



# H-Series 12mm Pneumatic Cylinders

## 12mm Bore, Double Acting with Magnet



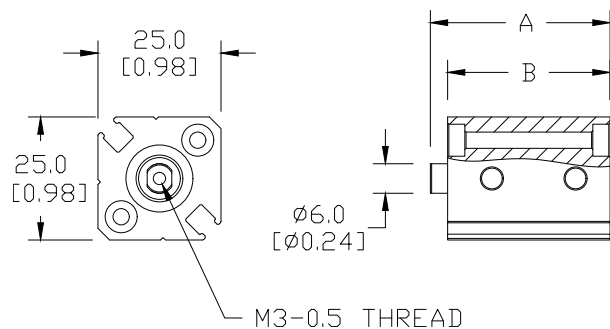
Part No. H12M005MD-M

12mm Bore H-Series Cylinders - Double Acting w/ Magnet						
Part Number	Stroke Length (mm)	"A" (mm [in])	"B" (mm [in])	Port Size	Weight (lbs)	Price
<a href="#"><u>H12M005MD-M</u></a>	5	36.5 [1.44]	33.0 [1.30]	M5x0.8	0.1	\$;10!9:
<a href="#"><u>H12M010MD-M</u></a>	10	41.5 [1.63]	38.0 [1.50]		0.2	\$;10!a:
<a href="#"><u>H12M015MD-M</u></a>	15	46.5 [1.83]	43.0 [1.69]		0.2	\$;10!b:
<a href="#"><u>H12M020MD-M</u></a>	20	51.5 [2.03]	48.0 [1.89]		0.2	\$;10!c:
<a href="#"><u>H12M025MD-M</u></a>	25	56.5 [2.22]	53.0 [2.09]		0.2	\$;10!d:
<a href="#"><u>H12M030MD-M</u></a>	30	61.5 [2.42]	58.0 [2.28]		0.2	\$;10!e:
<a href="#"><u>H12M040MD-M</u></a>	40	71.5 [2.81]	68.0 [2.68]		0.3	\$;,:10!f:
<a href="#"><u>H12M050MD-M</u></a>	50	81.5 [3.21]	78.0 [3.07]		0.7	\$;10!g:

Mounting Accessories	
<i>Rod Clevis</i>	<u><i>HRC-12M</i></u>
<i>Rod Male Adapter</i>	<u><i>HMA-12M</i></u>
<i>Female Rear Clevis</i>	<u><i>HFC-12M</i></u>

**Note:** For full details see Accessories at the end of the section.

## Dimensions

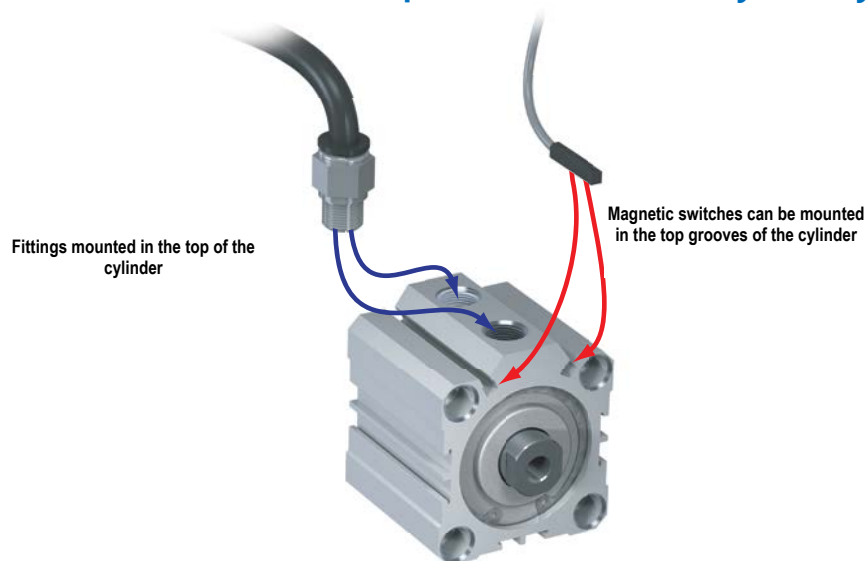
**mm [inches]**

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



# H-Series Pneumatic Cylinders

## NITRA Pneumatic Compact Extruded Body Air Cylinders



Click on the thumbnail or go to <https://www.automationdirect.com/VID-PN-0052> for a short video on pneumatic cylinder selection and purchasing.

