

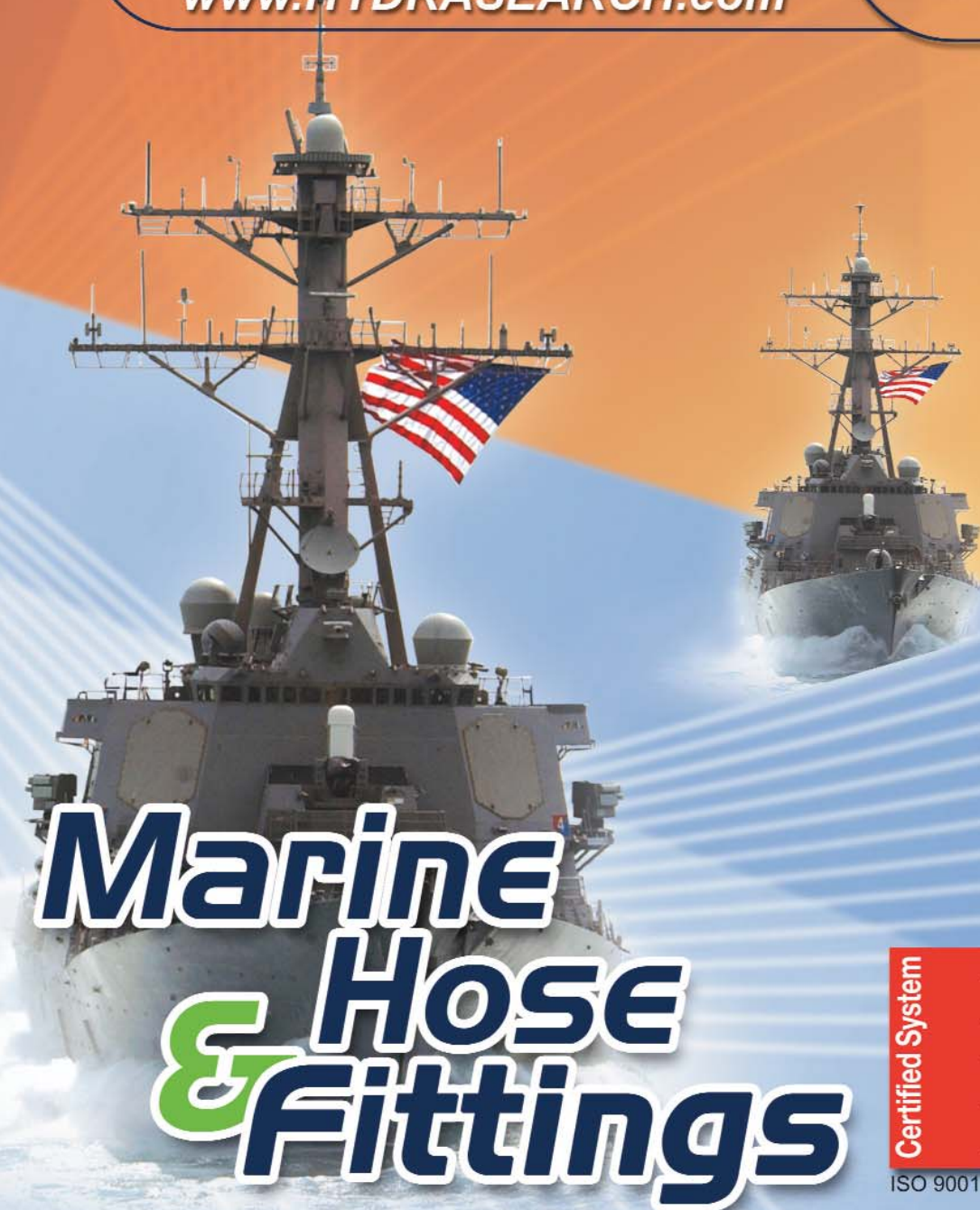


Hydrasearch

**Committed
to Quality
& Innovation!**

**Catalog
109**

www.HYDRASEARCH.com



**Marine
& Hose
Fittings**



Hydrasearch Co., Inc.
Chesapeake Bay Business Park
100 Log Canoe Circle
Stevensville, MD 21666

Ph: 410.643.8900
Fx: 410.643.8954
www.hydrasearch.com



Committed to Quality and Innovation

Founded in 1962, Hydrasearch Company, Inc. is dedicated to providing military and commercial marine vessels with the highest quality products, fully compliant with customer requirements.

We have successfully built our business through strict adherence to product design and quality control, interchangeability with existing products, close attention to customer requirements and delivery needs, and competitive pricing. As a result, we have steadily increased our market presence.

Today, Hydrasearch products are found in marine vessels throughout the world. We supply all major shipyards in the U.S., and our market continues to grow internationally.

A Knowledge Base Built on Experience

For Over 40 years, Hydrasearch has focused on the design, development, and manufacture of fluid systems and components. Many of our original products were specially designed hydraulic systems and fueling-at-sea-systems for the U.S. Navy. Our in-depth knowledge of hose fitting designs for demanding applications soon led to the development of innovative hose couplings and related products that are now part of many fuel and water handling systems used by military and commercial customers alike.

Our Mission

Work together to delight our customers and generate a profit.

Hydrasearch Co., Inc.
Chesapeake Bay Business Park
100 Log Canoe Circle
Stevensville, MD 21666

Ph: 410.643.8900
Fx: 410.643.8954
www.hydrasearch.com



About Hydrasearch

Military Qualifications That Build Confidence

In the mid-1980's, Hydrasearch developed its ER512 line of hoses and fittings. Following tests and Qualified Products Listings (QPL) approvals by the Naval Sea Systems Command (NAVSEA), the ER512 line became widely used aboard Navy ships for vibration absorption, sound deadening, and movement of connected equipment. Since then, Hydrasearch has received QPL listings for six additional product lines, plus acceptance of all related accessory equipment.

Many of the products listed in this catalog comply with U.S. Military Specifications MIL-H-24136, and MIL-F-24787. Hydrasearch products are approved under Qualified Products Listings QPL-24135, QPL-24136 and QPL-24787.

Expanding Horizons

Our growth and successful penetration of the market led to the relocation of Hydrasearch's manufacturing activities to larger facilities in 1994. One year later, we acquired Technical Products & Precision Manufacturing Company. Known for its quality line of valves and fittings, the Technical Products acquisition significantly expanded our product offerings to the defense industry, as well as to the select commercial markets worldwide, such as the petrochemical industry. In 1999 Hydrasearch acquired the Aerospace Hose and Fitting Line from Deutsch Metal Components. This acquisition continues our efforts to expand our presence in the military market.

ii

Quality Control Ensures Reliability

Supplying high quality products is our foremost concern at Hydrasearch. We maintain an ISO 9001 registered Quality System which ensures strict adherence to requirements. Many Hydrasearch products contain special codes that can be traced to a specific heat of raw material whose chemical and physical properties have been analyzed, tested, and recorded.

Complete Customer Satisfaction

Supplying products that meet strict design and quality standards is only part of our mission. At Hydrasearch, we strive to establish and maintain close relationships with each of our customers. We pay attention to the little details that help you obtain just what you need, when you need it. If your requirements involve more than a "standard" product, our technical staff will work to satisfy those needs.



Using This Catalog

Dimensions - All dimensions shown are approximate, and subject to change. Please contact Hydrasearch Technical Sales Department at (410) 643-8900 if exact dimensions are required.

Pricing & Availability - Please contact Hydrasearch Technical Sales Department at (410) 643-8900 for pricing and availability information.

NAVSEA Technical Directive - Please refer to the Technical Directive, Piping Devices, Flexible Hose Assemblies S6430-AE-TED-010, Volume 1 for information and guidelines on the selection, fabrication, inspection, installation, and maintenance of flexible hose assemblies used in piping systems aboard U.S. Navy Ships.

Accuracy of Information - Every effort has been made to ensure the accuracy of the information contained in this catalog. While we cannot assume liability for any errors or omissions, we encourage you to contact our Customer Service Department with such information, so that the necessary changes can be made.

Other Catalogs Available - Please contact our Technical Sales Department at (410) 643-8900 to request other Hydrasearch product literature, free of charge:

- Underway Replenishment Products
- Layflat and Rubber Hoses
- Reattachable Couplings for Layflat & Rubber Hoses
- Tech-O-Seal™ Valves & Fittings
- Aerospace Hose and Fittings

iii

Statement of Guaranty

Hydrasearch Company, Inc. guarantees that its own designed and manufactured equipment meets the overall specifications, technical proposals or published catalog data.

