

**Aeroquip® Brand**

4-Spiral Reinforced PTFE Hose Assemblies

AE313, AE413 and AE513 Series



*Powering Business Worldwide*

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## Simpler Construction

The construction of the AE313 hose itself has been simplified. A unique process developed by Eaton permits elimination of the calendar layers between wire wraps. The result is a more efficient use of the wire reinforcement layers and an almost 50% reduction in the minimum bend radius. In addition, AE313 hose assemblies use two-piece fittings instead of the three-piece fittings used on previous PTFE 4-spiral wire hose assemblies.

## Meets AS1339-Revision B and AS604-Revision A performance requirements



**AE313 4-Spiral Reinforced PTFE Hose**



**Previous 4-Spiral Reinforced PTFE Hose**

## Smaller Envelope Fittings

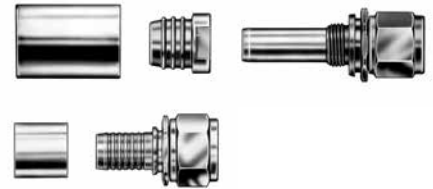
The flared and flareless fittings in straight, 45° and 90° elbow configurations (in the 1-inch size) of Aeroquip brand AE313 hose are smaller in O.D./length ranging from 20% to 65% compared to previous fittings.



**Previous Fittings**



**AE313 Fittings**



## More Flexible

The minimum bend radius of the 1-inch (-16) hose is 5.00 inches (127mm) compared to 9.62 inches (244,3mm) for the previous hose style. This greater flexibility provides a significant advantage, especially in limited space installations.

## Flared

AE313 flared fittings have an average weight savings of 34% vs. previous flared fittings.

## Flareless

AE313 flareless fittings have an average weight savings of 30.3% vs. previous flared fittings.

## Lighter Weight Fittings

The overall weight of the AE313 hose assemblies is substantially reduced due to the simplified construction of the fittings.

Fitting Weight lbs. (kgs)	Straight	45° Elbow	90° Elbow
1.100 0,500			
1.000 0,454			
0.900 0,408			
0.800 0,363			
0.700 0,317			
0.600 0,272			
0.500 0,227			
0.400 0,181			
0.300 0,136			
0.200 0,091			
0.100 0,045			

Fitting Weight lbs. (kgs)	Straight	45° Elbow	90° Elbow
1.100 0,500			
1.000 0,454			
0.900 0,408			
0.800 0,363			
0.700 0,317			
0.600 0,272			
0.500 0,227			
0.400 0,181			
0.300 0,136			
0.200 0,091			
0.100 0,045			

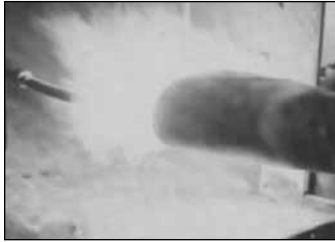
**Note:** Both flared and flareless fittings for AE313 hose use the same socket. Socket weight is included with fittings

## Increasing the Capabilities of AE313 Hose Assemblies

The use of either Aeroquip brand integral firesleeve or integral chafe guard on AE313 hose assemblies protects against adverse environments and helps prolong service life.

