

Bead Ring Style

Air Springs



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Bead Ring Style Air Springs - Overview

Enidine's large, Bead-Ring Style Air Springs are highly durable, precisely engineered and cost effective for use in a wide variety of actuation and vibration isolation applications. With time-tested designs, fabric-reinforced natural rubber flex member construction and corrosion-protected bead-ring mounting hardware, Enidine Air Springs provide superior quality and performance.

As an actuator, Enidine Air Springs provide linear or angular motion. These Air Springs offer a favorable stroke-to-compressed-height ratio when compared to air cylinders, and can accept a wide variety of actuation media such as air, water, nitrogen or anti-freeze.

As an isolator, Enidine Air Springs are effective in reducing the harmful effects of vibration. They can simultaneously isolate vibration and regulate load height, as well as allow for consistent vibration isolation under varying loads.

Enidine offers a variety of Air Spring types in addition to the large, Bead-Ring Style to meet your actuation or isolation needs. The Single, Double and Triple Convolute Bellows, Rolling Lobe and Sleeve Types are available in a wide range of sizes, with various end retainer mounting styles for your installation. Contact Enidine for further information regarding these Air Spring products.

Temperature Range Guidelines

Enidine Bead-Ring Style Air Springs are constructed of natural rubber. The standard operating temperature is from -40°F (-40°C) to 125°F (50°C). The maximum permissible operating temperature is 160°F (70°C), although when operating at this temperature, the air spring may have a reduced service life.

Storage

Enidine Air Springs should be stored in dark, dry conditions at normal room temperature.

Chemical Resistance

Enidine Air Springs are resistant to:

- Compressed air containing oil
- Chemically non-aggressive dust and contaminant's
- Alkaline and acidic cleaning agents
- Glycol-based hydraulic fluids
- The effects of weathering

Installation Guidelines

Warning:

- Before installing, check the Air Spring carefully for any damage it may have suffered from transport or improper storage.
- Do not inflate the Air Spring until it has been secured properly.
- The maximum operating air pressure is 120 psi (8 bar).
- Upper and lower bead rings are attached by bolting each to the customer's own mounting plate. Bead-Ring Air Springs are provided with 3/8 – 24 UNF X 1 7/8 long bolts. Recommended torque is 28-32 FT-LBS.
- Customer will need to fabricate their own mounting plates. Plates must be flat with a minimum surface finish of 32 Ra (micro inches).
- Fully deflate the Air Spring before removing
- Provide stroke limitations to prevent the Air Spring from exceeding the maximum allowable stroke height and minimum compressed height.
- Never use the Air Spring in torsion.

Note: Products contained in this publication are manufactured for Enidine Incorporated by ContiTech, a division of Continental AG.

The contents of this publication are the result of many years of research and experience gained in application technology. All information is given in good faith; it does not represent a guarantee with respect to characteristics and does not exempt the user from testing the suitability of products, including checking with respect to industrial property rights of any third parties. No liability whatsoever will be accepted for damage, regardless of its nature and its legal basis, arising from advice given in this publication. Products are subject to technical changes as a result of new developments.

Table of Contents

Single Convolute

YI-FS 960-12-478.....	2
YI-FS 1330-11-197.....	3
YI-FS 1710-12-727.....	4
YI-FS 2870-16-737.....	5
YI-FS 5450-16-601.....	6

Double Convolute

YI-FD 960-22-191.....	7
YI-FD 1330-25-227.....	8
YI-FD 1710-25-203.....	9
YI-FD 2380-24-772.....	10
YI-FD 2870-30-230.....	11
YI-FD 5450-28-602.....	12

Triple Convolute

YI-FT 960-34-761.....	13
YI-FT 1330-35-823.....	14
YI-FT 1710-38-324.....	15
YI-FT 2870-45-304.....	16
YI-FT 5450-44-603.....	17

Applications & Other Uses

Applications

- Paper & pulp mill equipment
- Stamping press cushions in automotive plants
- Laminate press equipment
- Large material handling equipment - Heavy Industry



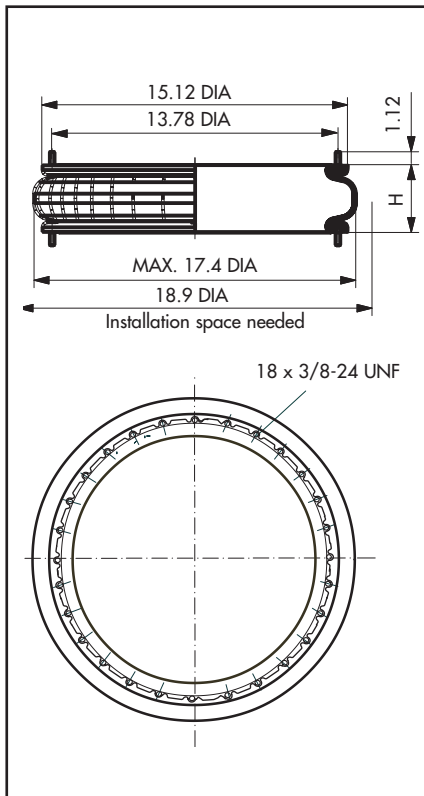
Other Uses

- Use as a protective boot or flexible coupling
- Stack multiple airsprings together for increased stroke capabilities
- Use when the application requires a rapid flow of air in and out of the air spring

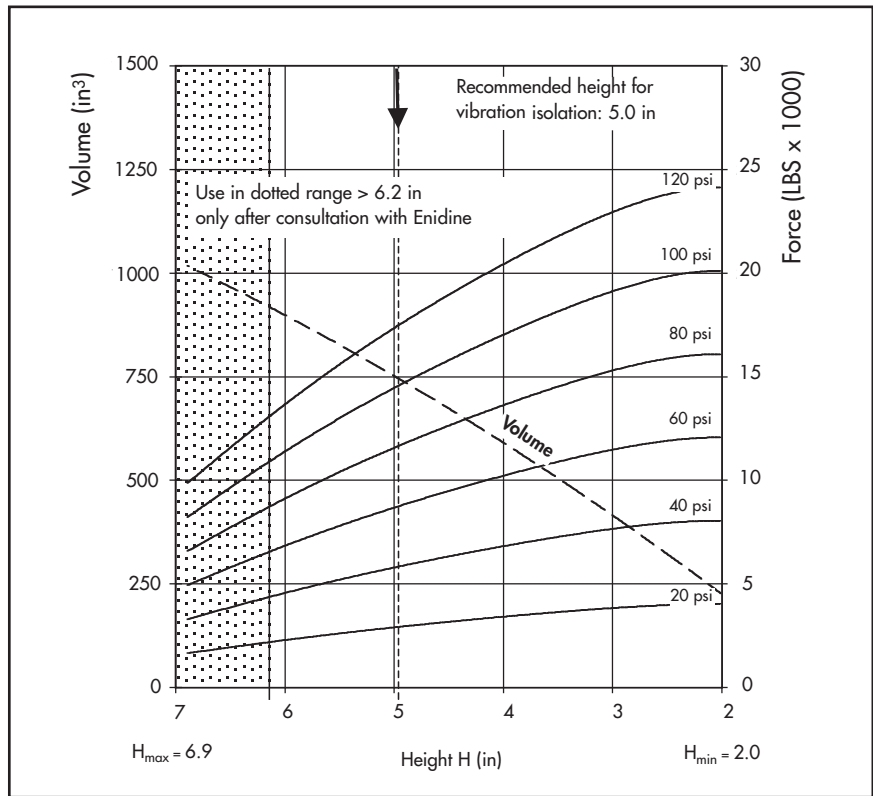


Bead Ring Style Air Springs

YI-FS 960-12-478



Single Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63472
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 22 lbs
Overall weight with bead rings, bolts, nuts and washers	11 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 5 inch, minimum 4.3 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	5780	8660	11550	14440	17330	
Spring Rate (lbs/in)	3123	4529	5820	7176	8580	
Natural Frequency (Hz)	2.2	2.2	2.2	2.2	2.2	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)	
Height H (in)	6	2280	4570	6850	9130	11420	13700	892
	5.5	2610	5210	7820	10430	13040	15640	822
	5	2890	5780	8660	11550	14440	17330	754
	4.5	3150	6300	9450	12600	15750	18900	675
	4	3390	6780	10170	13570	16960	20350	591
	3.5	3640	7270	10910	14550	18180	21820	500
	3	3820	7640	11460	15280	19100	22920	412