The NITRA Pneumatics H-Series compact extruded body cylinders includes bore sizes from 12mm to 100mm and stroke lengths from 5mm to 100mm to meet a broad range of limited space applications. These high quality cylinders are constructed with hard anodized extruded aluminum bodies and end caps. Cylinder switch

mounting slots are built in to the bodies. All sizes include a magnet in the piston and a chrome plated steel piston rod. Interchangeable with other common brands, these cylinders are factory lubricated for optimum performance and long, reliable life.

### Features

- Ten bore sizes
- Eight stroke lengths
- Interchangeable with other popular brands
- Work with 4mm square T-slot cylinder switches
- Nitrile / Buna-N O-rings



Click the icon or scan the QR code to be taken to [https://www.automationdirect.com/pneumatics/cylinders/cylinder\\_sizing](https://www.automationdirect.com/pneumatics/cylinders/cylinder_sizing) for additional information regarding cylinder sizing & force.

### H-Series Cylinder Specifications

Bore Size (mm)	12	16	20	25	32	40	50	63	80	100
Action	Double acting									
Fluid	Air (clean/dry)									
Temperature Range	-4 to 176°F (-20 to 80°C)									
Pressure Range	14 to 145 psi (0.96 to 9.9 bar)									
Proof Pressure	215psi (14.8 bar)									
Lubrication	Not required									
Cushion Type	Bumper - Polyurethane (ø12 - ø25); Buna-N (ø32 - ø100)									
Speed Range	30 to 500 mm/s									
Stroke Tolerance	+1.0 / -0 mm									
Port Size	M5x0.8				1/8-NPT		1/4-NPT		3/8-NPT	
Extend Force @ 87psi (lbs.)	15	27	42	66	108	169	264	420	678	1059
Retract Force @ 87psi (lbs.)	11	20	32	51	81	142	222	378	611	950
Sensor Switch Compatibility	CPS9H Series Switches									