Hydrasearch equipment is guaranteed to be free of defects in materials and workmanship for twelve (12) months from date of shipment. Components purchased for above equipment, and under warranty by another manufacturer, carry that manufacturer's warranty only.

Liabilities under this warranty are limited to the replacement, correction, or repair of the defect at the original place of shipment. No liability can be accepted for the loss of revenues due to non-operation of equipment, nor for the cost of repair beyond those stated above.

©Hydrasearch is a registered trademark of Hydrasearch Company, Inc.
™The 'H' design is a trademark of Hydrasearch Company, Inc.
©2002 Hydrasearch Company, Inc.
Rev. 1

Table of Contents

- i..... **Introduction**
- ii.... **About Hydrasearch**
- iii.... **Using This Catalog**

Marine Hose and AssembliesSection A

- 2 **HS4182**..... Synthetic rubber tube cover with multiple layer synthetic fiber reinforcement
- 3 **ER512**..... Synthetic rubber tube cover with multiple layer synthetic fiber reinforcement
- 4 **HS133**..... Synthetic rubber tube cover with multiple layer synthetic fiber reinforcement
- 5 **HOS-22240**..... Synthetic rubber tube cover with multiple layer synthetic braided yarn reinforcement for fueling-at-sea applications
- 6 **HSSA**..... Polyurethane elastomer tube and cover reinforced with high-tensity polyester
- 7 **H/A-SNKL-134.5L**.. HS133 hose with crimped-on monel fittings

FittingsSection B

- 10 **HS449**..... Bolt-on 3-piece segment design for use with wire reinforced rubber hoses P/N's HS4265 and HS4224
- 31 **HS1546**..... Bolt-on 2-piece segment design for use with synthetic yarn reinforced rubber hose P/N 4182
- 44 **ER512**..... Bolt-on 3-piece segment design for use with synthetic yarn reinforced rubber hose P/N ER512
- 60 **HS1489**..... Bolt-on 2-piece segment design for use with synthetic yarn reinforced rubber hose P/N HS133
- 68 **HS1488**..... Solid socket design for use with synthetic yarn and wire reinforced hoses
- 107 **HS1600**..... Solid socket design for use with wire reinforced hoses
- 119 **HS1602**..... Solid socket design for use with wire reinforced hoses
- 127 **LFS**..... Bolt-on 2-piece design segment design for use with polyester reinforced polyurethane hose P/N HSSA

Split Clamps, Sil-Braze & TailpiecesSection C

- 132 Split clamps
- 133 Tailpiecess
- 137 "O"-Rings
- 137 Back-Up Rings
- 138 Internal Support Coil
- 140 Internal Support Sleeve



Table of Contents

Adapters	Section D
8652 Solder Port x 37°	142
8651 Sil-Braze Tube x 37° Male Flare	143
8640 Sil-Braze Tube x 37° Str. Thd	144
4307 Sil-Braze Pipe x 37° Male Flare	145
4238 37° Flare x Socketweld Pipe	146
8635 Female Sil-Braze Pipe x 37° Male Flare	147
6728 S.A.E. "O"-Ring Tube to 37° Flare	148
8641 S.A.E. 37° Flare Union	149
8636 Internal Pipe x 37° Flare	150
8650 Internal Pipe x 45° Flare	151
8638 External Pipe x 37° Flare	152
8637 37° Flare Internal x 37° Male Flare	153
8639 37° Flare Swivel x 37° Male Flare	154
8643 37° Flare Swivel x 37° Flare	155
8647 37° Flare Plug	156
8644 External Plug	156
8646 Reducer-Ext. Pipe x Internal Pipe	157
8645 External Pipe x Plug	157
Assembly Instructions	Section E
HS449 Fittings	160
HS1546 Fittings	161
ER512 Fittings	162
HS1489 Fittings	163
HS1488 Fittings	164
HS1600 Fittings	165
HS1602 Fittings	165
LFS Fittings	166
Internal Support Sleeves	167
Aeroquip to Hydrasearch	168
Conversion Information	189

Notes





Marine Hose & Assemblies

Section A

Product Designation	Construction	Sizes	Page No.
HS4182	Synthetic rubber and cover with multiple layer fiber reinforcement	2-1/2' to 4"	2
ER512	Synthetic rubber and cover with multiple layer fiber reinforcement	5" to 12"	3
HS133	Synthetic rubber and cover with multiple layer fiber reinforcement	3/8" to 2"	4
HOS-22240	Synthetic rubber and cover with multiple layer synthetic braided yarn reinforcement for fueling-at-sea applications	2-1/2" to 7"	5
HSSA	Polyurethane elastomer tube and cover reinforced with high-tenacity polyester	1-1/2" & 3"	6
H/A-SNKL-134.5L	HS133 hose with crimped-on monel fittings	1/2"	7

Hose

HS4182 - Large Bore

MIL-H-24136/4

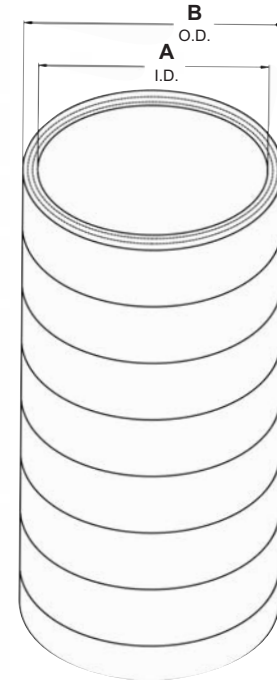
Equal to Aeroquip P/N FC132

Use with Hydrasearch **HS1546** Series Fittings on Pages 31 - 43.

Material: Synthetic rubber tube and cover reinforced with synthetic fiber.

Application: Oil, fuel, fresh and salt water systems.

Operating Temperature Range: -40°F to +200° F



Part Number	Hose I.D.	Pressure (Lb/In ²)		Dimensions (Inches)			
		Working Pressure	Burst Pressure	A		B	
				Min.	Max	Min.	Max
HS4182-40	2-1/2"	1,000	4,000	2.454	2.531	3.230	3.360
HS4182-48	3"	900	3,600	2.954	3.031	3.730	3.860
HS4182-64	4"	600	2,400	3.938	4.062	4.800	5.050

Part Number	Hose Size (Dash No.)	Reinforcement		Minimum Bend Radius (In.)	Wt./Ft. (Lbs.)
		Construction	Layers		
HS4182-40	-40	Braided or Spiral	3 or 6	20	2.25
HS4182-48	-48	Braided or Spiral	3 or 6	24	2.55
HS4182-64	-64	Braided or Spiral	3 or 6	30	3.15

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Hose

ER512 - Large Bore

MIL-H-24136/1

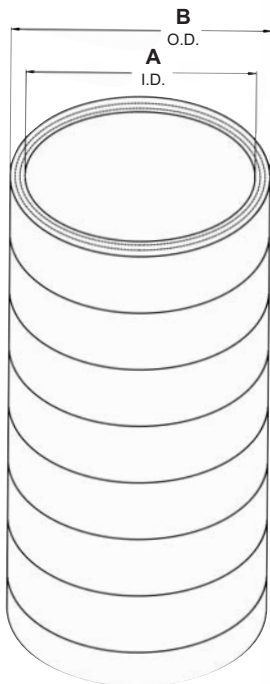
Equal to Aeroquip P/N 2580

Use with Hydrasearch ER512 Series Fittings on Pages 44 - 59.

Materials: Synthetic rubber tube and cover reinforced with synthetic fiber.

Application: Oil, fuel, fresh and salt water systems.

