KEVLAR® Reinforced High Pressure Teflon® Hose Assemblies

- Light Weight
- Integral Abrasion Resistance
- Qualified to Industry Standards
- Compatible with Aerospace Fluids
- Available for 3000, 4000 or 5000 psi Applications

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Kevlar and Teflon are registered trademarks of the DuPont Company.
KEVLAR® Reinforced High Pressure Teflon® Hose And Fittings

General Characteristics
With its Kevlar® reinforced hose product line, Aeroquip meets the challenge of the Aerospace Industry’s continuing requirements for weight savings, superior performance and increased value.

The same Kevlar® fiber that is used in bulletproof vests is used as the reinforcement material for Aeroquip AE319, AE334 and AE355 hose styles. The result is light weight hose assemblies that are capable of handling hydraulic pressures up to 5000 psi.

Kevlar® is the registered trademark for DuPont’s family of high temperature resistant aramid fibers having a unique combination of toughness and exceptional thermal stability. These properties offer the means to increase strength and reduce the weight of reinforcement in Aeroquip hose.

The Teflon® tube used in Aeroquip’s Kevlar® reinforced high pressure Teflon® hose is manufactured to the same stringent requirements as the tube used in our wire reinforced hoses. Inherent resiliency and toughness are built into the extruded tube by close control of factors affecting crystallinity. The extruded tube has a tough, smooth, waxlike texture which resists erosion and has sufficient conductivity to prevent electrostatically-induced hose failures.

Application Data
Aeroquip Kevlar® reinforced Teflon® hose is suitable for use with fuels, lube oils, hydraulic fluids, coolants or solvents commonly used in aircraft applications. Superior vibration resistance and low volumetric expansion make these hoses ideal for high pressure hydraulic system applications.

The Aeroquip Kevlar® reinforced Teflon® hoses shown in this bulletin are rated according to the listed industry specifications. These various ratings are for specific service conditions involving specified temperature, pressure and impulse conditions. In many cases, a specific rating can be successfully exceeded if other variables are modified. Thus a higher operating pressure might be allowable if temperature and impulse life are modified. Our trained application engineers are available to help with recommendations for special applications with the support of our test facilities and experienced technical staff.

Hose assemblies can be fitted with Aeroquip AE102 (AS1072) style firesleeve for fire protection.

Identification
A white layline consisting of “Aeroquip”, hose part number and size and specification number (where applicable) is printed along the length of the hose.

Fittings
Fittings are available in both flareless and ArcSeal® styles to mate with MS33514 and MIL-F-85421 end connections. In addition, elbow fittings are available in standard 45° and 90° styles. Contact Aeroquip about special fittings for custom installations.

Fitting Material

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<th>AE319/AE334 FITTINGS</th>
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<td>Wire - 305 CRES (AMS 5685) or 302 CRES (AMS 5637)</td>
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<td>Socket - Commercially pure titanium (ASTM B 348 Grade 2)</td>
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ArcSeal® is a registered trademark of Aeroquip Corporation
# AE319 Heavy Duty Hose

## 3000/4000 psi Operating Pressure

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*All dimensions in inches*

**Temperature Range:** -65°F to +275°F

**Construction:** Extruded, conductive Teflon® inner tube, with one (-4 size), two (-6 through -10 sizes) or three (-12 and -16 sizes) layers of full-coverage Kevlar® reinforcement and a full-coverage black PBI / Kevlar® (-4 through -12 sizes) or black polyester (-16 size) outer braid.

**Industry Specifications:** Meets the requirements of SAE specification AS4623 for heavy duty 3000 psi operation. Qualified to Aeroquip specifications for 4000 psi operation.