### AE413 Integral Silicone Covered Hose

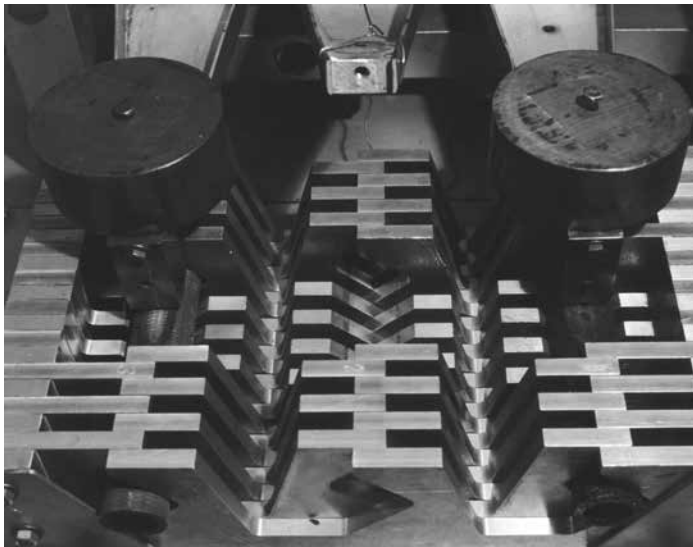
This durable cover is an asbestos-free material extruded directly onto the outer wire braid to form a smooth, tight bond. The integral cover eliminates the need for fire sleeve attachment band clamps and eliminates fluid “wicking.” The AE413 hose also has a smaller envelope than the conventional tubular firesleeve.



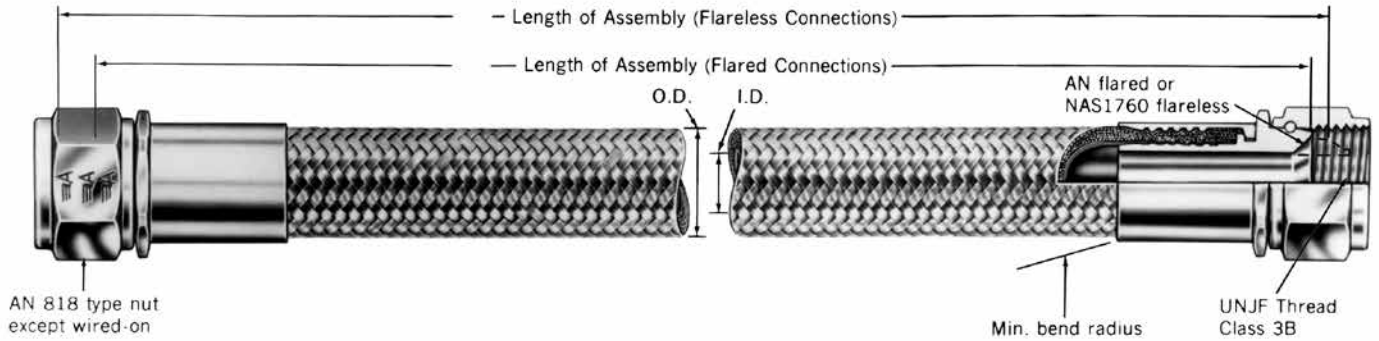
AE413 hose meets the fire test requirements of TSO-C75 Types IIIA and IIIB and AS1055 Type IIa and IIb Class B.

### AE513 Integral Polyester Chafe Guard Covered Hose

The Aeroquip brand chafe resistant cover is made integral with the hose by braiding polyester yarn onto the outer wire braid. The cover adds minimal weight and minimal increase in O.D. to the hose assembly and allows the same hose flexibility (minimum bend radius) as unsleeved hose. AS604 Rev. A performance capability is maintained with exception of an upper temperature limit of 300°F (+150°C).



This tough polyester braid withstood 1,000,000 abrasion test cycles without exposing the wire braid.



**AE313 Hose**



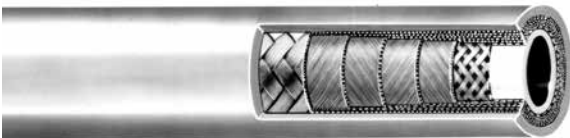
**Construction**

Extruded conductive PTFE inner tube with corrosion resistant steel wire inner braid. Multiple spirally applied corrosion resistant steel reinforcement and corrosion resistant steel outer braid.

