

# AE645 PTFE Reinforced Convolutated Hose

- Lightweight
- Meets performance requirements of AS1227
- 50% tighter bend radius
- Improved flexing characteristics



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## Up to 36% more lightweight than equivalent wire braid hose

Eaton's Aeroquip AE645 hose was developed to combine the routing flexibility of lightweight rubber hose with the fluid compatibility of PTFE hose. Consisting of a conductive convoluted PTFE tube and reinforcement, AE645 hose is lightweight, flexible and ideal for application such as electronic coolant lines, fuel lines, etc. Lightweight aluminum nipple assemblies and stainless steel sockets are offered as standard end fittings to ensure Eaton's proven compression crimp retention.

AE645 hose meets or exceeds the performance requirements of AS1227, Class 2, Type 1. (-10, -12 and -16 sizes require an internal support coil to meet vacuum requirements of AS1227.)

Operating temperature range:  
-65°F to +275°F  
(-54°C to +135°C).

## AE645 Hose Data

In/Lbs in light type. **Millimeters and Bars in bold type**

Size	Operating Pressure psig/Bar	I.D. Min. In/mm	O.D. Max In/mm	Min. Bend Radius In/mm	Vacuum Rating In/mm
-4	300 <b>20.70</b>	.270 <b>6.86</b>	.482 <b>12.24</b>	.50 <b>12.7</b>	.28 <b>711</b>
-6	300 <b>20.70</b>	.345 <b>8.76</b>	.575 <b>14.60</b>	.75 <b>19.05</b>	.28 <b>711</b>
-8	250 <b>17.25</b>	.510 <b>12.95</b>	.760 <b>19.30</b>	1.00 <b>25.40</b>	28 <b>711</b>
-10	250 <b>17.25</b>	.600 <b>15.24</b>	.870 <b>22.10</b>	1.50 <b>38.10</b>	15** <b>381</b>
-12	200 <b>13.80</b>	.790 <b>20.07</b>	1.075 <b>27.30</b>	2.00 <b>50.80</b>	15** <b>381</b>
-16	200 <b>13.80</b>	.982 <b>24.94</b>	1.315 <b>33.40</b>	3.00 <b>76.20</b>	10** <b>254</b>

\*\*Vacuum rating without internal support coil

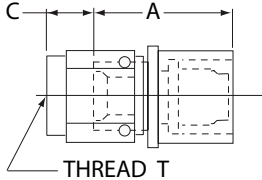
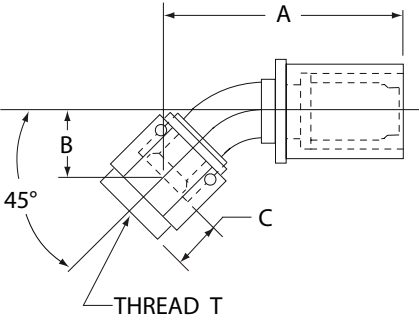
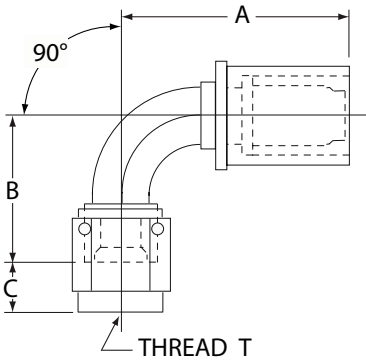
## Weight Comparison:

Lbs./Ft. in light type, **Kgs./ml in bold type**

SIZE	AE645 HOSE (PTFE BRAID)	AE641 HOSE (CRES BRAID)
-4	.07 <b>.11</b>	.10 <b>.15</b>
-6	.08 <b>.12</b>	.10 <b>.15</b>
-8	.13 <b>.20</b>	.15 <b>.22</b>
-10	.15 <b>.22</b>	.20 <b>.30</b>
-12	.20 <b>.30</b>	.31 <b>.47</b>
-16	.26 <b>.39</b>	.39 <b>.58</b>