**FAA Approvals:** All sizes are certified to TSO-C75, Type II-B-S/P.
## AE319 Fittings and Hose Assemblies

### 3000 psi Flareless Fitting Dimensions

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*Nipple assembly part number does not include socket

All dimensions in inches

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## 3000 psi Hose Assemblies - Flareless to Flareless

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# AE319 Fittings and Hose Assemblies

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* Nipple assembly part number does not include socket

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## 4000 psi Hose Assemblies - Flareless to Flareless

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**3000/4000 psi ArcSeal® Fitting Dimensions**

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*A nipple assembly part number does not include socket. All dimensions in inches.*

### 3000/4000 psi Hose Assemblies - ArcSeal® to ArcSeal®

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*The -16 size is only qualified for operating pressures of 3000 psi and below.*
# AE355 Standard Duty Hose

## 3000/4000 psi Operating Pressure

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*All dimensions in inches*

### Temperature Range

-65°F to +275°F

### Construction

Extruded, conductive Teflon® inner tube, with one (-4 through -8 sizes) or two (-10 size) layers of full-coverage Kevlar® reinforcement and a full-coverage black polyester outer braid.

### Industry Specifications

Meets the requirements of SAE specification AS1975 for 3000/4000 psi operation.

### FAA Approvals

All sizes are certified to TSO-C75, Type II-B-S/P.
### AE355 Fittings and Hose Assemblies

#### 3000/4000 psi Flareless Fitting Dimensions

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*Fitting assembly part number does not include socket

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# AE355 Fittings and Hose Assemblies

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*Fitting assembly part number does not include socket

All dimensions in inches

## 3000/4000 psi Hose Assemblies - ArcSeal® to ArcSeal®

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# AE334 Hose

## 5000 psi Operating Pressure

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All dimensions in inches

### Temperature Range:
-65° F. to +275° F.

### Industry Specifications:
Meets the performance requirements of MIL-H-85800 for 5000 psi operation.

### Construction:
Extruded, conductive Teflon® inner tube, with two (-3 through -6 sizes) or three (-8 and -10 sizes) layers of full-coverage Kevlar® reinforcement and a full-coverage black PBI / Kevlar® outer braid.
# AE334 Fittings and Hose Assemblies

## 5000 psi ArcSeal® Fitting Dimensions

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* Nipple assembly part number does not include socket

All dimensions in inches

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## 5000 psi Hose Assemblies - ArcSeal® to ArcSeal®

### MIL-H-85800/1

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*All dimensions in inches*

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*Aeroquip 11*
How to Complete Hose Assembly Part Numbers

The part numbers shown here represent standard configurations with materials, markings and cleaning requirements conforming to the related military or aerospace standards as they apply. If your requirements differ from these standards, the hose assemblies you order will be assigned new customer specific part numbers by Aeroquip.

Example of Aeroquip Part Number

AC129HA0242SSU

Base Part Number and Hose Size Code
Silicone Firesleeve
Use "-" if Sleeve is Not Required
Length of Assembly in Inches
Fraction of an Inch in Eighths

R-Step Down One Size
S-Hose Size
E-Step Up One Size

90' Fitting

Lockwire Holes
U-Two Lockwire Holes
W-Three Lockwire Holes
Leave Character Space Blank if Lockwire Holes are Not Required

Example of Aeroquip Part Number

AC139HA242U270

Base Part Number and Hose Size Code
Silicone Firesleeve
Use "-" if Sleeve is Not Required
Length of Assembly in Inches
Fraction of an Inch in Eighths
Lockwire Holes
U-Two Lockwire Holes
W-Three Lockwire Holes
Use "-" if Lockwire Holes are Not Required
Orientation Angle in 1° Increments

On assemblies with an elbow fitting on each end, measure the orientation angle as shown above. Add the angle measurement as a suffix to the base part number. In all cases, the angle should be expressed in 3 digits. For example, 90° should be written 090. If the angle desired is 0°, specify 000.

The length for flareless hose assemblies can be measured to the end of the nipple or to the gage point, as referenced in NAS1760. When defining the part number length, use the length between the gage points. The "K" dimension shows the distance between the end of the nipple and the gage point (reference pages 4, 5 and 8).

This part number format is consistent with the SAE AS part number format.

Hose Dash Size 3 4 6 8 10 12 16
Letter Code BEGHIJKM

AEROQUIP CORPORATION
Aerospace Marine Group
300 S. East Avenue
Jackson, MI 49203-1972
Phone: 517-787-8121
Fax: 517-787-5758
http://www.aeroquip.com

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