**Operating Temperature Range:** -65°F to +400°F (-54°C to +204°C)

Dash Size	O.D. Tube Size inches (mm)	Hose I.D. Min. inches (mm)	Hose O.D. Max. inches (mm)	Maximum Operating Pressure psi (bar)	Proof Pressure psi (bar)	Minimum Burst Pressure psi (bar)	Minimum Bend Radius inches (mm)	Weight lbs/inch (kg/m)
-16	1.0 (25,4)	.855 (21,7)	1.27 (32,3)	3000 (207)	6000 (414)	12000 (828)	5.00 (127)	.086 (0,128)

**AE413 Hose**



**Construction**

AE313 hose with an integral cover of asbestos-free silicone rubber compound

**Operating Temperature Range:** -65°F to +400°F (-54°C to +204°C)

Dash Size	O.D. Tube Size inches (mm)	Hose I.D. Min. inches (mm)	Hose O.D. Max. inches (mm)	Maximum Operating Pressure psi (bar)	Proof Pressure psi (bar)	Minimum Burst Pressure psi (bar)	Minimum Bend Radius inches (mm)	Weight lbs/inch (kg/m)
-16	1.0 (25,4)	.855 (21,7)	1.52 (38,6)	3000 (207)	6000 (414)	12000 (828)	5.00 (127)	.113 (0,168)

**AE513 Hose**



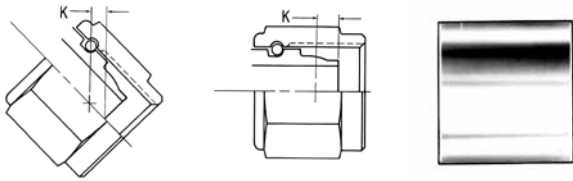
**Construction**

AE313 hose overlaid with a braided cover of tough polyester yarn

**Operating Temperature Range:** -65°F to +300°F (-54°C to +150°C)

Dash Size	O.D. Tube Size inches (mm)	Hose I.D. Min. inches (mm)	Hose O.D. Max. inches (mm)	Maximum Operating Pressure psi (bar)	Proof Pressure psi (bar)	Minimum Burst Pressure psi (bar)	Minimum Bend Radius inches (mm)	Weight lbs/inch (kg/m)
-16	1.00 (25,4)	.855 (21,7)	1.33 (33,8)	3000 (207)	6000 (414)	12000 (828)	5.00 (127)	.094 (0,140)

# Fitting Dimensions



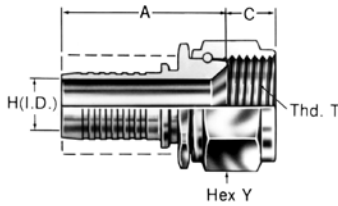
## Socket AE25877 (code)

Socket must be ordered separately under Eaton's Aeroquip brand part number AE25877 (letter size code same as nipple assembly).

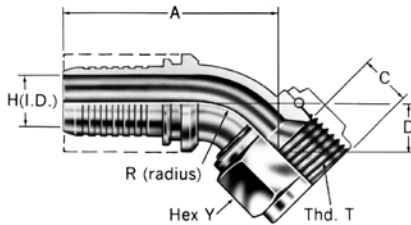
K = gauge point location per NAS 1760; .30 inch (7,62 mm)