Operating Temperature Range: -40°F to +200° F



Part Number	Hose I.D.	Pressure (Lb/In ²)		Dimensions (Inches)			
		Working Pressure	Burst Pressure	A		B	
				Min.	Max	Min.	Max
HOS-ER512-5	5"	300	1,200	5.050	5.116	5.690	5.878
HOS-ER512-6	6"	300	1,200	6.036	6.110	6.750	6.938
HOS-ER512-8	8"	300	1,200	8.054	8.130	8.781	8.969
HOS-ER512-10	10"	200	800	10.064	10.140	10.781	10.969
HOS-ER512-12	12"	150	600	12.111	12.187	12.925	13.249

Part Number	Hose Size (Dash No.)	Reinforcement		Minimum Bend Radius (In.)	Wt./Ft. (Lbs.)
		Construction	Layers		
HOS-ER512-5	-80	Spiral	6	36	3.71
HOS-ER512-6	-96	Spiral	6	42	4.65
HOS-ER512-8	-128	Spiral	8	54	6.79
HOS-ER512-10	-160	Spiral	8	66	8.5
HOS-ER512-12	-192	Spiral	10	78	12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Hose

HS133 - High Pressure

MIL-H-24136/2

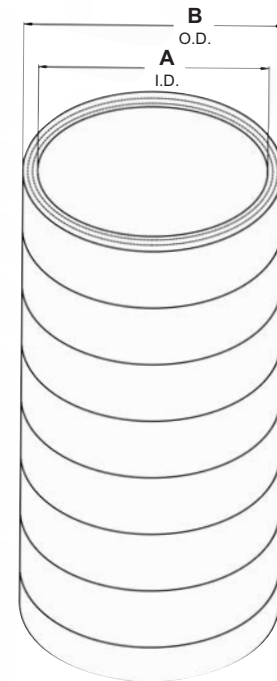
Equal to Aeroquip P/N FC133

Use with Hydrasearch **HS1489** Series Fittings on Pages 60 - 67.

Materials: Synthetic rubber tube and cover reinforced with synthetic fiber.

Application: Fresh and salt water systems, hydraulic systems, fuel systems, oil applications and low pressure air.

Operating Temperature Range: -40°F to +200° F



Part Number	Hose I.D.	Pressure (Lb/In ²) ²		Dimensions (Inches)			
		Working Pressure	Burst Pressure	A		B	
				Min.	Max	Min.	Max
HS133-06	3/8"	2000	8000	.359	.390	.968	1.031
HS133-08	1/2"	2000	8000	.465	.531	1.094	1.156
HS133-12	3/4"	1500	6000	.718	.781	1.469	1.531
HS133-16	1"	1400	5600	.968	1.031	1.750	1.812
HS133-20	1-1/4"	1000	4000	1.211	1.289	1.975	2.069
HS133-24	1-1/2"	1000	4000	1.461	1.539	2.203	2.297
HS133-32	2"	900	3600	1.961	2.039	2.702	2.828

Part Number	Hose Size (Dash No.)	Reinforcement		Minimum Bend Radius (In.)	Wt./Ft. (Lbs.)
		Construction	Layers		
HS133-06	-6	Braided	3	5.00	.46
HS133-08	-8	Braided	3	7.00	.52
HS133-12	-12	Braided	3	9.50	.81
HS133-16	-16	Braided	3	11.00	1.03
HS133-20	-20	Braided	3	16.00	1.26
HS133-24	-24	Braided	3	20.00	1.34
HS133-32	-32	Braided	3	25.00	1.88

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

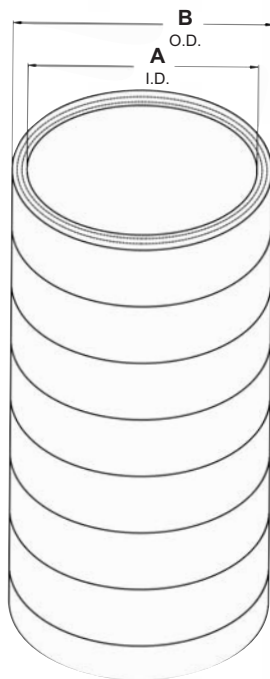


Hose

22240 - Fueling at Sea

MIL-H-22240

For a complete line of fittings and accessories see *Hydrasearch Underway Replenishment Catalog*.



Materials: Synthetic rubber tube and cover reinforced with braided yarn.

Application: Fueling at Sea Hoses come in 2-1/2", 4", 6", and 7" inside diameter sizes and are utilized for various transfer applications. The 4", 6", and 7" type "A" hoses are used only for Alongside Fueling. The 2-1/2" type "C" hoses can be used for Alongside Transfer of water in addition to fuel. The 6" type "B" hose is utilized in Astern Fueling-at-Sea Operations.

Operating Temperature Range: -40°F to +150° F

Part Number	Hose I.D.	Type	Pressure (Lb/In ²)		Dimensions (Inches)		Minimum Tensil (Lbs.)	Wt./Ft. (Lbs.)
			Working Pressure	Burst Pressure	A	B		
HOS-22240-25C	2-1/2"	C	300	600	2.50	3.12	5,000	1.5
HOS-22240-4A	4"	A	300	600	4.00	4.90	5,000	2.25
HOS-22240-6A	6"	A	300	600	6.00	6.90	12,000	4.4
HOS-22240-7A	7"	A	300	600	7.00	7.90	12,000	5
HOS-22240-6B	6"	B	300	600	6.00	7.01	16,000	4

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Hose

HSSA - Super Aquaduct Layflat Hose

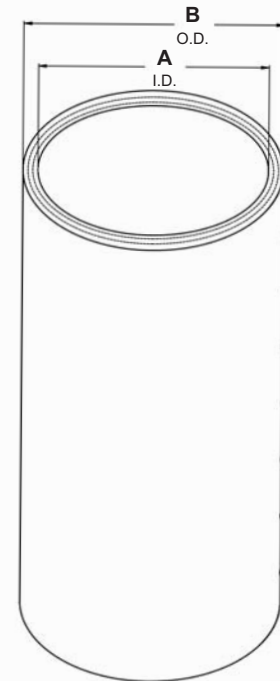
Use with Hydrasearch **LFS** Elbows and End Fittings on Pages 127 - 129.

For a complete line of fittings and accessories see Hydrasearch Layflat & Rubber Hose Catalog.

Materials: Polyurethane elastomer tube and cover reinforced with high tenacity polyester.

Application: Salt and fresh water conveying systems.

Operating Temperature Range: -40°F to +200° F



Part Number	Hose I.D.	Pressure (Lb/In ²)		Dimensions (Inches)			
		Working Pressure	Burst Pressure	A		B	
				Min.	Max	Min.	Max
HSSA-24	1-1/2"	300	600	1.50	1.59	1.64	1.73
HSSA-48	3"	300	600	2.97	3.06	3.15	3.24

Part Number	Hose Size (Dash No.)	Reinforcement		Wt./Ft. (Lbs.)
		Construction	Layers	
HSSA-24	-24	Polyester	1	.144
HSSA-48	-48	Polyester	1	.342

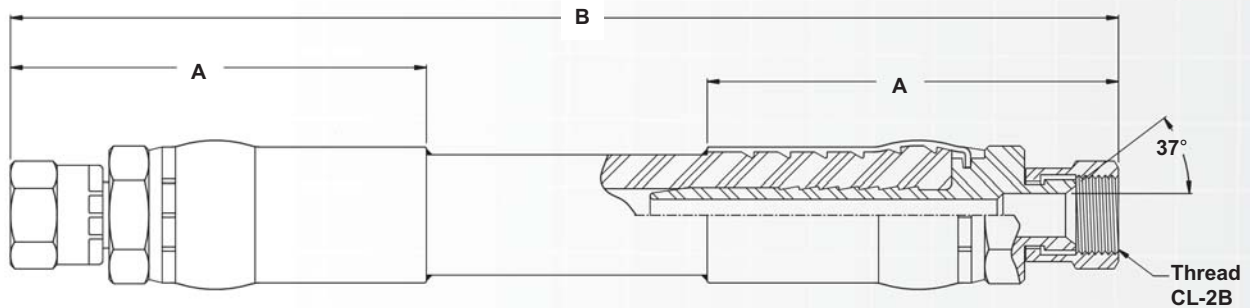
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Snorkel Hose Assembly

H/A-SNKL-134.5L

The Hydrasearch Snorkel Hose Assembly was specially designed for use in the snorkel induction system on nuclear submarines and is approved under NAVSEA Letter 03Y2C/377. The assembly can withstand external pressures associated with deep sea submergence and survive corrosive seawater environments.

The assembly comes standard in 134-1/2" Lengths. Other lengths are available as required. Fittings are constructed of monel and are a welded socket design. This inhibits seawater from entering the assembly. The assembly uses HS133 hose shown on page 4.



