB-40M</b>	NITRA mounting bracket, end, aluminum. For use with L40M series rodless cylinders. Mounting screws included.	0.25	\$26.50
	<b>LCMB-16M</b>	NITRA mounting bracket, center, aluminum. For use with L16M series rodless cylinders.	0.02	\$11.50
	<b>LCMB-25M</b>	NITRA mounting bracket, center, aluminum. For use with L25M series rodless cylinders.	0.02	\$12.50
	<b>LCMB-32M</b>	NITRA mounting bracket, center, aluminum. For use with L32M series rodless cylinders. Mounting screws included.	0.16	\$26.00
	<b>LCMB-40M</b>	NITRA mounting bracket, center, aluminum. For use with L40M series rodless cylinders. Mounting screws included.	0.23	\$27.00
	<b>LSMB-16M25M</b>	NITRA mounting bracket, switch, aluminum. For use with L16M and L25M series rodless cylinders. Mounting screws included.	0.03	\$11.00

See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings



# L-Series Rodless Pneumatic Cylinder Accessories

## Mounting guidelines for 16mm and 25mm bore cylinders



## Mounting guidelines for 32mm and 40mm bore cylinders

