

# *Western Valve and Fitting*

## Flexible Vacuum Tubing Products



Size Ranges from .25" I.D. up to 16" I.D.

End Connections include Tube Stub Ends

VCR<sup>®</sup> ends, VCO<sup>®</sup> ends, and Flange Ends

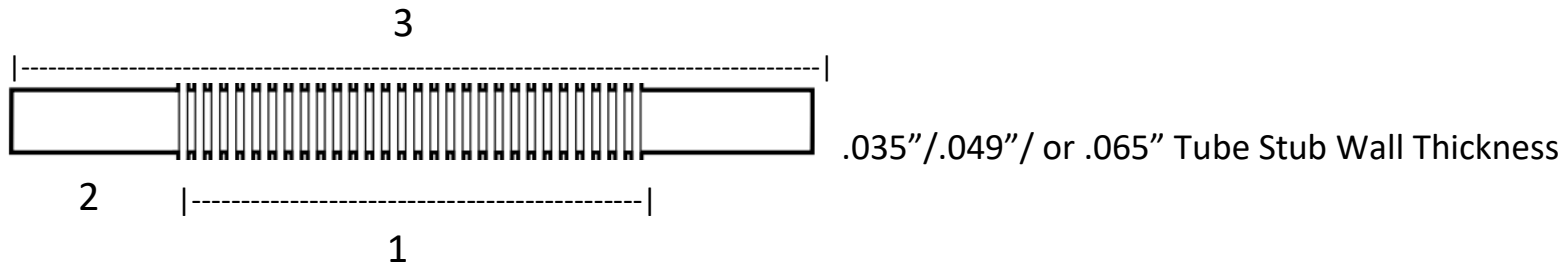
Standard Material is 321 Stainless Steel

Additional sizes and wall thicknesses available

Standard Testing is 1 x 10<sup>-9</sup> cm<sup>3</sup>/s max leak rate

*Western Valve and Fitting 4355 Technology Drive, Unit G*

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## Common Flexible Tubing Sizes with Tube Stub Ends

Nominal Tube Size	End Connections	Convolution Wall Thickness	Nominal O.D.	MAX WORKING PRESSURE (PSI)	MAX BURST PRESSURE (PSI)	MAX STATIC COMPRESSION (IN.)	STATIC BEND RADIUS (IN.)	DYNAMIC BEND RADIUS (IN.)
1/4"	1/4" OD .035" Wall Tube Stubs .75" Long	0.008	0.38	48	192	3	0.8	3
3/8"	3/8" OD .035" Wall Tube Stubs .75" Long	0.008	0.58	23	90	3	1.3	5
1/2"	1/2" OD .049" Wall Tube Stubs .75" Long	0.008	0.71	24	95	3	1.5	6
3/4"	3/4" OD .049" Wall Tube Stubs .75" Long	0.008	1.02	29	115	3	1.8	7
1"	1" OD .065" Wall Tube Stubs .75" Long	0.008	1.37	20	80	3	2.8	11

## Standard Part Numbers

Nominal Tube Size Inches	Common Sizes Used and part numbers	.035"/.049" /.065" wall Tube Stub End length Dimension, inches 2	Dimensions, inches			
			Manufactured Dimension Length, inches 1	Extended Length, inches	Overall Length of Manufactured Assembly, inches 3	
1/4"	S321-4-2T	0.75"	2.00	3.00 (76.2)	4.00	
	S321-4-4T		4.00	6.00 (152)	6.00	
	S321-4-6T		6.00	9.00 (229)	8.00	
	S321-4-12T		12.0	18.0 (457)	14.0	
	S321-4-24T		24.0	36.0 (914)	26.0	
3/8"	S321-6-1T	0.75"	1.00	1.50 (38.1)	3.00	
	S321-6-3T		3.00	4.50 (114)	5.00	
	S321-6-6T		6.00	9.00 (229)	8.00	
	S321-6-12T		12.0	18.0 (457)	14.0	
	S321-6-24T		24.0	36.0 (914)	26.0	
1/2"	S321-8-3T	0.75"	3.00	4.50 (114)	5.40	
	S321-8-6T		6.00	9.00 (229)	8.40	
	S321-8-12T		12.0	18.0 (457)	14.40	
	S321-8-24T		24.0	36.0 (914)	26.40	
3/4"	S321-12-1T	0.75"	1.00	1.50 (38.1)	3.50	
	S321-12-3T		3.00	4.50 (114)	5.50	
	S321-12-6T		6.00	9.00 (229)	8.50	
	S321-12-12T		12.0	18.0 (457)	14.50	
	S321-12-24T		24.0	36.0 (914)	26.50	
1"	S321-16-3T	0.75"	3.00	4.50 (114)	6.00	
	S321-16-6T		6.00	9.00 (229)	9.00	
	S321-16-12T		12.0	18.0 (457)	15.0	
	S321-16-24T		24.0	36.0 (914)	27.0	