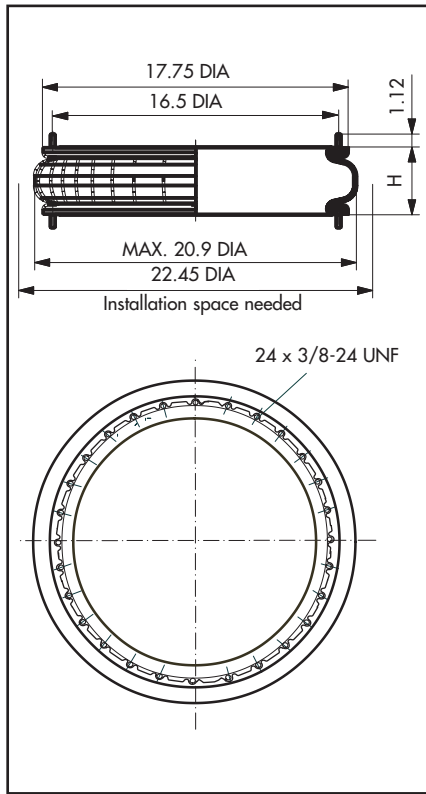
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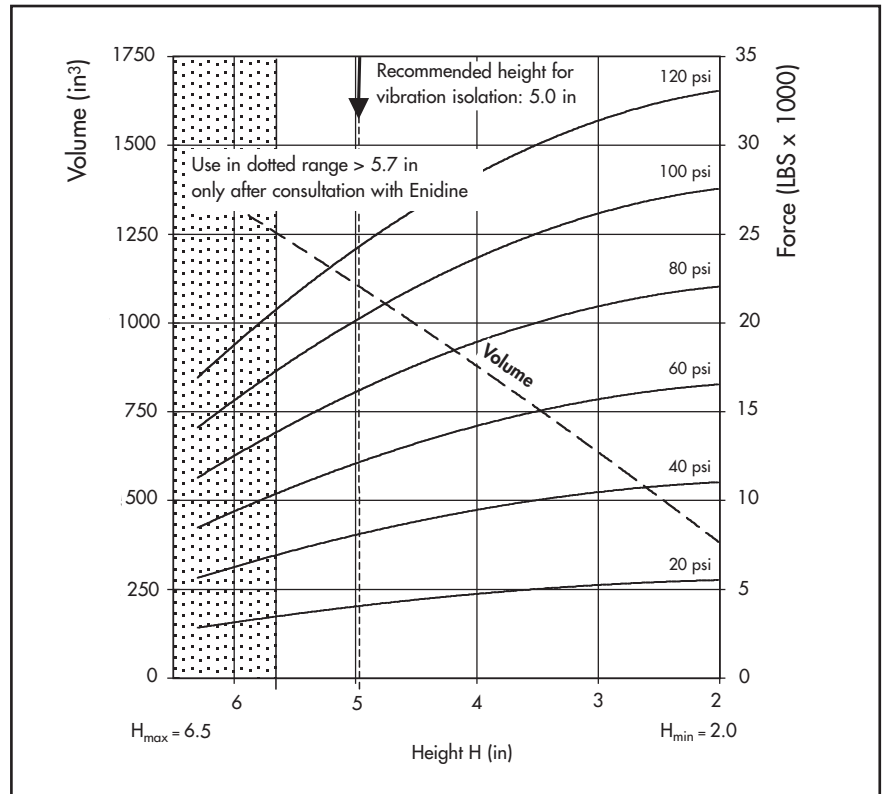
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Bead Ring Style Air Springs

YI-FS 1330-11-197



Single Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63475
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 20 lbs
Overall weight with bead rings, bolts, nuts and washers	16.1 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 5.0 inch, minimum 4.1 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	8040	12060	16080	20100	24120	
Spring Rate (lbs/in)	4268	6218	8025	9932	11722	
Natural Frequency (Hz)	2.2	2.2	2.2	2.2	2.2	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)	
Height H (in)	5.5	3620	7230	10850	14470	18080		1224
	5	4020	8040	12060	16080	20100		1112
	4.5	4370	8740	13110	17480	21850		994
	4	4720	9440	14150	18870	23590		871
	3.5	5010	10030	15040	20050	25060		766
	3	5240	10480	15720	20970	26210		632

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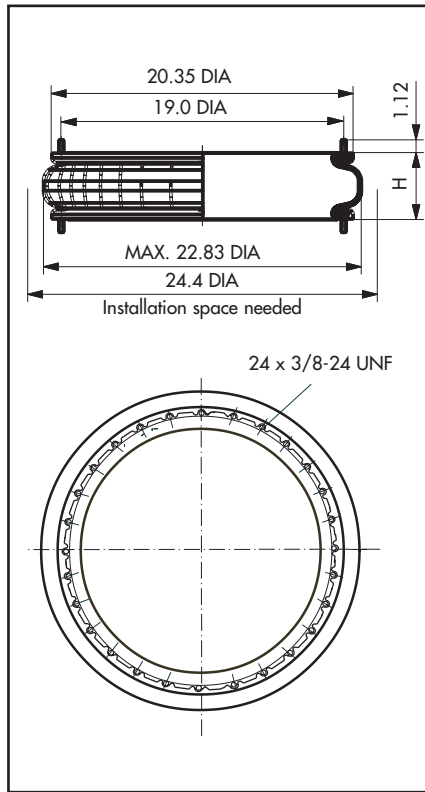
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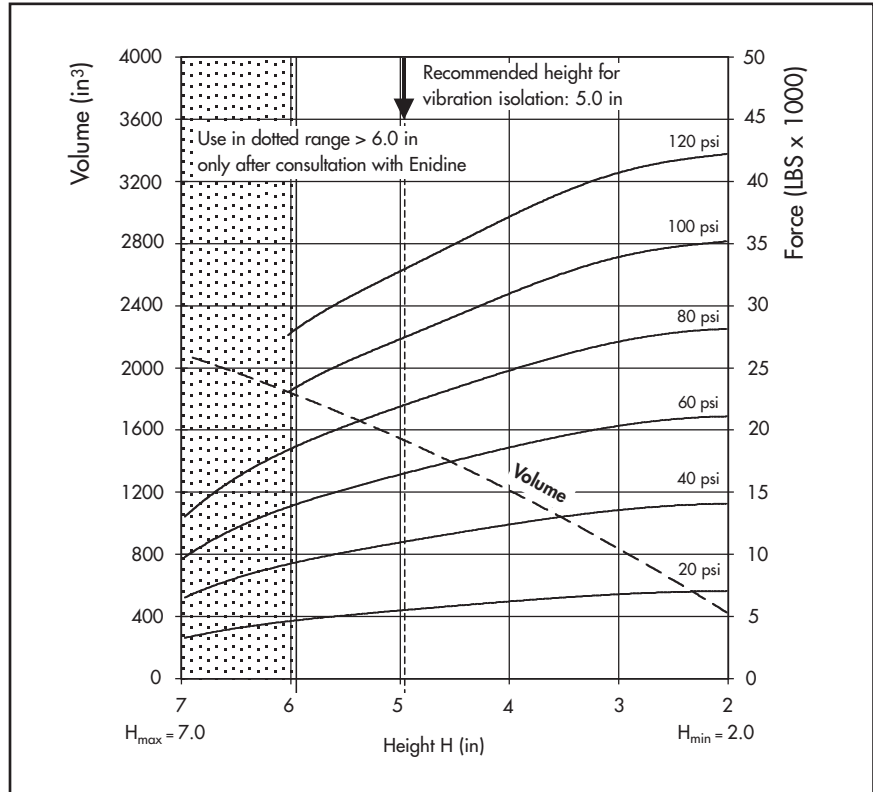
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Bead Ring Style Air Springs

YI-FS 1710-12-727



Single Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63478
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:

3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 27 lbs
Overall weight with bead rings, bolts, nuts and washers	19.2 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 5 inch, minimum 4.3 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	10900	16350	21800	27250	32700	1544
Spring Rate (lbs/in)	5349	7606	9770	12114	14456	
Natural Frequency (Hz)	2.2	2.2	2.1	2.1	2.1	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)	
Height H (in)	6	4620	9250	13870	18500	23120	27740	1836
	5	5450	10900	16350	21800	27250	32700	1544
	4	6190	12390	18580	24780	30970	37170	1195
	3	6760	13510	20270	27020	33780	40530	842