Part Number	Hose I.D. (NOM)	Hose O.D. (NOM)	Min. Bend Radius (In.)	Max. Operating Pressure (PSI)	Operating Temp. Range	Thread Size	A (In.)	B (In.)
H/A-SNKL-134.5L	.50	1.12	7.00	2,000	-40°F to +200° F	3/4"-16	3.96	134-1/2"

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Notes





Fittings

Section B

Product Designation	Construction	Sizes	Page No.
HS449	Bolt-on-3-piece segment design for use with wire reinforced rubber hoses P/N HS4265 and HS4224	2" - 4"	10
HS1546	Bolt-on-2-piece segment design for use with synthetic yarn reinforced rubber hoses P/N HS4182	2" - 4"	31
ER512	Bolt-on-3-piece segment design for use with synthetic yarn reinforced rubber hoses P/N ER512	5" - 12"	44
HS1489	Bolt-on-2-piece segment design for use with synthetic yarn reinforced rubber hoses P/N HS133	3/8" - 2"	60
HS1488	Solid socket design for use with synthetic yarn and wire reinforced hoses	1/4" - 3"	68
HS1600	Solid socket design for use with wire reinforced hoses	1/4" - 2"	107
HS1602	Solid socket design for use with wire reinforced hoses	1/4" - 1"	119
LFS	Bolt-on-2-piece segment design for use with polyester reinforced polyurethane hoses P/N HSSA	1-1/2", 3"	127

End Fitting - Straight - Hose to Flange

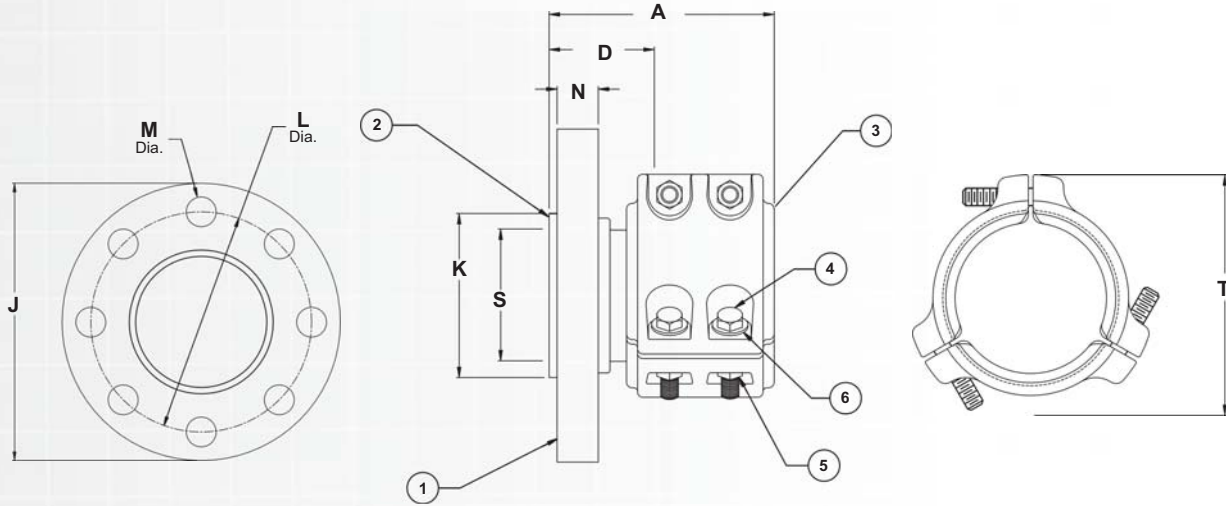
Equal to Aeroquip P/N 375-190752

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

Type F, Group IV, Class I,
400Lb. Flange Per MIL-PRF-20042

Fittings



Part Number	IPS Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A1-2-40	2"	7	.69	5.16	2.20	6.50	3.22	5.19	.81	2.24	5.35	12
EF-449A1-2.5-48	2-1/2"	8	.81	5.17	2.20	7.56	3.72	6.00	.94	2.71	5.58	17
EF-449A1-3-48	3"	8	.81	5.17	2.20	8.13	4.44	6.56	.94	3.31	5.58	18
EF-449A1-3.5-64	3-1/2"	9	.81	5.54	2.63	8.69	5.17	7.13	1.00	3.81	6.50	23
EF-449A1-4-64	4"	9	.81	5.54	2.63	9.25	5.22	7.69	1.00	4.28	6.50	26

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17798	C17801	C17802	C17803	C17804	Bronze
② Nipple	1	C17306	C18016	C17308	C18015	C17210	Alum. Bronze
③ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

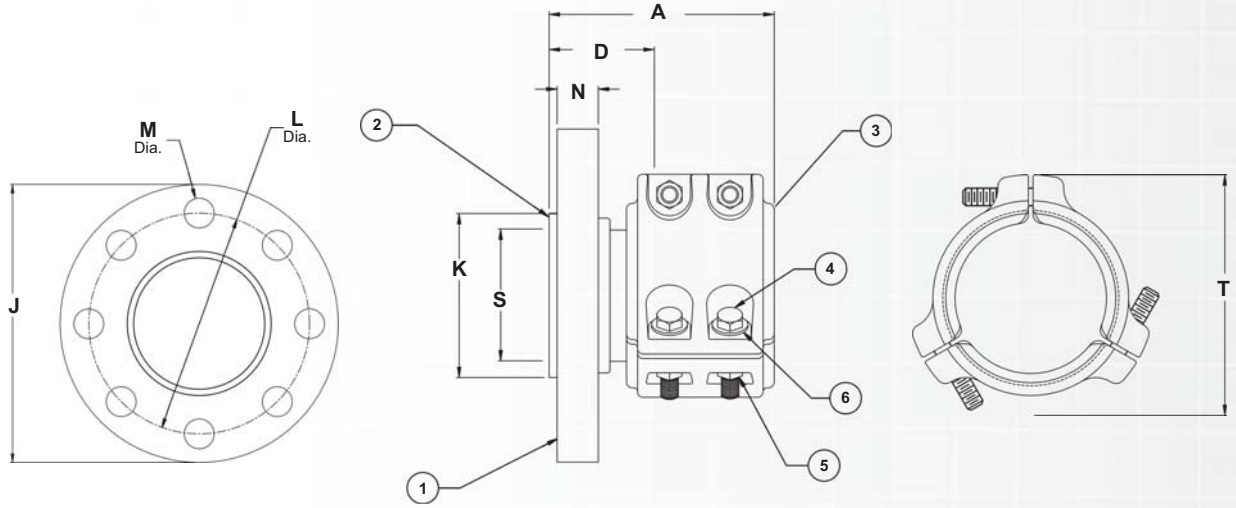


End Fitting - Straight - Hose to Flange

Equal to Aeroquip P/N 412-190814

Use with the following hose: HS4265, HS4224
2652, 150901

400Lb. Flange to Hose



Part Number	IPS Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A1-2.5-40-SS	2-1/2"	8	.81	5.16	2.20	7.56	3.28	6.00	.94	2.24	5.35	16

Components

Description	Req'd per Ass'y	2.5-40	Material
① Swivel Flange	1	C18156	Stainless Steel
② Nipple	1	C18152	Stainless Steel
③ Segment	3	D17299-1	Aluminum Bronze
④ Bolt	6	B17673-2	Monel
⑤ Lock Nut	6	B18176	Monel
⑥ Washer	6	B18175	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Hose to Flange