# Fitting Data

## Aluminum 37° (AS4395) Flared Nipples

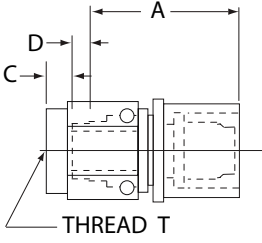
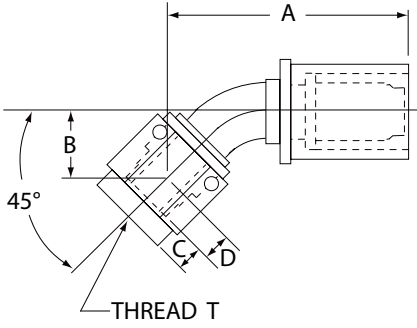
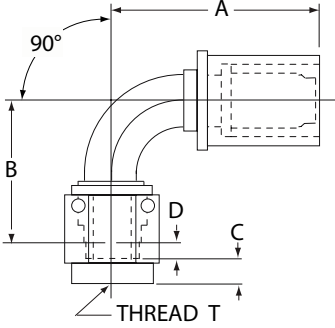
AE29970	Size	Thread "T"	A* Max	B Nom.	C Ref	Weight
	-4	.4375-20 UNJF-3B	1.20 <b>30.48</b>	— —	.37 <b>9.39</b>	.035 <b>.016</b>
	-6	.5625-18 UNJF-3B	1.28 <b>32.51</b>	— —	.38 <b>9.65</b>	.052 <b>.024</b>
	-8	.750-16 UNJF-3B	1.41 <b>35.81</b>	— —	.43 <b>10.92</b>	.086 <b>.039</b>
	-10	.875-14 UNJF-3B	1.58 <b>40.13</b>	— —	.50 <b>12.69</b>	.113 <b>.051</b>
	-12	1.0625-12 UNJF-3B	1.67 <b>42.42</b>	— —	.57 <b>14.47</b>	.172 <b>.078</b>
	-16	1.3125-12 UNJF-3B	1.78 <b>45.21</b>	— —	.60 <b>15.23</b>	.227 <b>.103</b>
AE30022	Size	Thread "T"	A* Max	B Nom.	C Ref	Weight
	-4	.4375-20 UNJF-3B	1.58 <b>40.13</b>	.353 <b>8.966</b>	.37 <b>9.39</b>	.038 <b>.017</b>
	-6	.5625-18 UNJF-3B	1.82 <b>46.23</b>	.478 <b>12.141</b>	.38 <b>9.65</b>	.054 <b>.024</b>
	-8	.750-16 UNJF-3B	1.91 <b>48.51</b>	.509 <b>12.929</b>	.43 <b>10.92</b>	.086 <b>.039</b>
	-10	.875-14 UNJF-3B	2.15 <b>54.61</b>	.573 <b>14.554</b>	.50 <b>12.69</b>	.116 <b>.053</b>
	-12	1.0625-12 UNJ-3B	2.40 <b>60.96</b>	.625 <b>15.875</b>	.57 <b>14.47</b>	.180 <b>.082</b>
	-16	1.3125-12 UNJ-3B	2.60 <b>66.04</b>	.682 <b>17.323</b>	.60 <b>15.23</b>	.243 <b>.110</b>
AE29972	Size	Thread "T"	A* Max	B Nom.	C Ref	Weight
	-4	.4375-20 UNJF-3B	1.45 <b>36.83</b>	.719 <b>18.263</b>	.37 <b>9.39</b>	.039 <b>.018</b>
	-6	.5625-18 UNJF-3B	1.63 <b>41.40</b>	.971 <b>24.663</b>	.38 <b>9.65</b>	.055 <b>.025</b>
	-8	.750-16 UNJF-3B	1.69 <b>42.93</b>	1.014 <b>25.756</b>	.43 <b>10.92</b>	.087 <b>.039</b>
	-10	.875-14 UNJF-3B	1.94 <b>49.28</b>	1.176 <b>29.870</b>	.50 <b>12.69</b>	.129 <b>.059</b>
	-12	1.0625-3B UNJ-3B	2.27 <b>57.66</b>	1.378 <b>35.001</b>	.57 <b>14.47</b>	.196 <b>.089</b>
	-16	1.3125-12 UNJ-3B	2.42 <b>61.47</b>	1.532 <b>38.913</b>	.60 <b>15.23</b>	.253 <b>.115</b>

\*DIMENSION IS MEASURED FROM END OF SOCKET.  
Inches in light type. **Millimeters and Kilograms in bold type.**