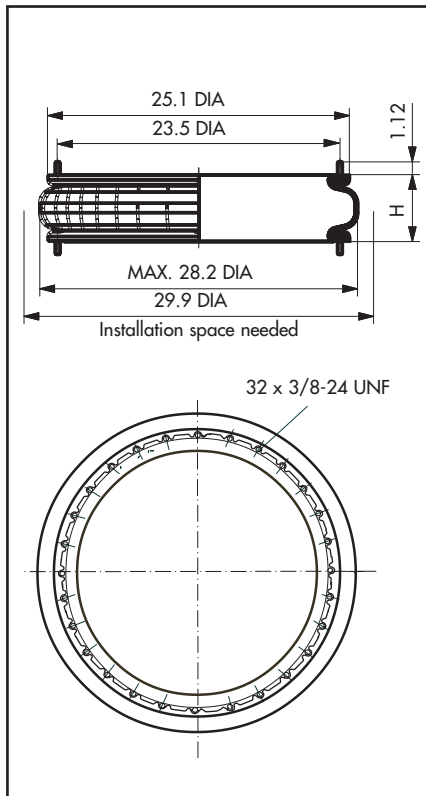
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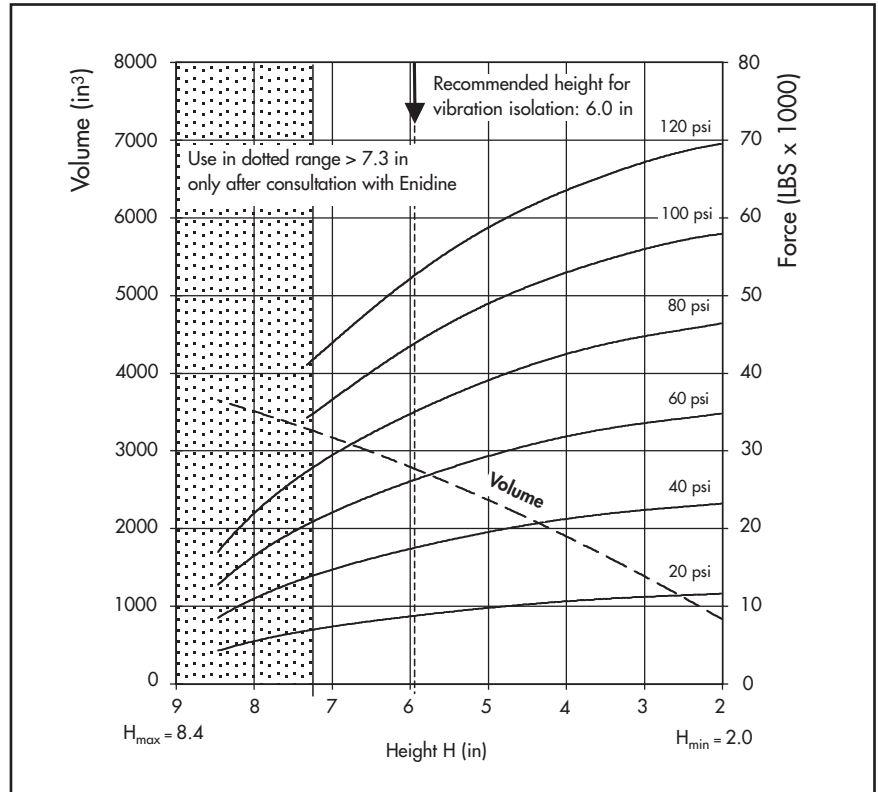
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Bead Ring Style Air Springs

YI-FS 2870-16-737



Single Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63482
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 151 lbs
Overall weight with bead rings, bolts, nuts and washers	24.5 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 6.0 inch, minimum 5.1 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	17290	25940	34580	43230	51870	2797
Spring Rate (lbs/in)	7380	10405	13461	16000	18543	
Natural Frequency (Hz)	2.0	2.0	1.9	1.9	1.9	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)	
Height H (in)	7	7340	14680	22020	29370	36710	44050	3173
	6	8650	17290	25940	34580	43230	51870	2797
	5	9790	19570	29360	39140	48930	58720	2371
	4	10560	21130	31690	42250	52820	63380	1865
	3	11160	22330	33490	44650	55810	66980	1364



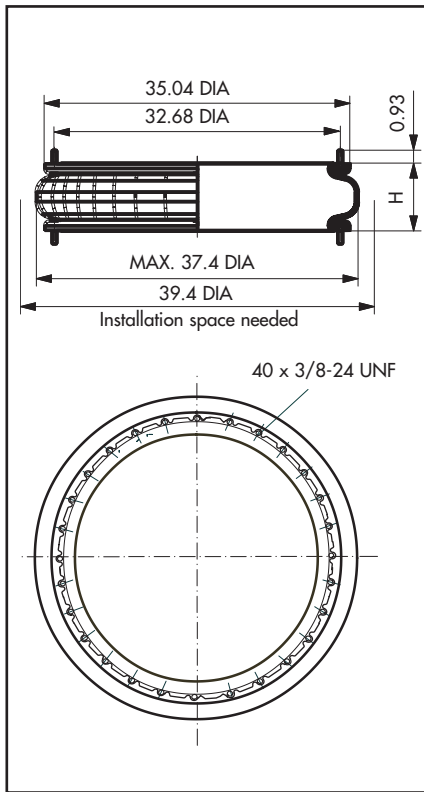
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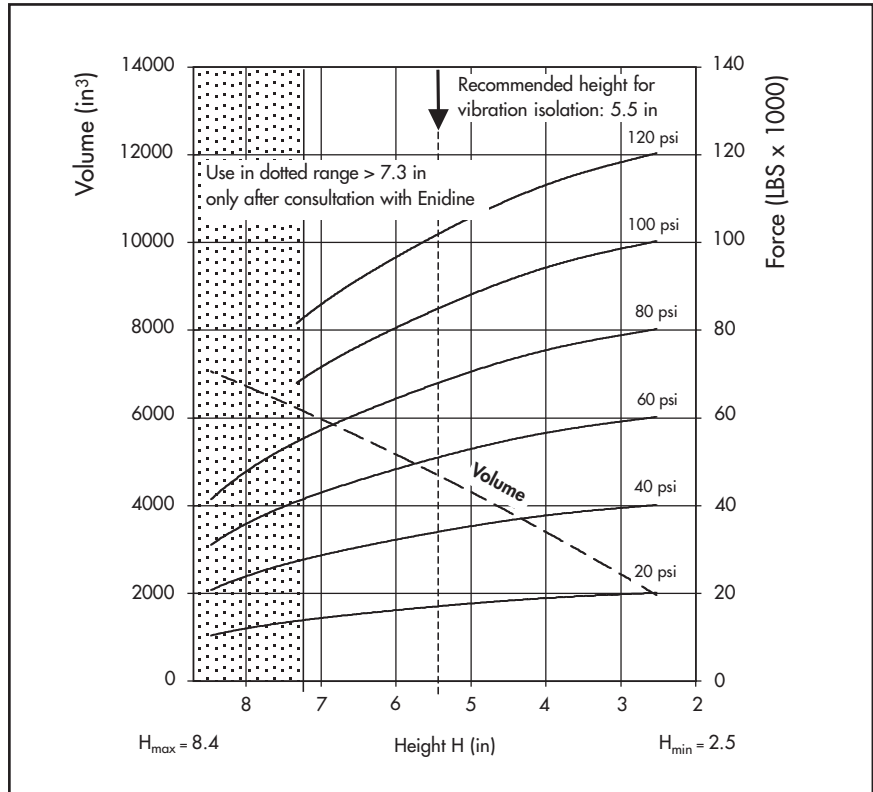
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Bead Ring Style Air Springs

YI-FS 5450-16-601



Single Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63485
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 310 lbs
Overall weight with bead rings, bolts, nuts and washers	48.5 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 5.5 inch, minimum 4.7 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in ³)
Force (Load) (lbs)	33810	50720	67630	84530	101440	4713
Spring Rate (lbs/in)	13532	19511	25290	30229	35739	
Natural Frequency (Hz)	2.0	2.0	1.9	1.9	1.9	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in ³)
Height H (in)	7	14280	28570	42850	57140	71420	6006
	6	16080	32160	48240	64320	80400	5162
	5	17580	35150	52730	70310	87890	4271
	4	18850	37710	56560	75410	94270	3410
	3	19710	39420	59130	78840	98550	2412