## Flared

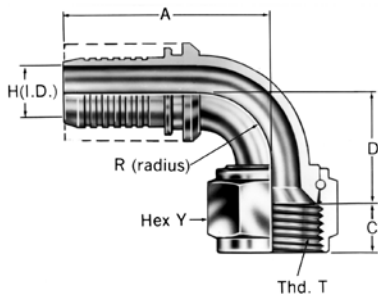
### Straight



### 45° Elbow

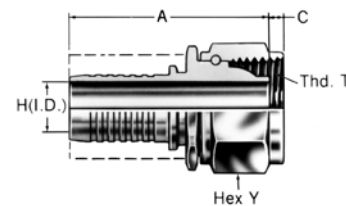


### 90° Elbow

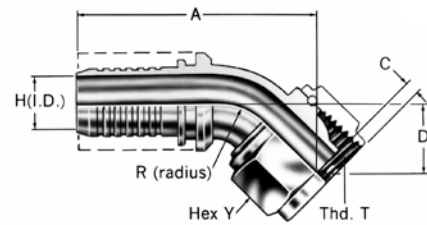


## Flareless

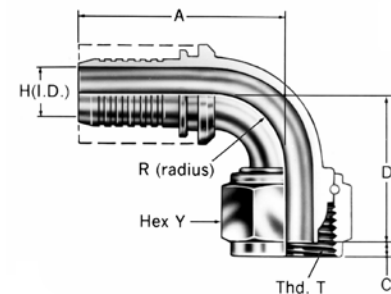
### Straight



### 45° Elbow



### 90° Elbow



Dimensions shown in inches (mm); weights shown in lbs. (kg)

Max. A: Maximum length of fitting including socket when fitting is assembled on hose.

Nom. D: Nominal drop dimensions. Tolerance is  $\pm 0.035$  (0,889) on 90° and 45° bent tube fittings.

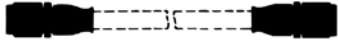
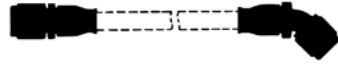
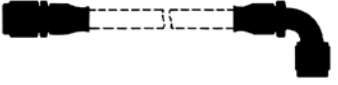
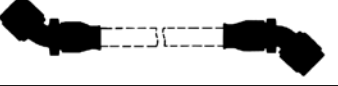
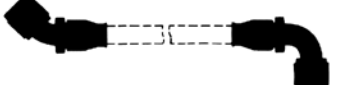
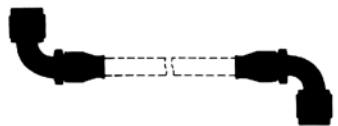
Configuration	Straight	45°	90°
<b>Dash Size</b>	-16	-16	-16
<b>Nipple Assembly</b>	AE25966M	AE26335M	AE25968M
<b>Max. A</b>	2.33 (59,18)	3.17 (80,52)	3.02 (76,71)
<b>C</b>	.50 (12,24)	.63 (16,00)	.63 (16,00)
<b>Nom. D</b>	—	.715 (18,16)	1.579 (41,11)
<b>Min. H Thru Hole</b>	.72 (18,29)	.66 (16,76)	.66 (16,76)
<b>R**</b>	—	.969 (24,61)	1.38 (35,05)
<b>Thread T</b>	1.3125 12UNJ-3B	1.3125 12UNJ-3B	1.3125 12UNJ-3B
<b>Hex Y</b>	1.50 (38,10)	1.50 (38,10)	1.50 (38,10)
<b>Weight</b>	.419 (0,190)	.509 (0,231)	.581 (0,264)

Configuration	Straight	45°	90°
<b>Dash Size</b>	-16	-16	-16
<b>Nipple Assembly</b>	AE26237M	AE26336M	AE26337M
<b>Max. A</b>	2.86 (72,64)	3.52 (89,41)	3.02 (76,71)
<b>C</b>	.14 (3,56)	.13 (3,30)	.13 (3,30)
<b>Nom. D</b>	—	1.069 (27,15)	2.079 (52,81)
<b>Min. H Thru Hole</b>	.72 (18,29)	.66 (16,76)	.66 (16,76)
<b>R**</b>	—	.969 (24,61)	1.38 (35,05)
<b>Thread T</b>	1.3125 12UNJ-3B	1.3125 12UNJ-3B	1.3125 12UNJ-3B
<b>Hex Y</b>	1.50 (38,10)	1.50 (38,10)	1.50 (38,10)
<b>Weight</b>	.499 (0,226)	.559 (0,254)	.630 (0,286)

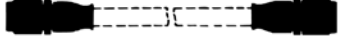
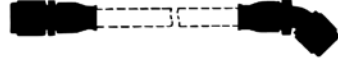
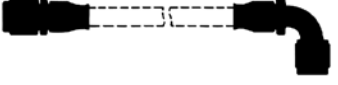
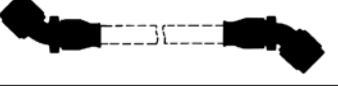
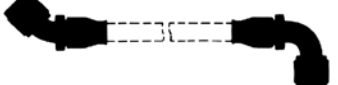
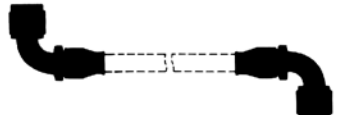
\*\*R: Radius of elbow measured to centerline.