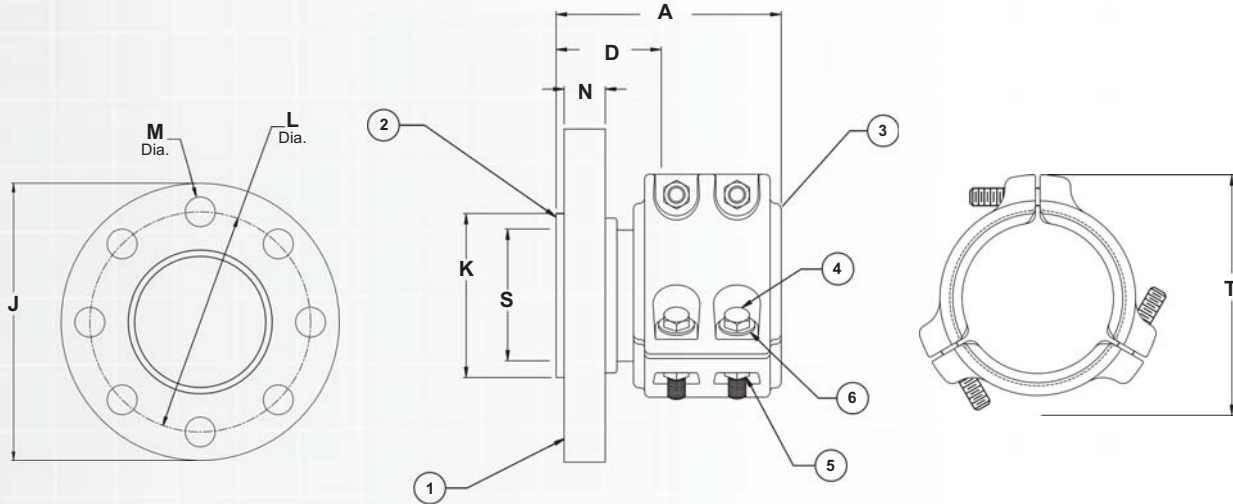
Equal to Aeroquip P/N 375-190751

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

Type F, Group IV, Class II,
150/400Lb. Flange Per MIL-PRF-20042

Fittings



Part Number	IPS Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A5-2-40	2"	6	.56	5.16	2.20	5.56	3.28	4.44	.81	2.24	5.35	10
EF-449A5-2.5-40	2-1/2"	6	.56	5.16	2.20	6.13	3.28	5.00	.94	2.24	5.35	12
EF-449A5-2.5-48	2-1/2"	6	.56	5.17	2.20	6.13	3.78	5.00	.94	2.71	5.58	13
EF-449A5-3-48	3"	8	.56	5.17	2.20	6.63	4.50	5.50	.94	3.31	5.58	13
EF-449A5-3.5-64	3-1/2"	8	.56	5.54	2.63	7.19	5.22	6.06	1.00	3.81	6.50	18
EF-449A5-4-64	4"	8	.56	5.54	2.63	7.69	5.22	6.56	1.00	4.28	6.50	20

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17765	C17796	C17795	C17766	C17794	C17767	Bronze
② Nipple	1	C17306	C17306	C18016	C17308	C18015	C17210	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

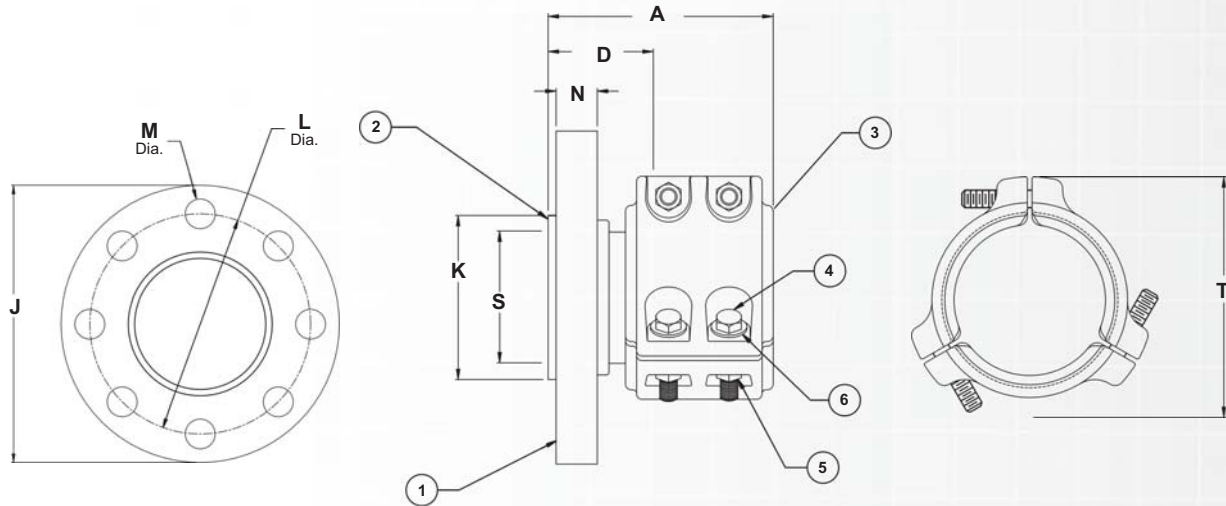
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Hose to Flange

Use with the following hose: HS4265,
HS4224 2652, 150901

MIL-F-24787/1,
Type F, Group IV, Class III,
250Lb. Flange Per MIL-PRF-20042



Part Number	IPS Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A2-2-40	2"	6	.69	5.16	2.20	5.56	3.22	4.44	.81	2.24	5.35	10
EF-449A2-2.5-40	2-1/2"	6	.69	5.16	2.20	6.13	3.22	5.00	.94	2.24	5.35	12
EF-449A2-2.5-48	2-1/2"	6	.69	5.17	2.20	6.13	3.72	5.00	.94	2.71	5.58	13
EF-449A2-3-48	3"	8	.69	5.17	2.20	6.63	4.44	5.50	.94	3.31	5.58	13
EF-449A2-3.5-64	3-1/2"	8	.69	5.54	2.63	7.19	5.17	6.06	1.00	3.81	6.50	18
EF-449A2-4-64	4"	8	.69	5.54	2.63	7.69	5.22	6.56	1.00	4.28	6.50	20

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17812	C17307	C17813	C17309	C17815	C17310	Bronze
② Nipple	1	C17306	C17306	C18016	C17308	C18015	C17210	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Hose to Flange

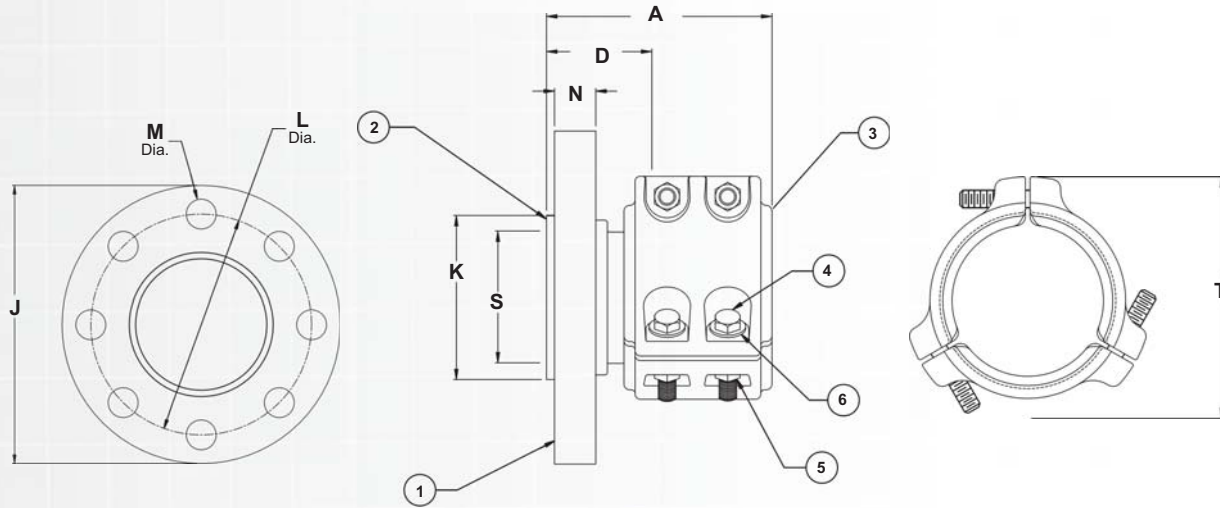
Equal to Aeroquip P/N 375-190655

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

**Type F, Group IV, Class IV,
150Lb. Flange Per MIL-PRF-20042**

Fittings



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A3-2-40	2"	6	.56	5.16	2.20	5.56	3.22	4.44	.44	2.24	5.35	8
EF-449A3-2.5-40	2-1/2"	6	.56	5.16	2.20	6.13	3.22	5.00	.50	2.24	5.35	9
EF-449A3-2.5-48	2-1/2"	6	.56	5.17	2.20	6.13	3.72	5.00	.50	2.71	5.58	10
EF-449A3-3-48	3"	8	.56	5.17	2.20	6.63	4.44	5.50	.50	3.31	5.58	11
EF-449A3-3.5-64	3-1/2"	8	.56	5.54	2.63	7.19	5.17	6.06	.50	3.81	6.50	15
EF-449A3-4-64	4"	8	.56	5.54	2.63	7.69	5.22	6.56	.50	4.28	6.50	16

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17925	C17929	C17931	C17933	C17938	C17940	Bronze
② Nipple	1	C17306	C17306	C18016	C17308	C18015	C17210	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