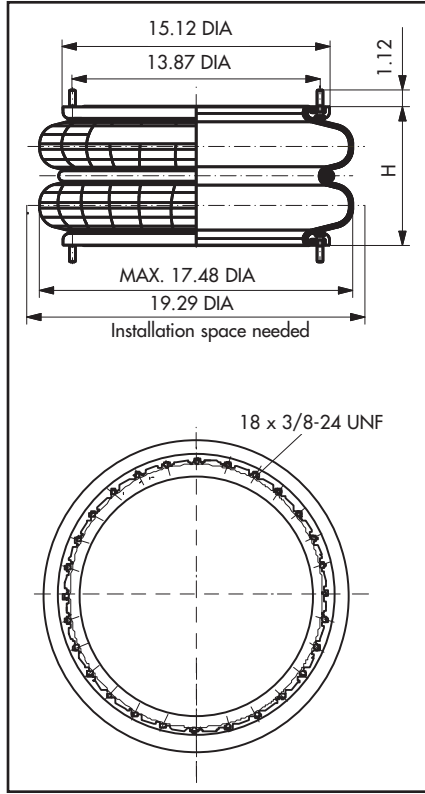
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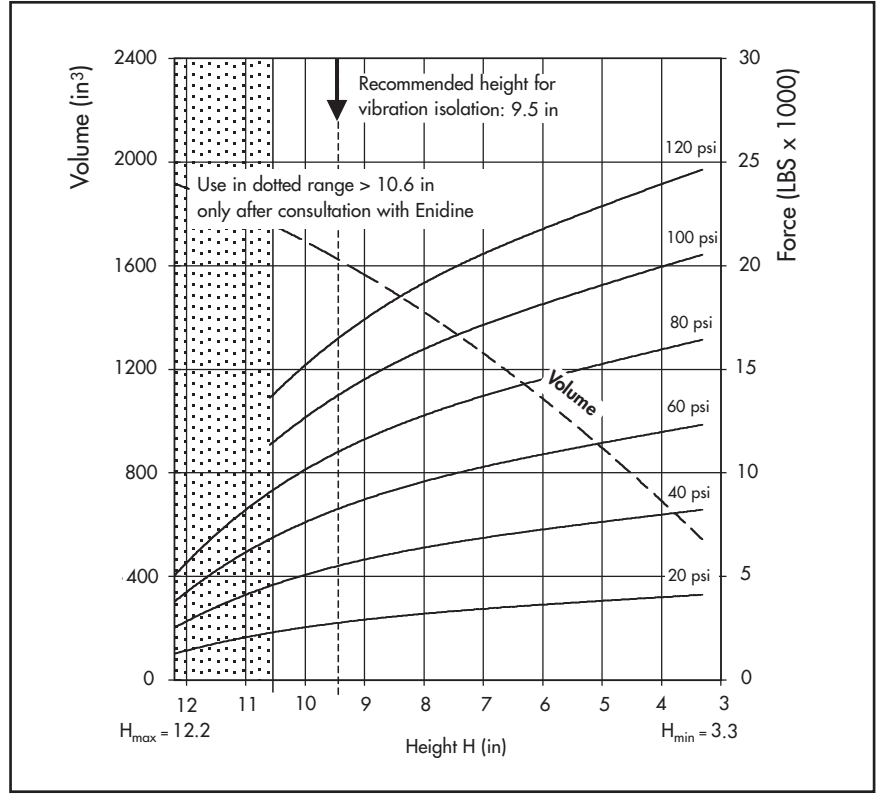
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Bead Ring Style Air Springs

YI-FD 960-22-191



Double Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63473
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 45 lbs
Overall weight with bead rings, bolts, nuts and washers	19 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 9.5 inch, minimum 8.7 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	5450	8180	10900	13630	16350	1655
Spring Rate (lbs/in)	1638	2303	3005	3633	4317	
Natural Frequency (Hz)	1.7	1.7	1.6	1.6	1.6	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	10	2520	5040	7560	10080	12600	1687
	9	2890	5790	8680	11580	14470	1566
	8	3190	6380	9560	12750	15940	1423
	7	3420	6840	10260	13680	17100	1265
	6	3630	7260	10890	14510	18140	1081
	5	3800	7610	11410	15220	19020	896
	4	3990	7980	11970	15960	19950	688

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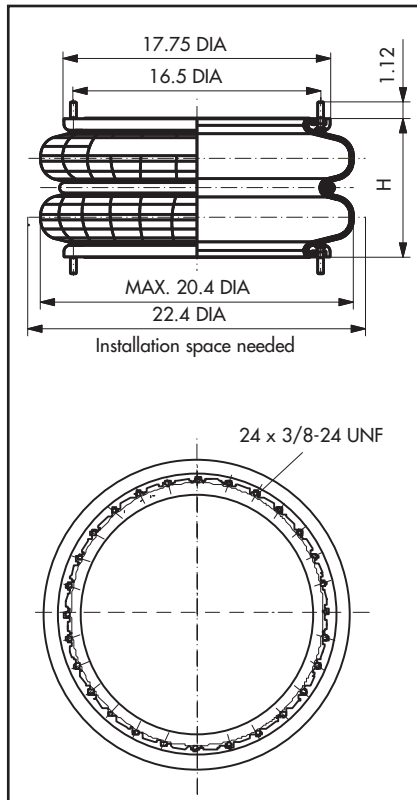
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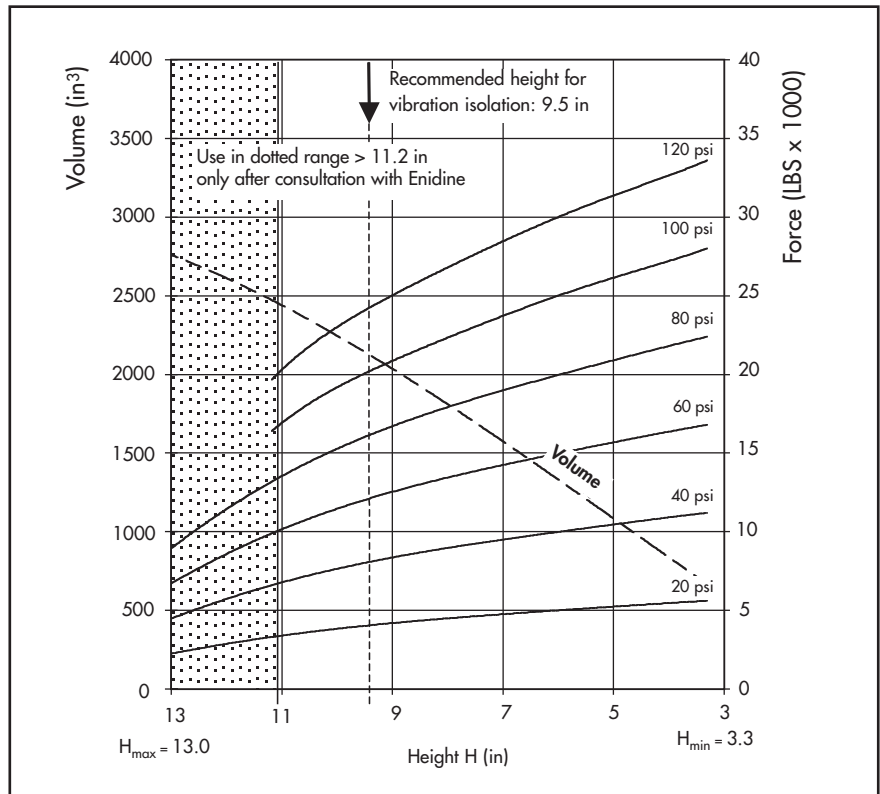
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Bead Ring Style Air Springs

YI-FD 1330-25-227



Double Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63476
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 40 lbs
Overall weight with bead rings, bolts, nuts and washers	23.8 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 9.5 inch, minimum 8.7 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	7990	11990	15990	19980	23980	2145
Spring Rate (lbs/in)	2173	3171	4101	4915	5882	
Natural Frequency (Hz)	1.6	1.6	1.5	1.5	1.5	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	11	3360	6710	10070	13430	16780	2440
	10	3930	7860	11790	15720	19650	2236
	9	4180	8360	12550	16730	20910	2050
	8	4470	8930	13400	17870	22330	1821
	7	4760	9510	14270	19030	23780	1565
	6	4980	9970	14950	19930	24910	1334
	5	5220	10440	15660	20880	26100	1083

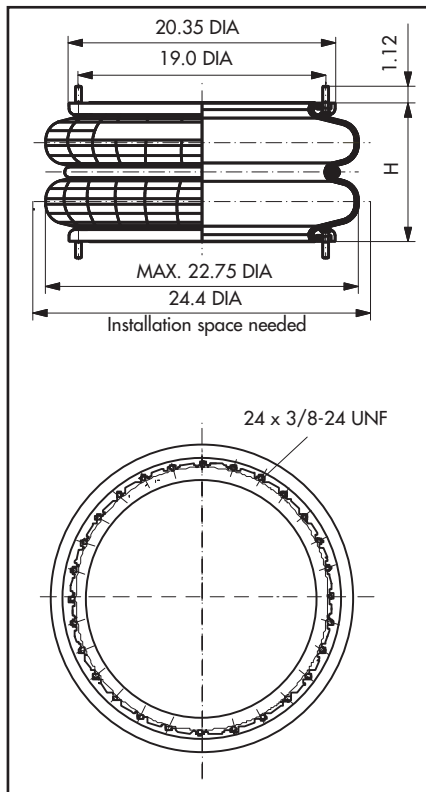
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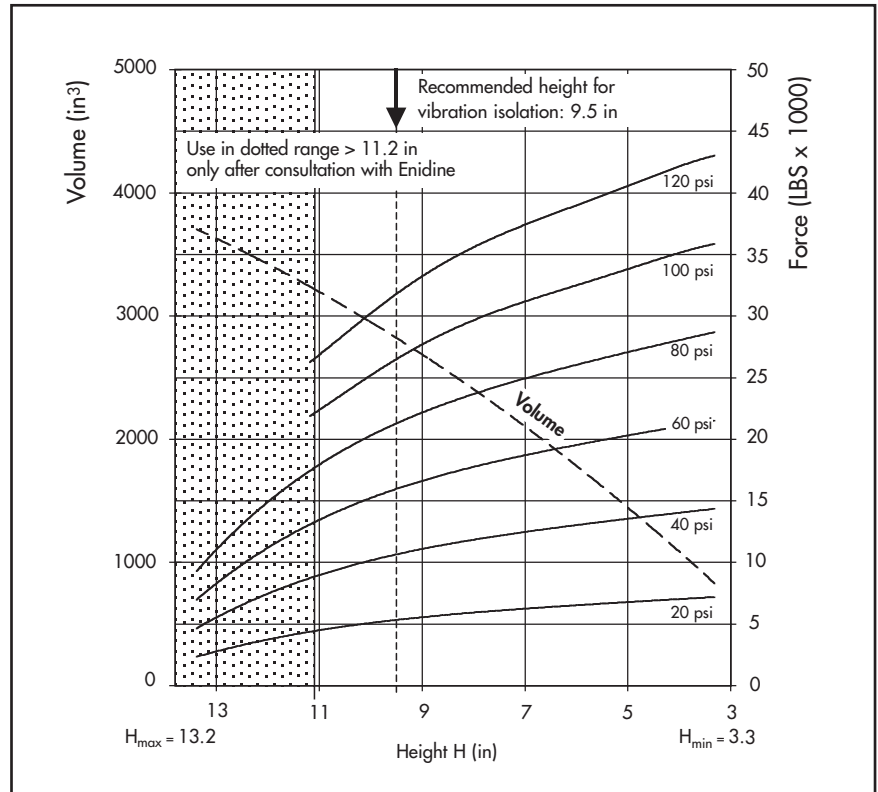
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Bead Ring Style Air Springs