# H-Series Pneumatic Cylinder Accessories

H-Series Pneumatic Cylinder Accessories				
Part Number	Description	Pcs/Pkg	Wt (lb)	Price
<a href="#"><u>HRC-12M</u></a>	NITRA cylinder rod clevis, plated steel, M5 x 0.8 thread. For use with 12 mm H-series cylinders. Male adapter and hex nut included.	1	0.1	\$112n:
<a href="#"><u>HRC-16M</u></a>	NITRA cylinder rod clevis, plated steel, M6 x 1.0 thread. For use with 16 mm H-series cylinders. Male adapter and hex nut included.	1	0.1	\$112o:
<a href="#"><u>HRC-20M</u></a>	NITRA cylinder rod clevis, plated steel, M8 x 1.25 thread. For use with 20 mm H-series cylinders. Male adapter and hex nut included.	1	0.1	\$112p:
<a href="#"><u>HRC-25M</u></a>	NITRA cylinder rod clevis, plated steel, M10 x 1.25 thread. For use with 25 mm H-series cylinders. Male adapter and hex nut included.	1	0.2	\$112q:
<a href="#"><u>HRC-32M</u></a>	NITRA cylinder rod clevis, cast iron, M14 x 1.5 thread. For use with 32 mm H-series cylinders. Male adapter and hex nut included.	1	0.3	\$112s:
<a href="#"><u>HRC-40M</u></a>	NITRA cylinder rod clevis, cast iron, M14 x 1.5 thread. For use with 40 mm H-series cylinders. Male adapter and hex nut included.	1	0.3	\$112t:
<a href="#"><u>HRC-50M</u></a>	NITRA cylinder rod clevis, cast iron, M18 x 1.5 thread. For use with 50 mm H-series cylinders. Male adapter and hex nut included.	1	0.6	\$112u:
<a href="#"><u>HRC-63M</u></a>	NITRA cylinder rod clevis, cast iron, M18 x 1.5 thread. For use with 63 mm H-series cylinders. Male adapter and hex nut included.	1	0.6	\$112v:
<a href="#"><u>HRC-80M</u></a>	NITRA cylinder rod clevis, cast iron, M22 x 1.5 thread. For use with 80 mm H-series cylinders. Male adapter and hex nut included.	1	1.5	\$112x:
<a href="#"><u>HRC-100M</u></a>	NITRA cylinder rod clevis, cast iron, M26 x 1.5 thread. For use with 100 mm H-series cylinders. Male adapter and hex nut included.	1	2.0	\$112y:
<a href="#"><u>HMA-12M</u></a>	NITRA cylinder male adapter, stainless steel, M5 x 0.8 thread. For use with 12 mm H-series cylinders. Hex nut included.	1	0.1	\$112z:
<a href="#"><u>HMA-16M</u></a>	NITRA cylinder male adapter, stainless steel, M6 x 1.0 thread. For use with 16 mm H-series cylinders. Hex nut included.	1	0.1	\$112j:
<a href="#"><u>HMA-20M</u></a>	NITRA cylinder male adapter, stainless steel, M8 x 1.25 thread. For use with 20 mm H-series cylinders. Hex nut included.	1	0.1	\$112k:
<a href="#"><u>HMA-25M</u></a>	NITRA cylinder male adapter, stainless steel, M10 x 1.25 thread. For use with 25 mm H-series cylinders. Hex nut included.	1	0.1	\$112l:
<a href="#"><u>HMA-32M</u></a>	NITRA cylinder male adapter, stainless steel, M14 x 1.5 thread. For use with 32 mm H-series cylinders. Hex nut included.	1	0.1	\$112m:
<a href="#"><u>HMA-40M</u></a>	NITRA cylinder male adapter, stainless steel, M14 x 1.5 thread. For use with 40 mm H-series cylinders. Hex nut included.	1	0.1	\$112n:
<a href="#"><u>HMA-50M</u></a>	NITRA cylinder male adapter, stainless steel, M18 x 1.5 thread. For use with 50 mm H-series cylinders. Hex nut included.	1	0.2	\$112o:
<a href="#"><u>HMA-63M</u></a>	NITRA cylinder male adapter, stainless steel, M18 x 1.5 thread. For use with 63 mm H-series cylinders. Hex nut included.	1	0.2	\$112p:
<a href="#"><u>HMA-80M</u></a>	NITRA cylinder male adapter, stainless steel, M22 x 1.5 thread. For use with 80 mm H-series cylinders. Hex nut included.	1	0.4	\$1130:
<a href="#"><u>HMA-100M</u></a>	NITRA cylinder male adapter, stainless steel, M26 x 1.5 thread. For use with 100 mm H-series cylinders. Hex nut included.	1	0.5	\$1131:
<a href="#"><u>HFC-12M</u></a>	NITRA cylinder rear clevis bracket, aluminum. For use with 12 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.1	\$1133:
<a href="#"><u>HFC-16M</u></a>	NITRA cylinder rear clevis bracket, aluminum. For use with 16 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.1	\$1134:
<a href="#"><u>HFC-20M</u></a>	NITRA cylinder rear clevis bracket, aluminum. For use with 20 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.2	\$1135:
<a href="#"><u>HFC-25M</u></a>	NITRA cylinder rear clevis bracket, aluminum. For use with 25 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.2	\$1136:
<a href="#"><u>HFC-32M</u></a>	NITRA cylinder rear clevis bracket, cast iron. For use with 32 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.4	\$1137:
<a href="#"><u>HFC-40M</u></a>	NITRA cylinder rear clevis bracket, cast iron. For use with 40 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.4	\$1138:
<a href="#"><u>HFC-50M</u></a>	NITRA cylinder rear clevis bracket, cast iron. For use with 50 mm H-series cylinders. Mounting hardware and pivot pin included.	1	0.8	\$1139:
<a href="#"><u>HFC-63M</u></a>	NITRA cylinder rear clevis bracket, cast iron. For use with 63 mm H-series cylinders. Mounting hardware and pivot pin included.	1	1.3	\$113a:
<a href="#"><u>HFC-80M</u></a>	NITRA cylinder rear clevis bracket, cast iron. For use with 80 mm H-series cylinders. Mounting hardware and pivot pin included.	1	2.3	\$113b:
<a href="#"><u>HFC-100M</u></a>	NITRA cylinder rear clevis bracket, cast iron. For use with 100 mm H-series cylinders. Mounting hardware and pivot pin included.	1	3.8	\$113c:



# H-Series Pneumatic Cylinder Accessories

## Rod Clevis

Part no. [HRC-20M](#)Part no. [HRC-32M](#)

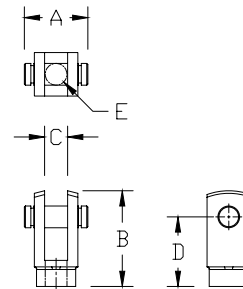
Note: Comes with Pivot Pin installed. Includes Rod Male Adapter (see below)

### Rod Clevis Dimension Table

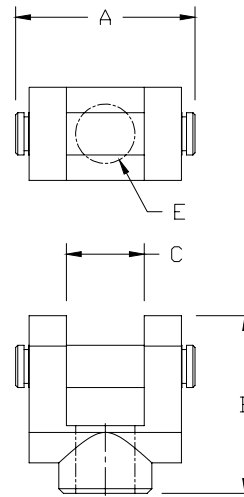
Part #	A	B	C	D	E
<a href="#">HRC-12M</a>	14.6 [0.57]	22.0 [0.87]	5.3 [0.21]	16.0 [0.63]	M5x0.8
<a href="#">HRC-16M</a>	16.8 [0.66]	28.0 [1.10]	6.6 [0.26]	21.0 [0.83]	M6x1.0
<a href="#">HRC-20M</a>	21.0 [0.83]	34.0 [1.34]	8.3 [0.33]	25.0 [0.98]	M8x1.25
<a href="#">HRC-25M</a>	26.4 [1.04]	41.0 [1.61]	10.3 [0.41]	30.0 [1.18]	M10x1.5
<a href="#">HRC-32M</a>	42.4 [1.67]	42.0 [1.65]	18.4 [0.72]	30.0 [1.18]	M14x1.5
<a href="#">HRC-40M</a>	42.4 [1.67]	42.0 [1.65]	18.4 [0.72]	30.0 [1.18]	M14x1.5
<a href="#">HRC-50M</a>	50.4 [1.98]	56.0 [2.20]	22.4 [0.88]	40.0 [1.57]	M18x1.5
<a href="#">HRC-63M</a>	50.4 [1.98]	56.0 [2.20]	22.4 [0.88]	40.0 [1.57]	M18x1.5
<a href="#">HRC-80M</a>	63.6 [2.50]	71.0 [2.80]	28.4 [1.12]	50.0 [1.97]	M22x1.5
<a href="#">HRC-100M</a>	72.6 [2.86]	79.0 [3.11]	32.4 [1.28]	55.0 [2.17]	M26x1.5

## Dimensions

mm [inches]



HRC-12M - HRC-25M



HRC-32M - HRC-100M

## Rod Male Adapter

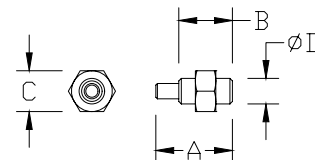
Part no. [HMA-32M](#)

### Rod Male Adapter Dimension Table

Part #	A	B	C	D
<a href="#">HMA-12M</a>	15.0 [0.59]	10.5 [0.41]	8.0 [0.31]	M5x0.8
<a href="#">HMA-16M</a>	18.0 [0.71]	12.0 [0.47]	10.0 [0.39]	M6x1.0
<a href="#">HMA-20M</a>	19.5 [0.77]	14.0 [0.55]	12.0 [0.47]	M8x1.25
<a href="#">HMA-25M</a>	26.5 [1.04]	17.5 [0.69]	17.0 [0.67]	M10x1.25
<a href="#">HMA-32M</a>	31.5 [1.24]	21.5 [0.85]	19.0 [0.75]	M14x1.5
<a href="#">HMA-40M</a>	31.5 [1.24]	21.5 [0.85]	19.0 [0.75]	M14x1.5
<a href="#">HMA-50M</a>	36.5 [1.44]	25.5 [1.00]	27.0 [1.06]	M18x1.5
<a href="#">HMA-63M</a>	36.5 [1.44]	25.5 [1.00]	27.0 [1.06]	M18x1.5
<a href="#">HMA-80M</a>	49.5 [1.95]	33.5 [1.32]	32.0 [1.26]	M22x1.5
<a href="#">HMA-100M</a>	51.5 [2.03]	31.5 [1.24]	36.0 [1.42]	M26x1.5