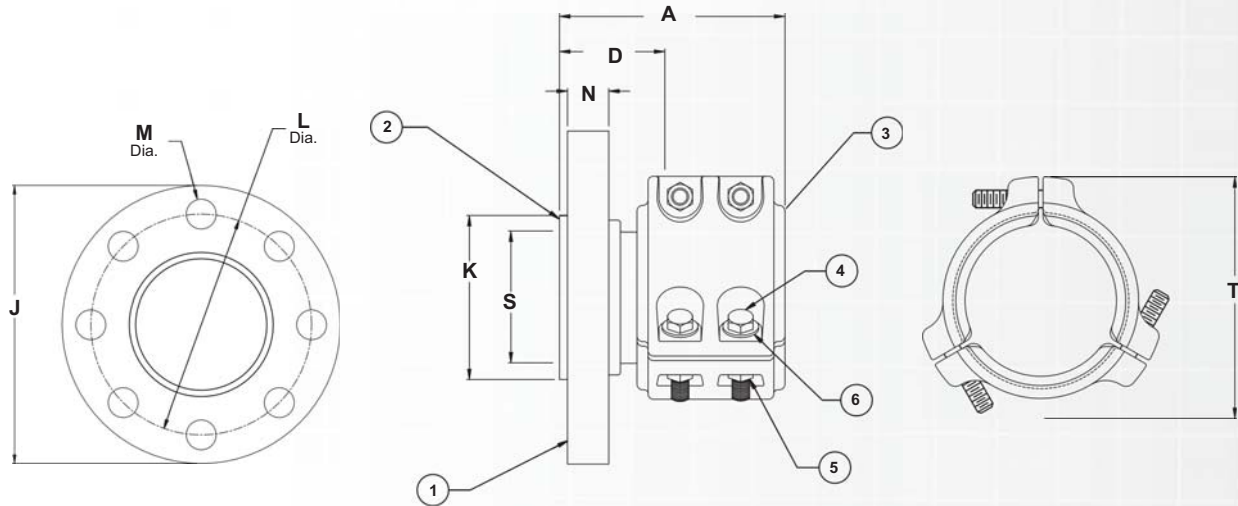
End Fitting - Straight - Hose to Flange

Equal to Aeroquip P/N 375-190767

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

**Type F, Group IV, Class V,
150Lb. Flange Per A.N.S.I. B16.5**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A4-2-40	2"	4	.75	5.16	2.20	6.00	3.22	4.75	.42	2.24	5.35	9
EF-449A4-2.5-40	2-1/2"	4	.75	5.16	2.20	7.00	3.22	5.50	.48	2.24	5.35	11
EF-449A4-2.5-48	2-1/2"	4	.75	5.17	2.20	7.00	3.72	5.50	.48	2.71	5.58	12
EF-449A4-3-48	3"	4	.75	5.17	2.20	7.50	4.44	6.00	.48	3.31	5.58	12
EF-449A4-3.5-64	3-1/2"	8	.75	5.54	2.63	8.50	5.17	7.00	.48	3.81	6.50	17
EF-449A4-4-64	4"	8	.75	5.54	2.63	9.00	5.22	7.50	.48	4.28	6.50	18

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17966	C17968	C17969	C17970	C17971	C17972	Bronze
② Nipple	1	C17306	C17306	C18016	C17308	C18015	C17210	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

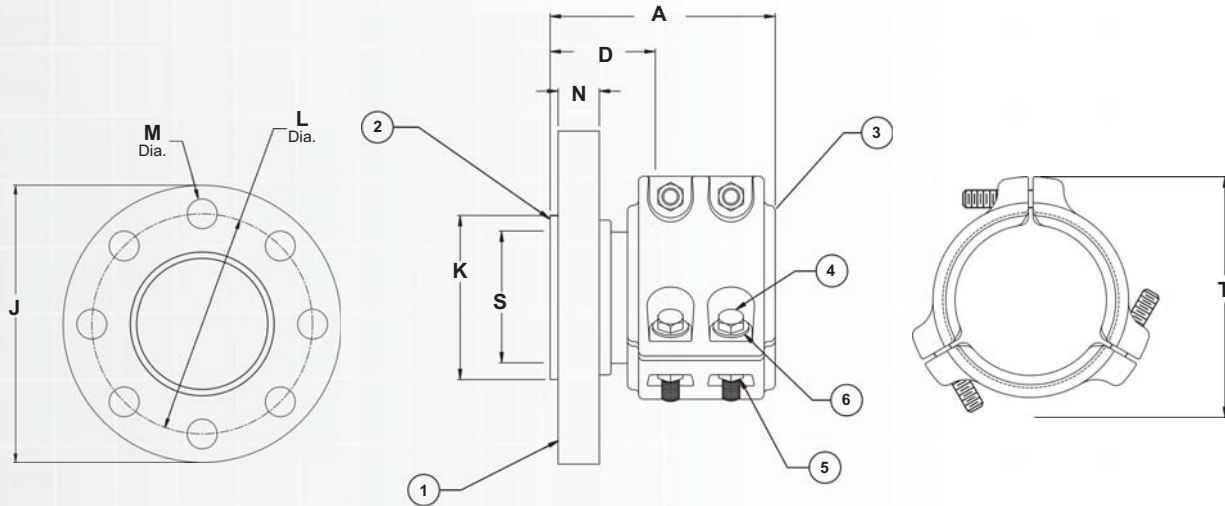
End Fitting - Straight - Hose to Flange

Equal to Aeroquip P/N 412-190767

Use with the following hose: HS4265, HS4224
2652, 150901

150Lb. Flange Per A.N.S.I. B16.5

Fittings



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A4-2.5-40-SS	2-1/2"	4	.75	5.16	2.20	7.00	3.28	5.50	.48	2.24	5.35	11
EF-449A4-2.5-48-SS	2-1/2"	4	.75	5.17	2.20	7.00	3.78	5.50	.48	2.71	5.58	12
EF-449A4-3-48-SS	3"	4	.75	5.17	2.20	7.50	4.50	6.00	.48	3.31	5.58	13
EF-449A4-4-64-SS	4"	8	.75	5.54	2.63	9.00	5.22	7.50	.48	4.28	6.50	18

Components

Description	Req'd per Ass'y	2.5-40	2.5-48	3-48	4-64	Material
① Swivel Flange	1	C18149	C18150	C18151	C19632	Stainless Steel
② Nipple	1	C18152	C18153	C18154	C19633	Stainless Steel
③ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B171984	Monel
⑥ Washer	6	B18175	B18175	B18175	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



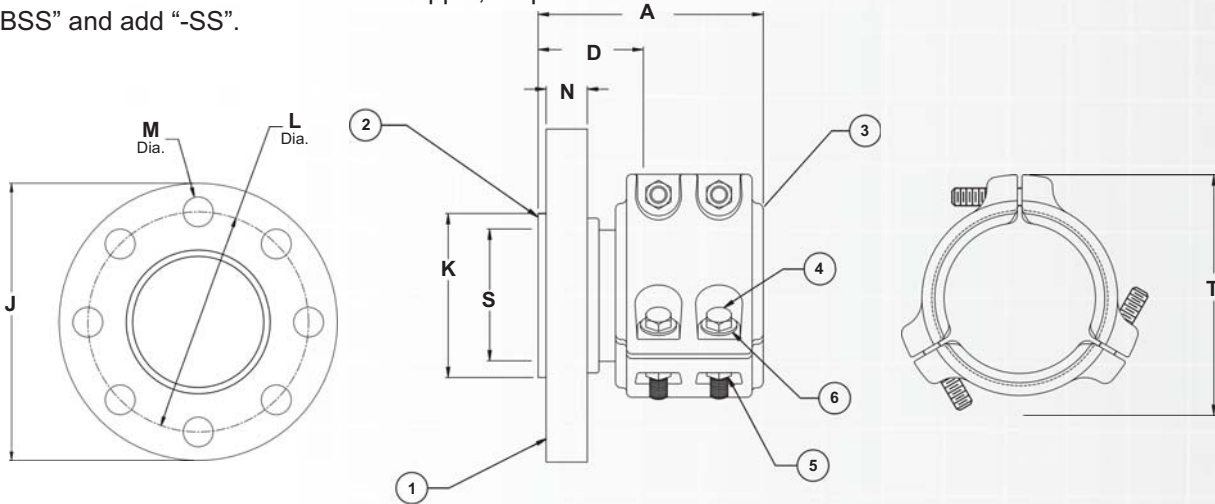
End Fitting - Straight - Hose to Flange

Equal to Aeroquip P/N FJ9477-413

Use with the following hose: HS4265, HS4224
2652, 150901

300Lb. Flange Per A.N.S.I. B16.5

Note: To substitute a stainless steel nipple, drop "-BSS" and add "-SS".