YI-FD 1710-25-203



Double Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63479
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 70 lbs
Overall weight with bead rings, bolts, nuts and washers	26.5 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 9.5 inch, minimum 8.7 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	10580	15860	21150	26440	31730	2820
Spring Rate (lbs/in)	2814	4027	5266	6299	7417	
Natural Frequency (Hz)	1.6	1.6	1.6	1.5	1.5	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)	
Height H (in)	10	5020	10040	15050	20070	25090	30110	2943
	8	5920	11840	17760	23680	29600	35520	2407
	6	6490	12990	19480	25970	32460	38960	1781
	4	7010	14020	21020	28030	35040	42050	1076

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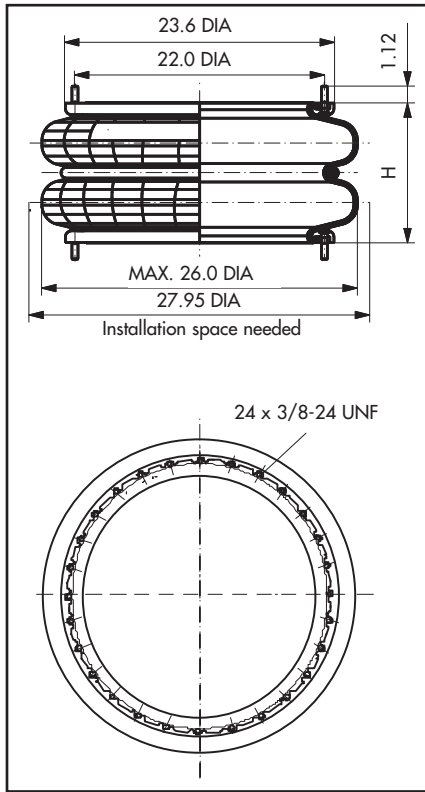
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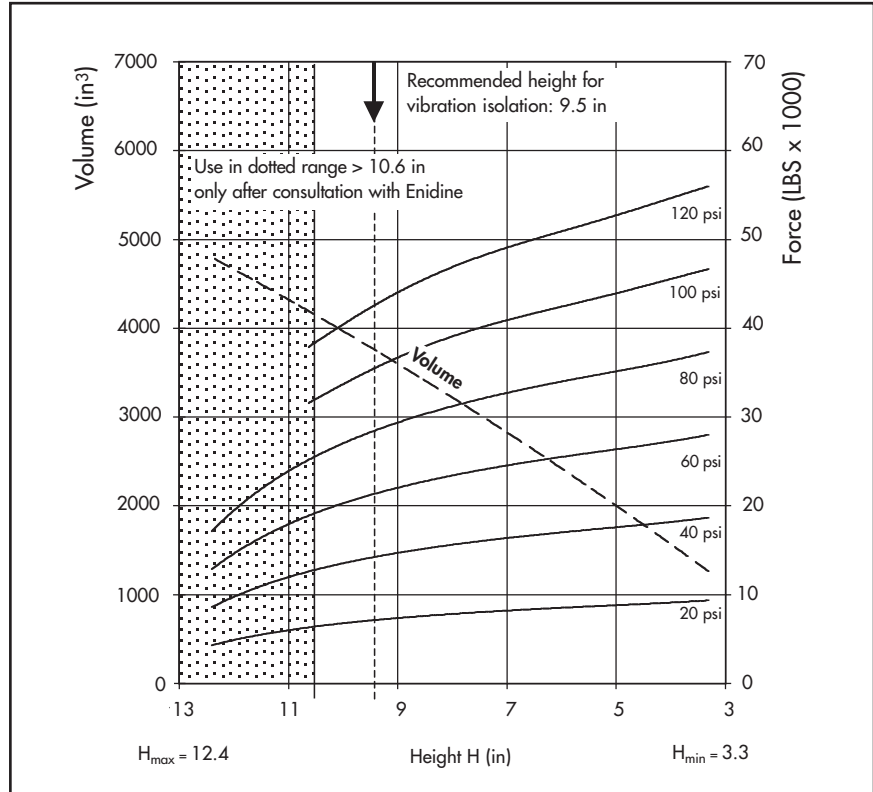
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Bead Ring Style Air Springs

YI-FD 2380-24-772



Double Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63481
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:

3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤100 lbs
Overall weight with bead rings, bolts, nuts and washers	31 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 9.5 inch, minimum 8.7 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	14090	21130	28180	35220	42260	
Spring Rate (lbs/in)	3790	5344	7004	8391	10009	
Natural Frequency (Hz)	1.6	1.6	1.6	1.5	1.5	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	10	6730	13470	20200	26930	33670	3968
	9	7310	14620	21930	29240	36550	3602
	8	7830	15650	23480	31300	39130	3223
	7	8160	16310	24470	32620	40780	2836
	6	8480	16970	25450	33940	42420	2407
	5	8780	17560	26350	35130	43910	1989
	4	9100	18210	27310	36420	45520	1567

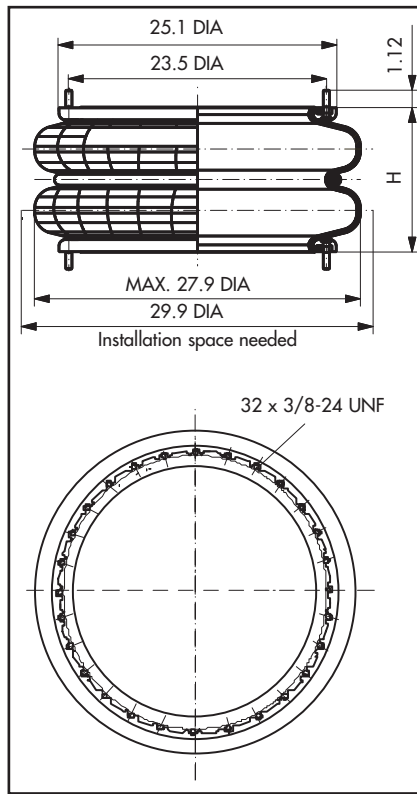
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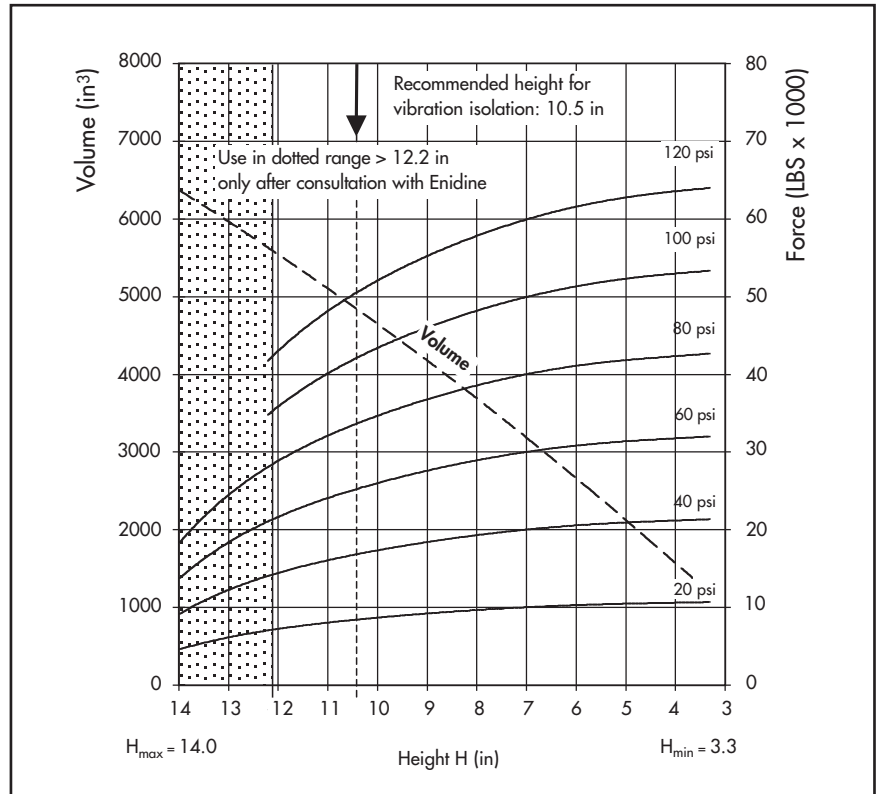
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Bead Ring Style Air Springs