**\*Longer overall Flex Tubing Lengths and other incremental lengths are available upon request\* Example: 36", 48", 60", 66", 72", 84", 90", 96", etc.**

**\*You may also request any End Connection you would like welded on Each End**

**Bellows Wall Thickness Range 0.008-0.012**  
**.25" Inside Diameter up to 12" Inside Diameter**



<b>NOM. ID</b>	<b>DESCRIPTION</b>	<b>MAX THICKNESS</b>	<b>NOMINAL OD</b>	<b>MAX WORKING PRESSURE (PSI)</b>	<b>MAX BURST PRESSURE (PSI)</b>	<b>MAX STATIC COMPRESSION (IN.)</b>	<b>STATIC BEND RADIUS (IN.)</b>	<b>DYNAMIC BEND RADIUS (IN.)</b>
<b>0.25</b>	<b>.25"ID X .008" 321SS</b>	<b>0.008</b>	<b>0.38</b>	<b>48</b>	<b>192</b>	<b>3</b>	<b>0.8</b>	<b>3</b>
<b>0.38</b>	<b>.375"ID X .008" 321SS</b>	<b>0.008</b>	<b>0.60</b>	<b>23</b>	<b>90</b>	<b>3</b>	<b>1.3</b>	<b>5</b>
<b>0.50</b>	<b>.500"ID X .008" 321SS</b>	<b>0.008</b>	<b>0.75</b>	<b>24</b>	<b>95</b>	<b>3</b>	<b>1.5</b>	<b>6</b>
<b>0.75</b>	<b>.75"ID X .008" 321SS</b>	<b>0.008</b>	<b>1.02</b>	<b>29</b>	<b>115</b>	<b>3</b>	<b>1.8</b>	<b>7</b>
<b>1.00</b>	<b>1.0"ID X .008" 321SS</b>	<b>0.008</b>	<b>1.37</b>	<b>20</b>	<b>80</b>	<b>3</b>	<b>2.8</b>	<b>11</b>

<b>NOM. ID</b>	<b>DESCRIPTION</b>	<b>WALL THICKNESS</b>	<b>NOMINAL OD</b>	<b>MAX WORKING PRESSURE (PSI)</b>	<b>MAX BURST PRESSURE (PSI)</b>	<b>MAX STATIC COMPRESSION (IN.)</b>	<b>STATIC BEND RADIUS (IN.)</b>	<b>DYNAMIC BEND RADIUS (IN.)</b>
1.50	1.5"ID X .006" 321SS	0.006	1.91	11	44	3	4.5	14
2.00	2.0"ID X .006" 321SS	0.006	2.45	10	40	3	4.5	18
2.50	2.5"ID X .006" 321SS	0.006	3.07	8	30	3	5.5	22
3.00	3.0"ID X .008" 321SS	0.008	3.76	6	25	3	6.8	27
3.25	3.25"ID X .008" 321SS	0.008	4.00	6	25	3	7.3	29
3.50	3.50"ID X .008" 321SS	0.008	4.30	7	28	3	7.8	31
4.00	4"ID X .008" X .012" 321SS	0.008	4.78	6	24	3	8.5	34
5.00	5"ID X .008" 321SS	0.008	5.75	6	25	3	10.5	42
5.50	5.50"ID X .008" 321SS	0.008	6.25	6	25	3	11.3	45
6.00	6.0"ID X .010" 321SS	0.010	6.84	7	28	3	12.5	50
7.00	7.0"ID X .012" 321SS	0.012	8.15	6	25	3	14.8	59
8.00	8.0"ID X .012" 321SS	0.012	9.25	5	20	3	31	67

