No. 105

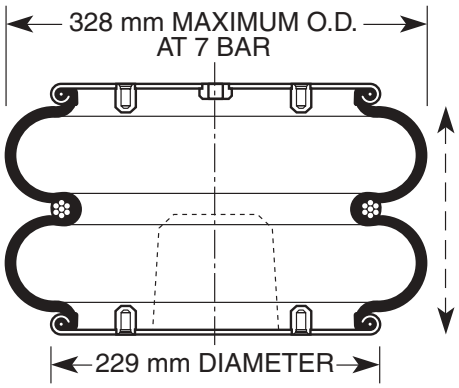
Convoluted style Airstroke® actuators with additional stroke

General Discussion

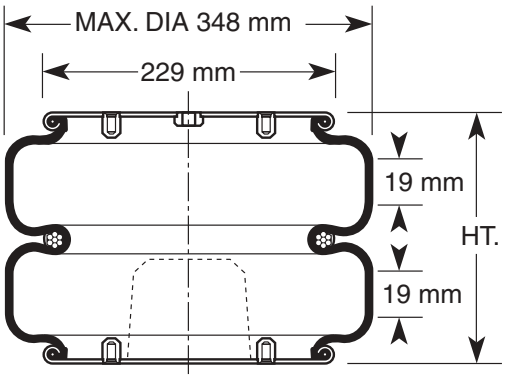
Over the years we have developed a special series of convoluted Airstroke actuators. They were originally designed because sufficient stroke was not available for a given air spring diameter.

In each case, our standard part was modified by extending the convolution or convolutions with an additional section in the center of each convolution. A good example is our standard #22 versus our #22-1.5:

Standard #22



#22-1.5



This change to the standard part does two things:

1. It extends the stroke capability of the actuator.
   (Check the load-deflection curve for the specific air spring.)

2. It slightly increases the effective area and, therefore, the force that the air spring will produce.

Caution should be advised when applying one of these special actuators, in that the inflated diameter is slightly greater than the diameter of the standard part of that size. Additionally, in some cases the bellows will extend beyond the bead plates at minimum height.

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Identification

These parts are shown in our price sheets and catalog with a dash followed by another number.

As an example:

Standard Style No. #22
Special Style No. #22-1 .5

The number after the dash tells you the size of the additional section in each convolution by dividing this number by the number of convolutions (using imperial units):

1. For the #22-1.5: $\frac{1.5 \text{ in.}}{2 \text{ conv.}}$ .75 in. (or 19 mm)

2. For the #116B-1: $\frac{1.0 \text{ in.}}{1 \text{ conv.}}$ 1.0 in. (or 25 mm)

Available Airstroke actuators

Style number	Maximum O.D.	Compare to maximum O.D. of Std. part
116B-1	244 mm	231 mm
22-1.5	348 mm	328 mm
1 9-75	348 mm	328 mm
21-2	406 mm	384 mm
113-1	406 mm	386 mm
138-1.5	709 mm	(Not Avail.)