YI-FD 2870-30-230



Double Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63483
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 157 lbs
Overall weight with bead rings, bolts, nuts and washers	34 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 10.5 inch, minimum 9.6 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	16700	25050	33400	41750	50100	4884
Spring Rate (lbs/in)	4058	5817	7420	8734	10452	
Natural Frequency (Hz)	1.5	1.5	1.5	1.4	1.4	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	12	7130	14270	21400	28540	35670	5521
	10	8640	17290	25930	34570	43210	4647
	8	9640	19280	28930	38570	48210	3702
	6	10230	20460	30690	40920	51150	2657
	4	10590	21170	31760	42340	52930	1549

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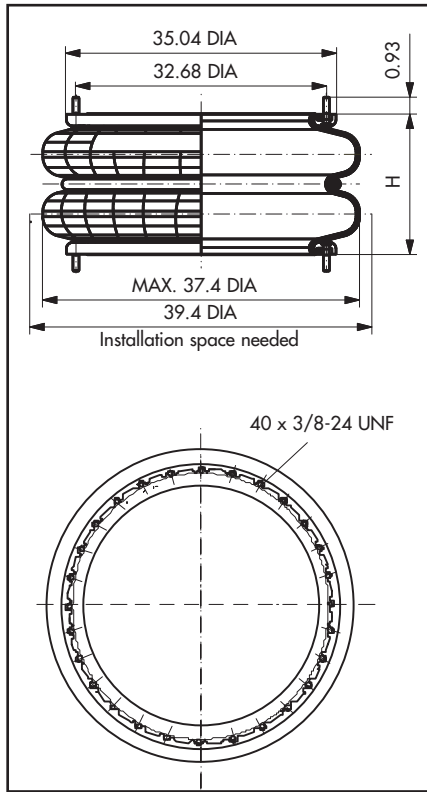
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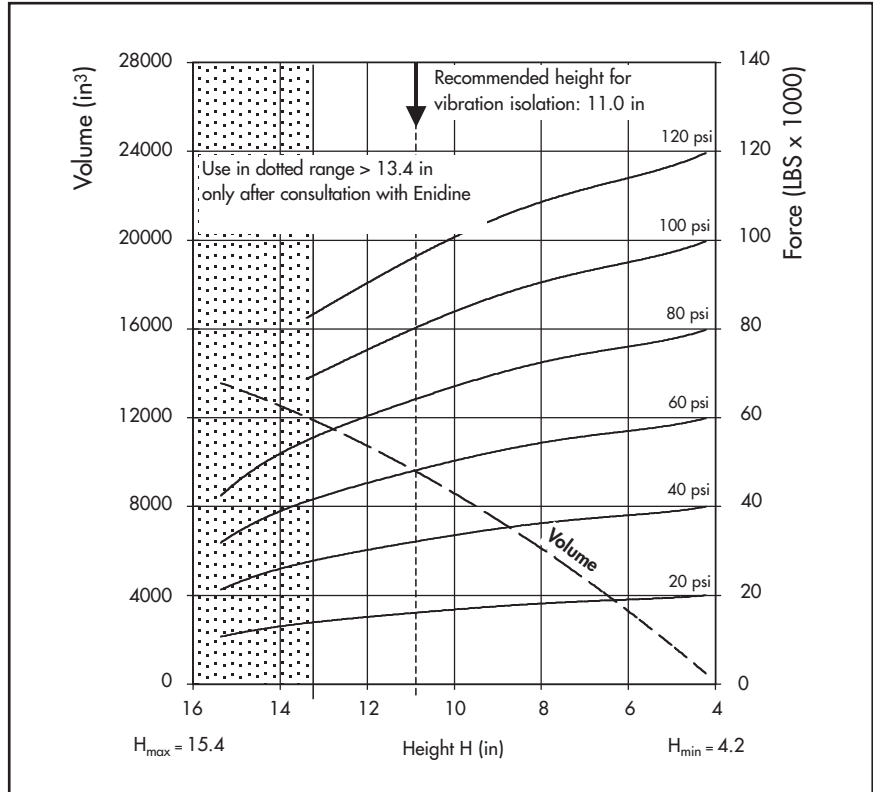
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Bead Ring Style Air Springs

YI-FD 5450-28-602



Double Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63486
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 350 lbs
Overall weight with bead rings, bolts, nuts and washers	72.5 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 11 inch, minimum 10.2 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	31720	47590	63450	79310	95170	9577
Spring Rate (lbs/in)	6661	9336	12195	14533	17173	
Natural Frequency (Hz)	1.4	1.4	1.4	1.3	1.3	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	13	14120	28240	42350	56470	70590	11677
	11	15860	31720	47590	63450	79310	9577
	9	17490	34990	52480	69980	87470	7385
	7	18520	37040	55560	74080	92600	4788
	5	19530	39070	58600	78130	97660	1789

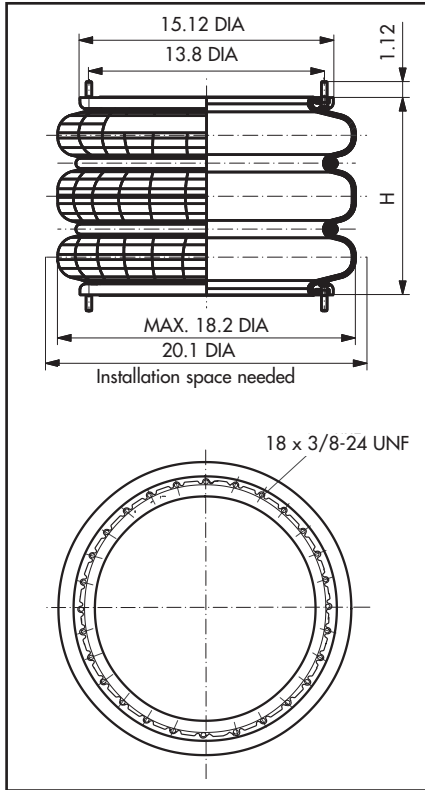
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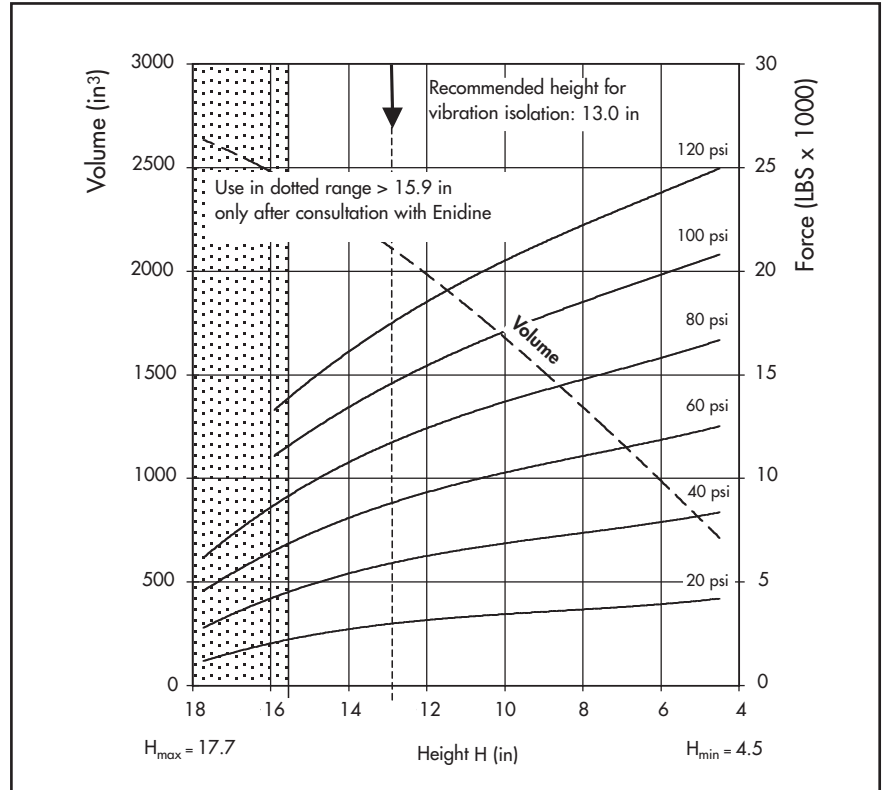
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Bead Ring Style Air Springs