Fitting Dash Size	4	6	8	10	12	16	20	24	32
Letter Code	E	G	H	J	K	M	N	P	R

# Fitting Data

## Aluminum Flareless (NAS1760) Nipples

AE30023	Size	Thread "T"	A* Max	B Nom.	C Ref	D Dim	Weight
	-4	.4375-20 UNJF-3B	1.26 <b>32.00</b>	—	.17 <b>4.32</b>	.162 / .155 <b>4.11 / 3.93</b>	.042 <b>.019</b>
	-6	.5625-18 UNJF-3B	1.35 <b>34.29</b>	—	.16 <b>4.06</b>	4.11 / 3.93 <b>4.34 / 4.16</b>	.053 <b>.024</b>
	-8	.750-16 UNJF-3B	1.52 <b>38.61</b>	—	.18 <b>4.57</b>	.196 / .189 <b>4.97 / 4.80</b>	.089 <b>.041</b>
	-10	.875-14 UNJF-3B	1.71 <b>43.43</b>	—	.20 <b>5.08</b>	.208 / .201 <b>5.28 / 5.10</b>	.113 <b>.051</b>
	-12	1.0625-12 UNJF-3B	1.89 <b>48.01</b>	—	.20 <b>5.08</b>	.235 / .228 <b>5.96 / 5.79</b>	.184 <b>.084</b>
	-16	1.3125-12 UNJF-3B	2.01 <b>51.06</b>	—	.13 <b>3.30</b>	.304 / .297 <b>1.71</b>	.239 <b>.109</b>
AE30025	Size	Thread "T"	A* Max	B Nom.	C Ref	D Dim	Weight
	-4	.4375-20 UNJF-3B	1.64 <b>41.66</b>	.412 <b>10.465</b>	.17 <b>4.32</b>	.162 / .155 <b>4.11 / 3.93</b>	.040 <b>.018</b>
	-6	.5625-18 UNJF-3B	1.86 <b>47.24</b>	.513 <b>13.030</b>	.16 <b>4.06</b>	4.11 / 1.64 <b>4.34 / 4.16</b>	.054 <b>.025</b>
	-8	.750-16 UNJF-3B	1.99 <b>50.55</b>	.585 <b>14.859</b>	.18 <b>4.57</b>	.196 / .189 <b>4.97 / 4.80</b>	.086 <b>.039</b>
	-10	.875-14 UNJF-3B	2.27 <b>57.66</b>	.688 <b>17.475</b>	.20 <b>5.08</b>	.208 / .201 <b>5.28 / 5.10</b>	.127 <b>.058</b>
	-12	1.0625-12 UNJ-3B	2.55 <b>64.77</b>	.774 <b>19.660</b>	.20 <b>5.08</b>	.235 / .228 <b>5.96 / 5.79</b>	.183 <b>.083</b>
	-16	1.3125-12 UNJ-3B	2.78 <b>70.61</b>	.863 <b>21.920</b>	.13 <b>3.30</b>	.304 / .297 <b>7.72 / 7.54</b>	.237 <b>.108</b>
AE30027	Size	Thread "T"	A* Max	B Nom.	C Ref	D Dim	Weight
	-4	.4375-20 UNJF-3B	1.45 <b>36.83</b>	.802 <b>20.371</b>	.17 <b>4.32</b>	.162 / .155 <b>4.11 / 3.93</b>	.041 <b>.019</b>
	-6	.5625-18 UNJF-3B	1.63 <b>41.40</b>	1.020 <b>25.908</b>	.16 <b>4.06</b>	4.11 / 1.64 <b>4.34 / 4.16</b>	.061 <b>.028</b>
	-8	.750-16 UNJF-3B	1.70 <b>43.18</b>	1.123 <b>28.524</b>	.18 <b>4.57</b>	.196 / .189 <b>4.97 / 4.80</b>	.098 <b>.045</b>
	-10	.875-14 UNJF-3B	1.94 <b>49.28</b>	1.338 <b>33.985</b>	.20 <b>5.08</b>	.208 / .201 <b>5.28 / 5.10</b>	.124 <b>.056</b>
	-12	1.0625-3B UNJ-3B	2.27 <b>57.66</b>	1.590 <b>45.386</b>	.20 <b>5.08</b>	.235 / .228 <b>5.96 / 5.79</b>	.223 <b>.101</b>
	-16	1.3125-12 UNJ-3B	2.42 <b>61.47</b>	1.787 <b>45.390</b>	.13 <b>3.30</b>	.304 / .297 <b>7.72 / 7.54</b>	.290 <b>.132</b>

\*DIMENSION IS MEASURED FROM END OF SOCKET.  
Inches in light type. **Millimeters and Kilograms in bold type**