Meets the requirements of AS1339 Rev. B and AS604 Rev. A

**Flared**

	A	B	Hose	Dash Size	Assembly Base No.	Nipple A Part No.	Nipple B Part No.
AS627			AE313	-16	AE1010732	AE25966M	AE25966M
AS628			AE313	-16	AE1010733	AE25966M	AE26335M
AS629			AE313	-16	AE1010734	AE25966M	AE25968M
AS630			AE313	-16	AE5020	AE26335M	AE26335M
AS631			AE313	-16	AE5022	AE26335M	AE25968M
AS632			AE313	-16	AE5021	AE25968M	AE25968M






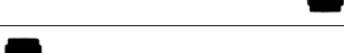
**Flareless**

	A	B	Hose	Dash Size	Assembly Base No.	Nipple A Part No.	Nipple B Part No.
AS621			AE313	-16	AE1010735	AE26237M	AE26237M
AS622			AE313	-16	AE1010736	AE26237M	AE26336M
AS623			AE313	-16	AE1010737	AE26237M	AE26337M
AS624			AE313	-16	AE5023	AE26336M	AE26336M
AS625			AE313	-16	AE5025	AE26336M	AE26337M
AS626			AE313	-16	AE5024	AE26337M	AE26337M







# Hose Assemblies With AE413 Hose

Meets the requirements of AS1339 Rev. B and AS604 Rev. A and fire test requirements of AS1055 Type IIa and 11b Class B, TSO C75 Types IIIA and IIIB

## Flared

	A	B	Hose	Dash Size	Assembly Base No.	Nipple A Part No.	Nipple B Part No.
AS627			AE413	-16	AE1010740	AE25966M	AE25966M
AS628			AE413	-16	AE1010741	AE25966M	AE26335M
AS629			AE413	-16	AE1010742	AE25966M	AE25968M
AS630			AE413	-16	AE5030	AE26335M	AE26335M
AS631			AE413	-16	AE5032	AE26335M	AE25968M
AS632			AE413	-16	AE5031	AE25968M	AE25968M

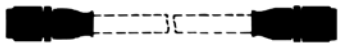
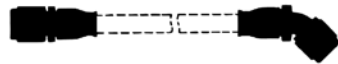
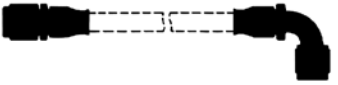
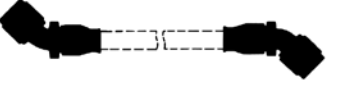
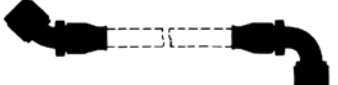
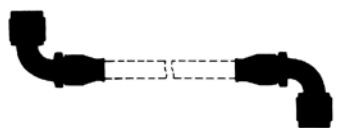
## Flareless

	A	B	Hose	Dash Size	Assembly Base No.	Nipple A Part No.	Nipple B Part No.
AS621			AE413	-16	AE1010743	AE26237M	AE26237M
AS622			AE413	-16	AE1010744	AE26237M	AE26336M
AS623			AE413	-16	AE1010745	AE26237M	AE26337M
AS624			AE413	-16	AE5033	AE26336M	AE26336M
AS625			AE413	-16	AE5035	AE26336M	AE26337M
AS626			AE413	-16	AE5034	AE26337M	AE26337M