YI-FT 960-34-761



Triple Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63474
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤135 lbs
Overall weight with bead rings, bolts, nuts and washers	21 lbs

Vibration Isolation - dynamic characteristic values

Design height H: recommended 13 inch, minimum 12.4 inch

Pressure p (psi)	40	60	80	100	120	Vol. V (in³)
Force (Load) (lbs)	5770	8650	11530	14420	17300	
Spring Rate (lbs/in)	1144	1659	2079	2610	3029	
Natural Frequency (Hz)	1.4	1.3	1.3	1.3	1.3	

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	15	2420	4830	7250	9670	12080	2368
	13	2880	5770	8650	11530	14420	2125
	11	3270	6530	9800	13070	16330	1846
	9	3560	7130	10690	14250	17820	1511
	7	3830	7650	11480	15300	19130	1161

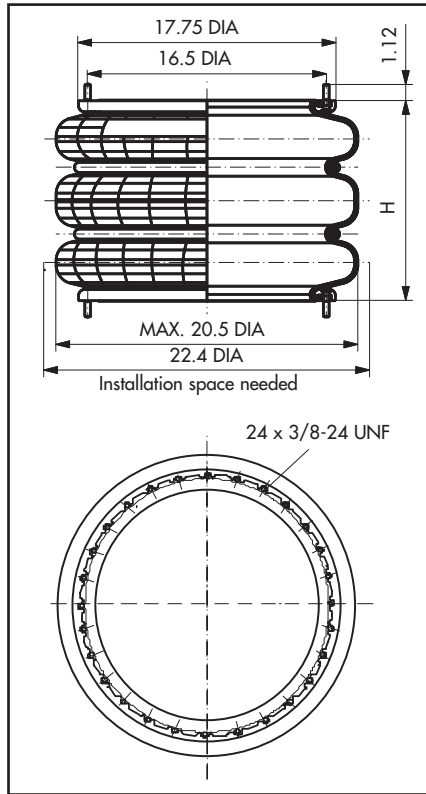


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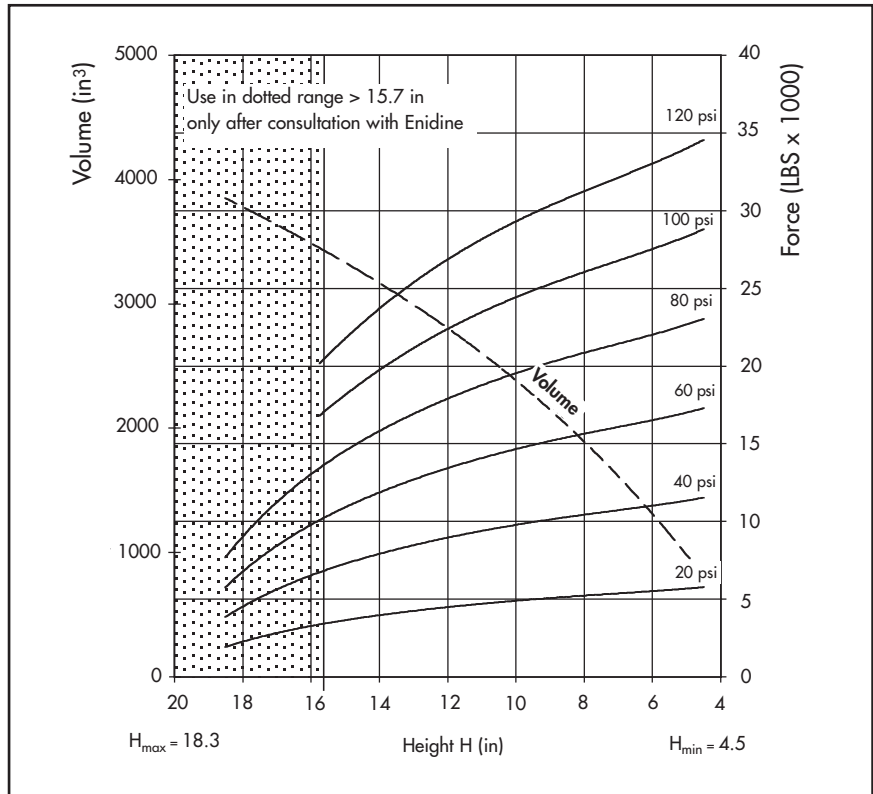
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Bead Ring Style Air Springs

YI-FT 1330-35-823



Triple Convoluted Air Spring



Force-Height diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63477
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:

3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 70 lbs
Overall weight with bead rings, bolts, nuts and washers	27.6 lbs

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
15	3620	7240	10860	14480	18100	21720	3321
13	4240	8480	12730	16970	21210	25450	2991
11	4680	9360	14040	18720	23400	28080	2618
9	5050	10100	15150	20200	25250	30310	2145
7	5350	10710	16060	21410	26770	32120	1594
5	5660	11330	16990	22660	28320	33980	950

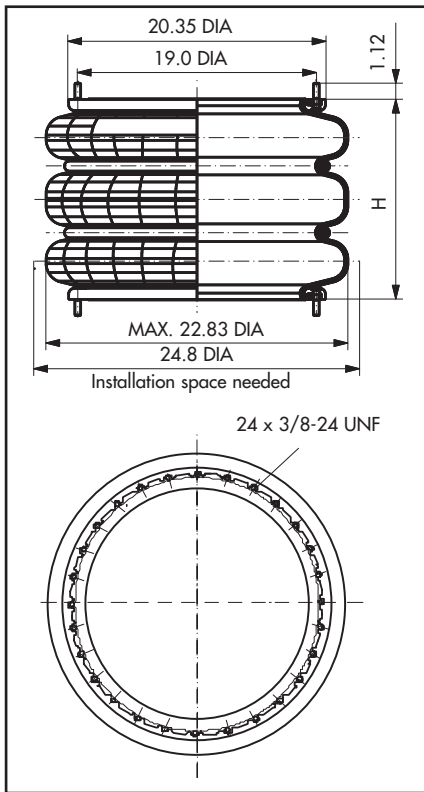
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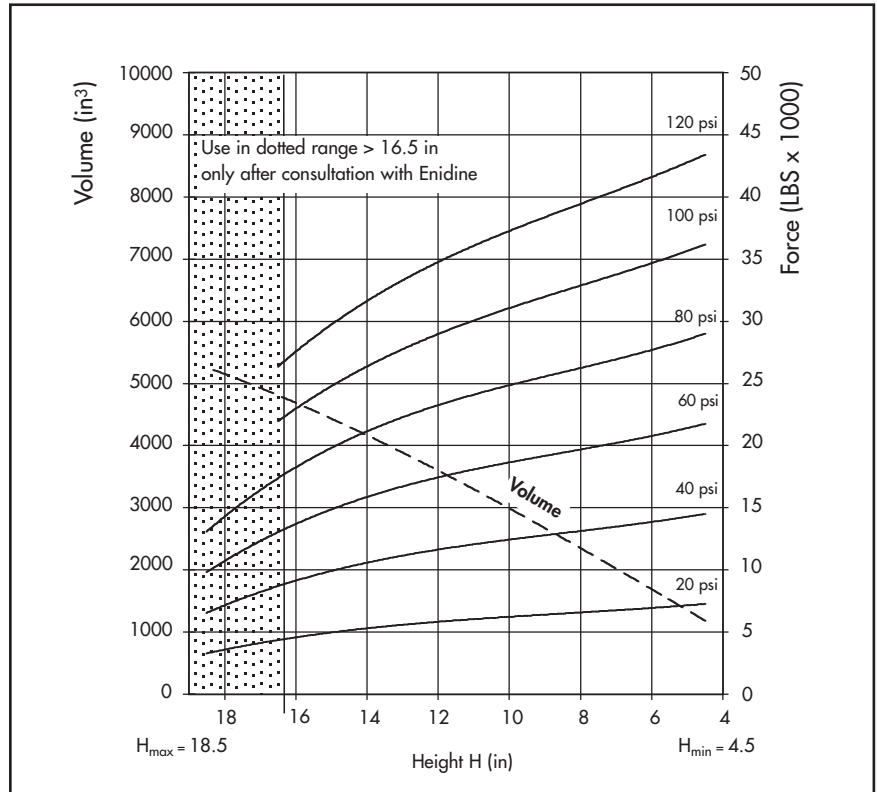
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Bead Ring Style Air Springs

YI-FT 1710-38-324



Triple Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63480
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 90 lbs
Overall weight with bead rings, bolts, nuts and washers	32 lbs