## Dimensions

mm [inches]



HMA-12M - HMA-100M

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



# H-Series Pneumatic Cylinder Accessories

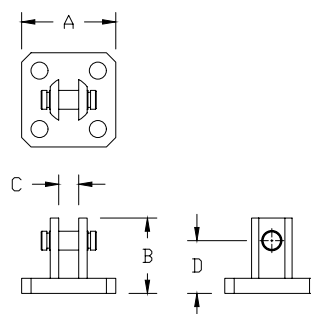
## Female Rear Clevis

Part no. HFC-20MPart no. HFC-32M

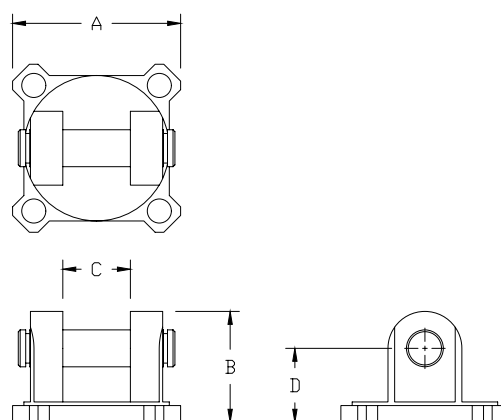
comes with Pivot Pin installed. Mount-  
ware Included.

## Dimensions

mm [inches]



HFC-12M - HFC-25M



HFC-32M - HFC-100M

Female Rear Clevis Dimension Table				
Part #	A	B	C	D
<u>HFC-12M</u>	25.0 [0.98]	20.0 [0.79]	5.3 [0.21]	14.0 [0.55]
<u>HFC-16M</u>	29.0 [1.14]	21.0 [0.83]	6.8 [0.27]	15.0 [0.59]
<u>HFC-20M</u>	36.0 [1.42]	27.0 [1.06]	8.3 [0.33]	18.0 [0.71]
<u>HFC-25M</u>	40.0 [1.57]	30.0 [1.18]	10.3 [0.41]	20.0 [0.79]
<u>HFC-32M</u>	45.5 [1.79]	30.0 [1.18]	18.3 [0.72]	20.0 [0.79]
<u>HFC-40M</u>	53.5 [2.11]	32.0 [1.26]	18.3 [0.72]	22.0 [0.87]
<u>HFC-50M</u>	64.5 [2.54]	42.0 [1.65]	22.3 [0.88]	28.0 [1.10]
<u>HFC-63M</u>	77.5 [3.05]	44.0 [1.73]	22.3 [0.88]	30.0 [1.18]
<u>HFC-80M</u>	98.5 [3.88]	56.0 [2.20]	28.3 [1.11]	38.0 [1.50]
<u>HFC-100M</u>	117.5 [4.63]	67.0 [2.64]	32.3 [1.27]	45.0 [1.77]

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



# CPS Series Cylinder Position Switches

## Position Switch Cross Reference Chart

NITRA Switch Type	Cylinder Brand (may fit some of these cylinders)	Photo Example	Groove Illustration	
<b>CPS CPSF</b>	NITRA A-Series NITRA D-Series NITRA F-Series			
<b>CPS9C</b>	DE-STA-CO Robohand SMC Compact Air Bimba Fabco			
<b>CPS9D</b>	NITRA L-Series Fabco Numatics Rotomation			
<b>CPS9E</b>	NITRA L-Series Fabco Numatics Rotomation			
<b>CPS9F</b>	NITRA G-Series Fabco Festo Numatics Rotomation			
<b>CPS9H</b>	NITRA E-Series NITRA H-Series			
<b>CPS9M</b>	Norgren			
<b>CPS9Q</b>	NITRA L-Series NITRA G-Series Parker Fabco Festo Numatics Rotomation			