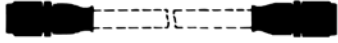
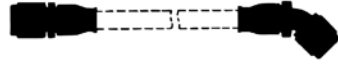
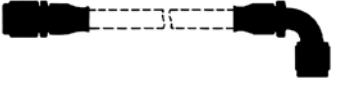
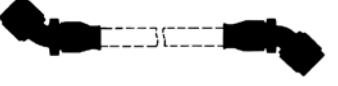
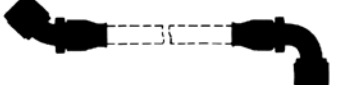
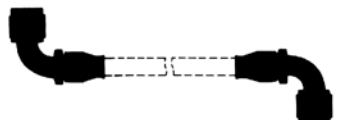


Meets the requirements of AS1339 Rev. B\* and AS604 Rev. A\*

## Flared

	A	B	Hose	Dash Size	Assembly Base No.	Nipple A Part No.	Nipple B Part No.
AS627			AE513	-16	AE1010758	AE25966M	AE25966M
AS628			AE513	-16	AE1010817	AE25966M	AE26335M
AS629			AE513	-16	AE1010818	AE25966M	AE25968M
AS630			AE513	-16	AE5063	AE26335M	AE26335M
AS631			AE513	-16	AE5065	AE26335M	AE25968M
AS632			AE513	-16	AE5064	AE25968M	AE25968M

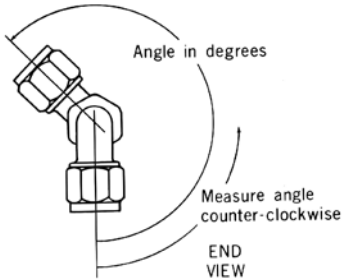
## Flareless

	A	B	Hose	Dash Size	Assembly Base No.	Nipple A Part No.	Nipple B Part No.
AS621			AE513	-16	AE1010819	AE26237M	AE26237M
AS622			AE513	-16	AE1010820	AE26237M	AE26336M
AS623			AE513	-16	AE1010821	AE26237M	AE26337M
AS624			AE513	-16	AE5066	AE26336M	AE26336M
AS625			AE513	-16	AE5068	AE26336M	AE26337M
AS626			AE513	-16	AE5067	AE26337M	AE26337M

\*Except for upper temperature limit of +300°F (+150°C)

# Hose Assembly Part Numbers

## How to Complete Hose Assembly Part Number



### Position Angle

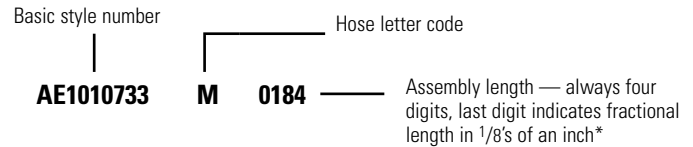
On assemblies with an elbow fitting on each end, measure the position angle as shown above, and the index angle will follow the basic style hose assembly part number, as indicated at the right. In all cases, the angle should be expressed in three digits. For example, 35° should be written as 035. If the angle desired is 0°, specify 000.

### Basic Assembly Numbers

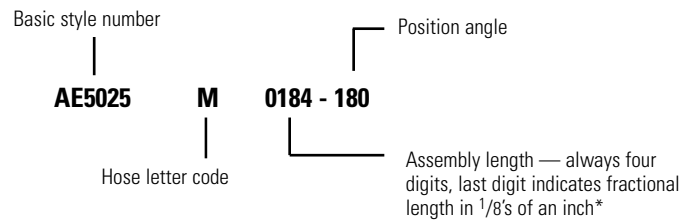
The basic part numbers shown here represent standard configurations with materials, markings and cleaning requirements conforming to AS1339 and AS604. If your requirements differ from these standards, the hose assemblies you order will be assigned new numbers by Eaton.

### Sample Part Numbers

#### Straight and single elbow assemblies



#### Double elbow assemblies



\*Length can be measured to the gauge point of NAS1760 or the end of the fitting, but when defining the part number length use length to the gauge point. "K" dimension shows the difference between overall length and length to gauge point (reference page 5).



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