Pneumatic Application - static characteristic values

Force F (lbs)

Height H (in)	Pressure p (psi)	20	40	60	80	100	120	Vol. (in ³)
	15	4940	9880	14820	19760	24700	29640	4419
13	5550	11100	16660	22210	27760	33310	3907	
11	6010	12030	18040	24060	30070	36090	3285	
9	6360	12720	19090	25450	31810	38170	2668	
7	6750	13500	20260	27010	33760	40510	2029	

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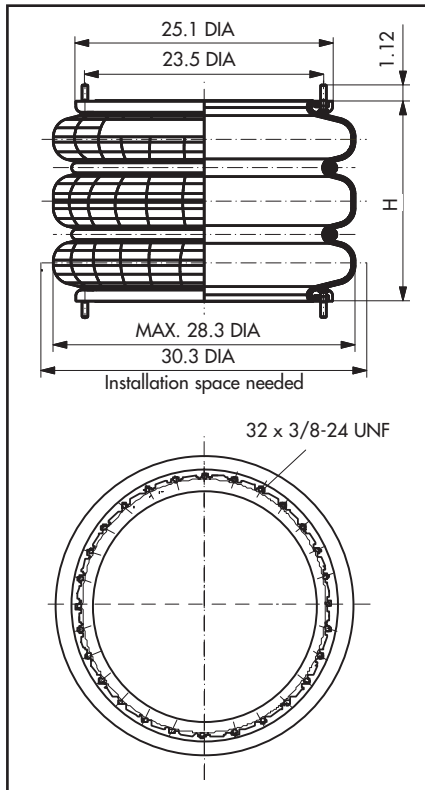
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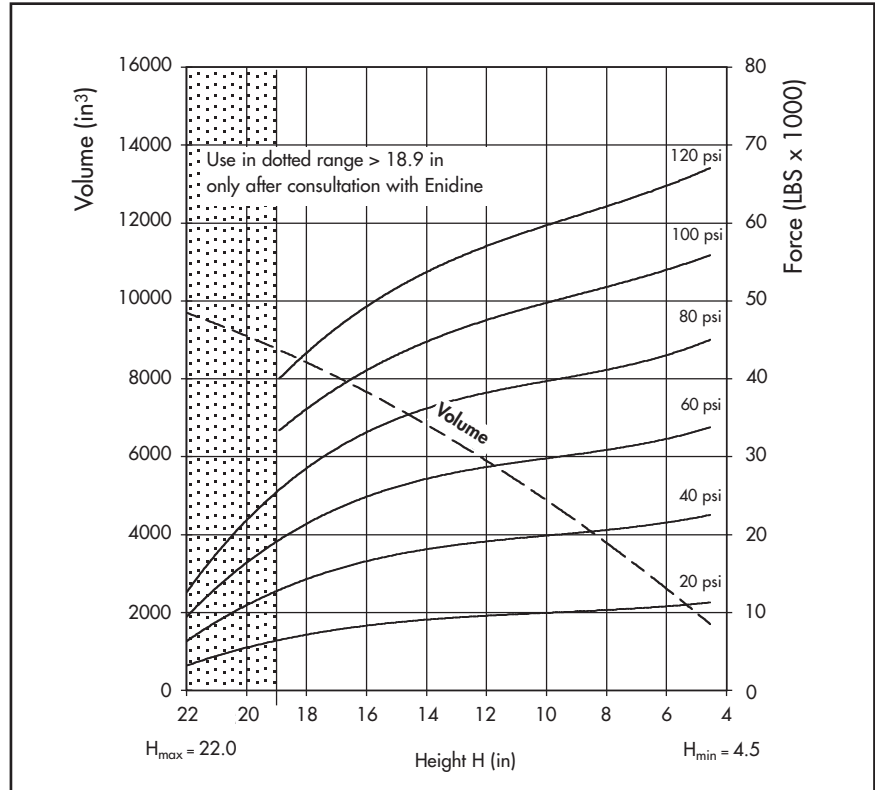
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Bead Ring Style Air Springs

YI-FT 2870-45-304



Triple Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63484
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 180 lbs
Overall weight with bead rings, bolts, nuts and washers	38 lbs

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	18	7180	14370	21550	28730	35920	8500
	15	8580	17160	25750	34330	42910	7251
	12	9510	19010	28520	38020	47530	6015
	9	10120	20240	30360	40480	50590	4124
	6	10820	21640	32470	43290	54110	2440

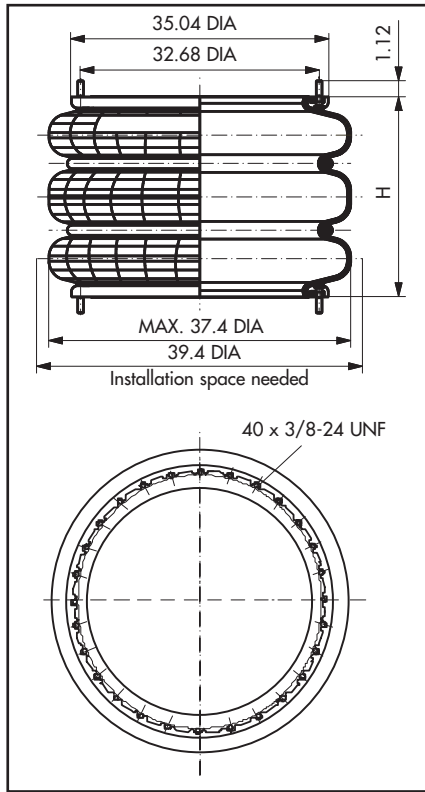
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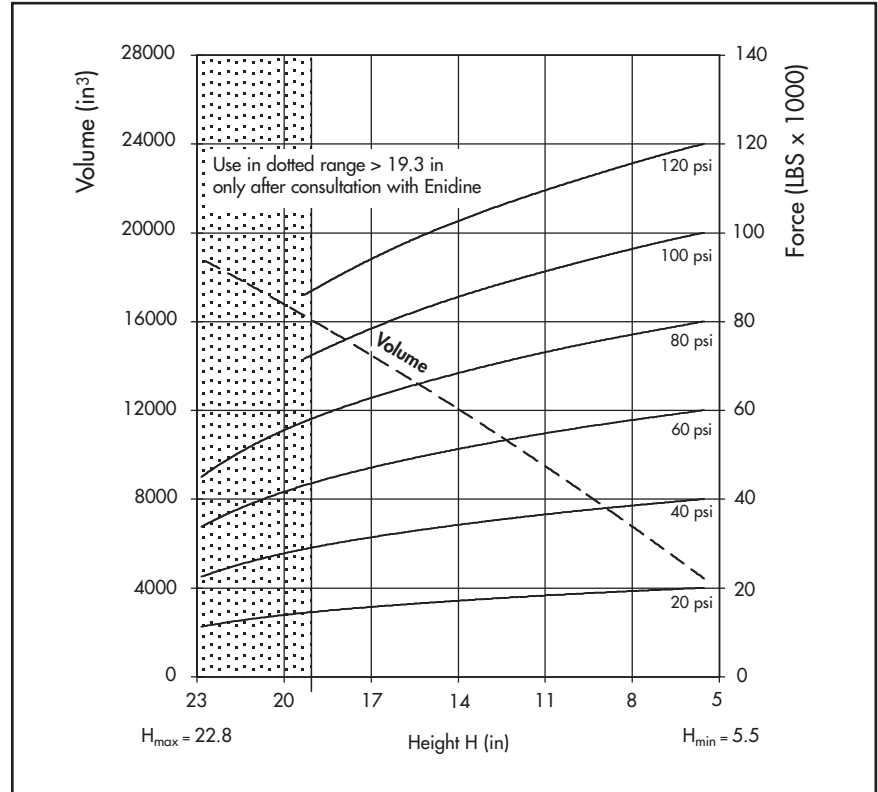
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Bead Ring Style Air Springs

YI-FT 5450-44-603



Triple Convoluted Air Spring



Force-Height-diagram

Purchase Order Data

Type	Model Ref No.
Bellows with bead rings, 1 7/8 bolts, nuts and washers	YI-63487
Rubber bellows only	Upon Request

Additional types on request

Service Instruction:
3/8-24 UNF = 28-32 FT-LBS

Technical Data

Min. Pressure	0 psi
Return Force to min. height	≤ 380 lbs
Overall weight with bead rings, bolts, nuts and washers	97 lbs

Pneumatic Application - static characteristic values

Force F (lbs)

Pressure p (psi)	20	40	60	80	100	120	Vol. (in³)
Height H (in)	18	15080	30170	45250	60340	75420	15381
	16	16190	32380	48560	64750	80940	13705
	14	17090	34190	51280	68380	85470	12000
	12	17880	35770	53650	71530	89410	10289
	10	18590	37170	55760	74340	92930	8564
	8	19290	38590	57880	77180	96470	6810
	6	19850	39700	59550	79390	99240	4893

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