Fitting Dash Size	4	6	8	10	12	16	20	24	32
Letter Code	E	G	H	J	K	M	N	P	R

# Hose Assembly Configurations

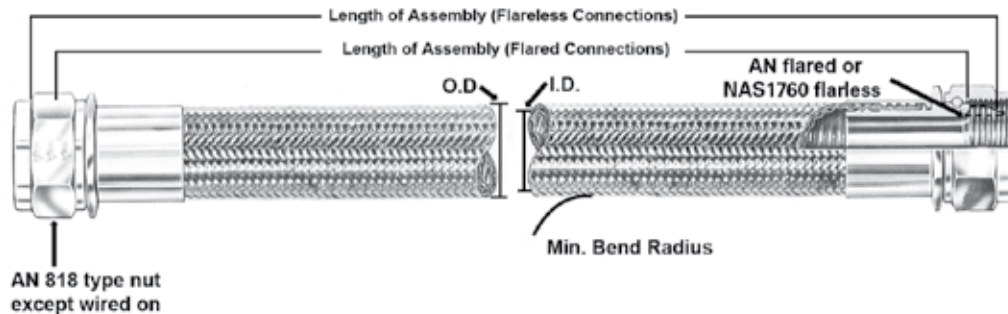
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## Flared

Configuration	Hose Size	Hose Assembly P/N	Nipple A	Nipple B
St to St	-4 to -16	AE1011341	AE29970	AE29970
St to 45	-4 to -16	AE1011342	AE29970	AE30022
St to 90	-4 to -16	AE1011343	AE29970	AE29972
45 to 45	-4 to -16	AE5279	AE30022	AE30022
45 to 90	-4 to -16	AE5294	AE30022	AE29972
90 to 90	-4 to -16	AE5280	AE29972	AE29972

## Flareless

Configuration	Hose Size	Hose Assembly P/N	Nipple A	Nipple B
St to St	-4 to -16	AE1011497	AE30023	AE30023
St to 45	-4 to -16	AE1011498	AE30023	AE30025
St to 90	-4 to -16	AE1011499	AE30023	AE30027
45 to 45	-4 to -16	AE5228	AE30025	AE30025
45 to 90	-4 to -16	AE5329	AE30025	AE30027
90 to 90	-4 to -16	AE5330	AE30027	AE30027



### Assembly Length

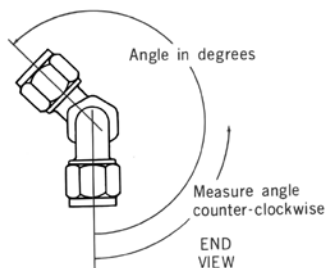
Assembly length is measured from sealing surface to sealing surface. When defining the part number length, measure the length from gauge point to gauge point of NAS 1760 flareless fittings. The "C" dimensions on page 5 shows the difference between overall length and length to gauge point. With elbow fittings, the measuring point is the intersection of the center line of the elbow with the face of the sealing surface.

### Assembly Length Tolerances

Up to and including 18 inches:	±.125
Above 18 inches, to and including 36 inches:	±.250
Above 36 inches, to and including 50 inches:	±.500
Above 50 inches:	±1% of length

### Rotational Angle Measurement

On assemblies with an elbow fitting on each end, measure the rotation angle as shown. The index angle will follow the basic style hose assembly part number indicated (see example for "double elbow" assemblies). In all cases, the angle should be expressed in 3 digits. For example, 35° should be written as 035. If the angle desired is 0°, specify 000.



### Examples:

#### Double Elbow Hose Assemblies

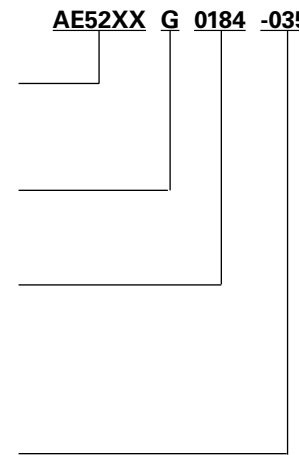
**AE52XX G 0184 -035**

Base number for all double elbow assemblies.

Size Code (see below).

Assembly length, in inches, always four digits; last digit indicates fractional length in 1/8's of an inch.

Elbow position angle, expressed in three digits.



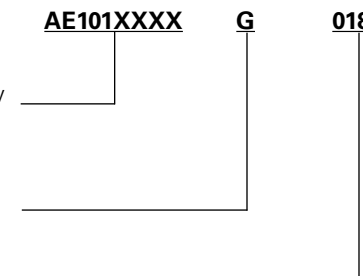
#### Straight and Single Elbow Hose Assemblies

**AE101XXXX G 0184**

Base number for all straight and single elbow assemblies

Size Code (see below)

Assembly length, in inches, always four digits; last digit indicates fractional length in 1/8's of an inch.



<b>Fitting Dash Size</b>	4	6	8	10	12	16	20	24	32
<b>Letter Code</b>	E	G	H	J	K	M	N	P	R

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