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-449A6-2-40-BSS	2"	8	.75	5.16	2.20	6.50	3.28	5.00	.88	2.24	5.35	9
EF-449A6-2.5-40-BSS	2-1/2"	8	.88	5.16	2.20	7.50	3.28	5.88	1.00	2.24	5.35	11
EF-449A6-2.5-48-BSS	2-1/2"	8	.88	5.17	2.20	7.50	3.78	5.88	1.00	2.71	5.58	12
EF-449A 6-3-48-BSS	3"	8	.88	5.17	2.20	8.25	4.50	6.62	1.12	3.31	5.58	12
EF-449A6-3.5-64-BSS	3-1/2"	8	.88	5.54	2.63	9.00	5.22	7.25	1.19	3.81	6.50	17
EF-449A6-4-64-BSS	4"	8	.88	5.54	2.63	10.00	5.22	7.88	1.25	4.28	6.50	18

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	--	--	C19770	--	C19765	Stainless Steel
② Nipple	1	C17306	C18016	C17308	C18015	C17210	Alum. Bronze
③ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B178175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Hose to Flange

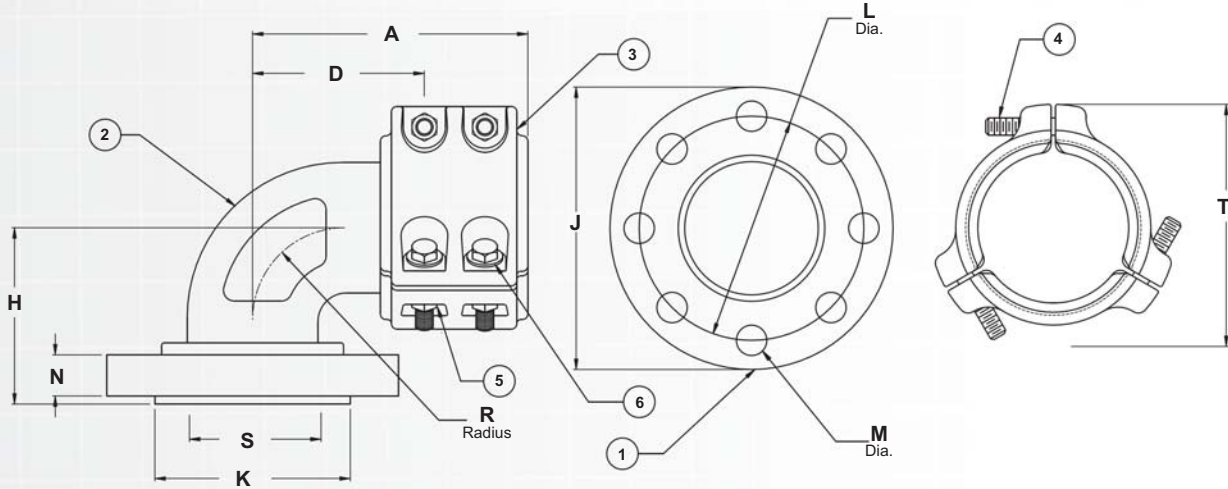
Equal to Aeroquip P/N 375-190758

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

Type FL, Group IV, Class I,
400Lb. Flange Per MIL-PRF-20042

Fittings



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-449B1-2-40	2"	7	.69	5.70	2.83	3.50	6.50	3.22	5.19	.81	1.88	2.24	5.35	13
90EF-449B1-2.5-48	2-1/2"	8	.81	5.96	3.09	4.00	7.56	3.72	6.00	.94	2.09	2.71	5.58	18
90EF-449B1-3-48	3"	8	.81	5.96	3.09	4.00	8.13	4.44	6.56	.94	2.09	3.31	5.58	20
90EF-449B1-3.5-64	3-1/2"	9	.81	6.75	3.88	4.62	8.69	5.17	7.13	1.00	2.81	3.81	6.50	27
90EF-449B1-4-64	4"	9	.81	6.75	3.88	4.62	9.25	5.22	7.69	1.00	2.81	4.28	6.50	30

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17798	C17801	C17802	C17803	C17804	Bronze
② Elbow	1	D17862	D17870	D17886	D17890	D17896	Alum. Bronze
③ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



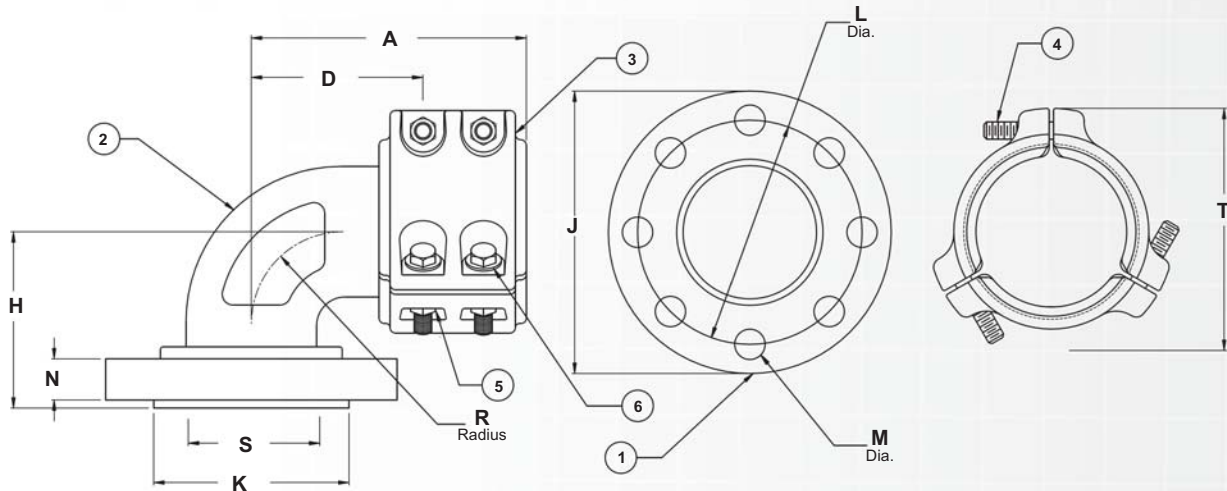
End Fitting - 90° - Hose to Flange

Equal to Aeroquip P/N 375-190757

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

Type FL, Group IV, Class II,
150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-449B5-2-40	2"	6	.56	5.70	2.83	3.50	5.56	3.28	4.44	.81	1.88	2.24	5.35	11
90EF-449B5-2.5-40	2-1/2"	6	.56	5.70	2.83	3.50	6.13	3.28	5.00	.94	1.88	2.24	5.35	13
90EF-449B5-2.5-48	2-1/2"	6	.56	5.96	3.09	4.00	6.13	3.78	5.00	.94	2.09	2.71	5.58	15
90EF-449B5-3-48	3"	8	.56	5.96	3.09	4.00	6.63	4.50	5.50	.94	2.09	3.31	5.58	16
90EF-449B5-3.5-64	3-1/2"	8	.56	6.75	3.88	4.62	7.19	5.22	6.06	1.00	2.81	3.81	6.50	22
90EF-449B5-4-64	4"	8	.56	6.75	3.88	4.62	7.69	5.22	6.56	1.00	2.81	4.28	6.50	24

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17765	C17796	C17795	C17766	C17794	C17767	Bronze
② Elbow	1	D17862	D17862	D17870	D17886	D17890	D17896	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