<b>NOM. ID</b>	<b>DESCRIPTION</b>	<b>WALL THICKNES S</b>	<b>NOMINAL OD</b>	<b>MAX WORKING PRESSURE (PSI)</b>	<b>MAX BURST PRESSURE (PSI)</b>	<b>MAX STATIC COMPRESSION (IN.)</b>	<b>STATIC BEND RADIUS (IN.)</b>	<b>DYNAMIC BEND RADIUS (IN.)</b>
<b>10.00</b>	<b>10.00"ID X .012" 321SS</b>	<b>0.012</b>	<b>11.25</b>	<b>5</b>	<b>20</b>	<b>3</b>	<b>40</b>	<b>82</b>
<b>12.00</b>	<b>12.00"ID X .012" 321SS</b>	<b>0.012</b>	<b>13.88</b>	<b>4</b>	<b>16</b>	<b>3</b>	<b>50</b>	<b>102</b>

Bellows Wall Thickness Range 0.008-0.020  
.75" Inside Diameter up to 16" Inside Diameter



<b>NOM. ID</b>	<b>DESCRIPTION</b>	<b>WALL THICKNES S</b>	<b>NOMINAL OD</b>	<b>MAX WORKING PRESSURE (PSI)</b>	<b>MAX BURST PRESSURE (PSI)</b>	<b>MAX STATIC COMPRESSION (IN.)</b>	<b>STATIC BEND RADIUS (IN.)</b>	<b>DYNAMIC BEND RADIUS (IN.)</b>
<b>0.75</b>	<b>.75"ID X .008" 321SS</b>	<b>0.008</b>	<b>1.02</b>	<b>29</b>	<b>115</b>	<b>3</b>	<b>1.8</b>	<b>7.5</b>
<b>1.00</b>	<b>1.0"ID X .008" 321SS</b>	<b>0.008</b>	<b>1.37</b>	<b>20</b>	<b>80</b>	<b>3</b>	<b>2.8</b>	<b>11</b>
<b>1.50</b>	<b>1.5"ID X .010" 321SS</b>	<b>0.010</b>	<b>1.91</b>	<b>29</b>	<b>116</b>	<b>3</b>	<b>4.5</b>	<b>14</b>
<b>2.00</b>	<b>2.0"ID X .012" 321SS</b>	<b>0.012</b>	<b>2.45</b>	<b>35</b>	<b>140</b>	<b>3</b>	<b>4.5</b>	<b>18</b>
<b>2.50</b>	<b>2.5"ID X .012" 321SS</b>	<b>0.012</b>	<b>3.08</b>	<b>20</b>	<b>80</b>	<b>3</b>	<b>5.5</b>	<b>22</b>
<b>4.00</b>	<b>4.0"ID X .010" 321SS</b>	<b>0.010</b>	<b>4.78</b>	<b>9</b>	<b>36</b>	<b>3</b>	<b>8.5</b>	<b>34</b>
<b>5.00</b>	<b>5.0"ID X .010" 321SS</b>	<b>0.010</b>	<b>5.75</b>	<b>11</b>	<b>42</b>	<b>3</b>	<b>10.0</b>	<b>42</b>
<b>7.50</b>	<b>7.50"ID X .012" 321SS</b>	<b>0.012</b>	<b>8.70</b>	<b>6</b>	<b>25</b>	<b>3</b>	<b>15.8</b>	<b>63</b>
<b>10.00</b>	<b>10.00"ID X .016" 321SS</b>	<b>0.016</b>	<b>11.25</b>	<b>10</b>	<b>40</b>	<b>3</b>	<b>40.0</b>	<b>82</b>
<b>12.00</b>	<b>12.00"ID X .016" 321SS</b>	<b>0.016</b>	<b>13.88</b>	<b>6</b>	<b>24</b>	<b>3</b>	<b>50.0</b>	<b>102</b>
<b>12.75</b>	<b>12.75"ID X .016" 321SS</b>	<b>0.016</b>	<b>14.56</b>	<b>5</b>	<b>18</b>	<b>3</b>	<b>50.0</b>	<b>107</b>
<b>16.00</b>	<b>16.00"ID X .020" 321SS</b>	<b>0.020</b>	<b>17.43</b>	<b>11</b>	<b>45</b>	<b>3</b>	<b>50.0</b>	<b>129</b>