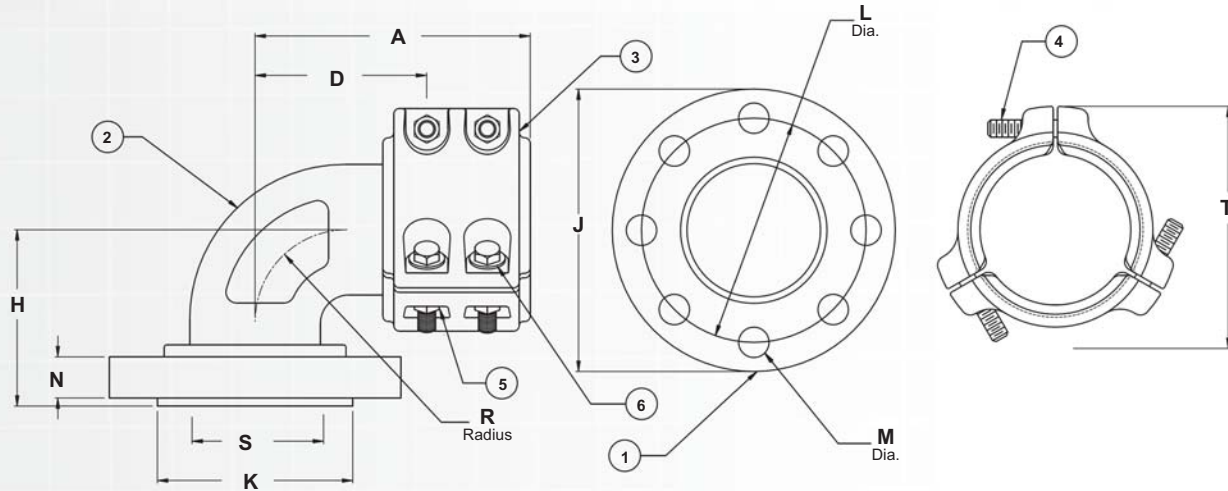
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Hose to Flange

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

**Type FL, Group IV, Class III,
250Lb. Flange Per MIL-PRF-20042**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-449B2-2-40	2"	6	.69	5.70	2.83	3.50	5.56	3.22	4.44	.81	1.88	2.24	5.35	16
90EF-449B2-2.5-40	2-1/2"	6	.69	5.70	2.83	3.50	6.13	3.22	5.00	.94	1.88	2.24	5.35	17
90EF-449B2-2.5-48	2-1/2"	6	.69	5.96	3.09	4.00	6.13	3.72	5.00	.94	2.09	2.71	5.58	18
90EF-449B2-3-48	3"	8	.69	5.96	3.09	4.00	6.63	4.44	5.50	.94	2.09	3.31	5.58	19
90EF-449B2-3.5-64	3-1/2"	8	.69	6.75	3.88	4.62	7.19	5.17	6.06	1.00	2.81	3.81	6.50	25
90EF-449B2-4-64	4"	8	.69	6.75	3.88	4.62	7.69	5.22	6.56	1.00	2.81	4.28	6.50	26

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17812	C17307	C17813	C17309	C17815	C17310	Bronze
② Elbow	1	D17862	D17862	D17870	D17886	D17890	D17896	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18175	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

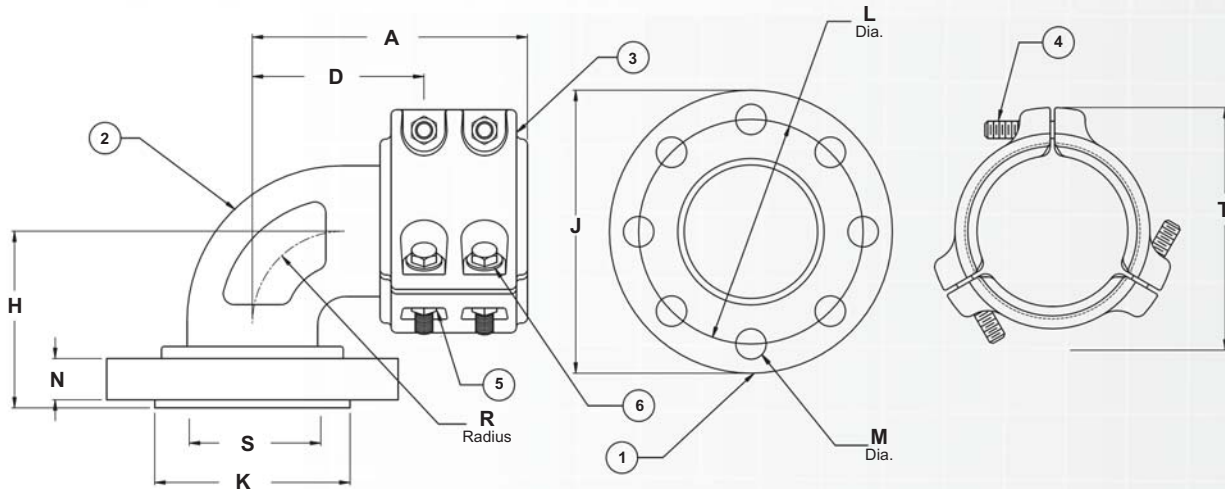
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Hose to Flange

Equal to Aeroquip P/N 375-190656

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,
Type FL, Group IV, Class IV,
150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-449B3-2-40	2"	6	.56	5.70	2.83	3.50	5.56	3.22	4.44	.44	1.88	2.24	5.35	9
90EF-449B3-2.5-40	2-1/2"	6	.56	5.70	2.83	3.50	6.13	3.22	5.00	.50	1.88	2.24	5.35	10
90EF-449B3-2.5-48	2-1/2"	6	.56	5.96	3.09	4.00	6.13	3.72	5.00	.50	2.09	2.71	5.58	12
90EF-449B3-3-48	3"	8	.56	5.96	3.09	4.00	6.63	4.44	5.50	.50	2.09	3.31	5.58	13
90EF-449B3-3.5-64	3-1/2"	8	.56	6.75	3.88	4.62	7.19	5.17	6.06	.50	2.81	3.81	6.50	19
90EF-449B3-4-64	4"	8	.56	6.75	3.88	4.62	7.69	5.22	6.56	.50	2.81	4.28	6.50	20

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17925	C17929	C17931	C17933	C17938	C17940	Bronze
② Elbow	1	D17862	D17862	D17870	D17886	D17890	D17896	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

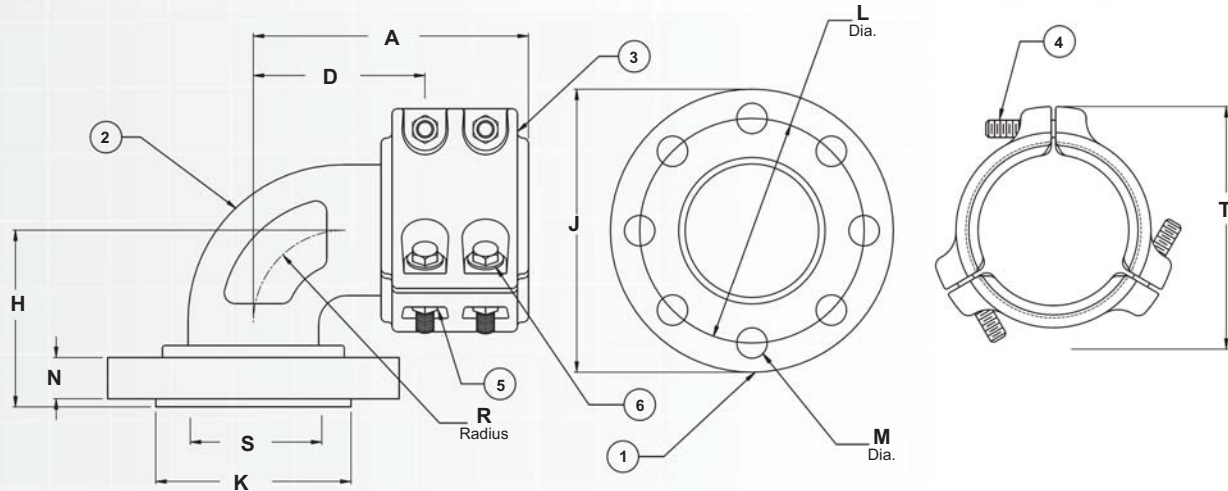
End Fitting - 90° - Hose to Flange

Equal to Aeroquip P/N 375-190769

Use with the following hose: HS4265, HS4224
2652, 150901

MIL-F-24787/1,

**Type FL, Group IV, Class V,
150Lb. Flange Per A.N.S.I. B16.5**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-449B4-2-40	2"	4	.75	5.70	2.83	3.50	6.00	3.22	4.75	.42	1.88	2.24	5.35	9
90EF-449B4-2.5-40	2-1/2"	4	.75	5.70	2.83	3.50	7.00	3.22	5.50	.48	1.88	2.24	5.35	12
90EF-449B4-2.5-48	2-1/2"	4	.75	5.96	3.09	4.00	7.00	3.72	5.50	.48	2.09	2.71	5.58	13
90EF-449B4-3-48	3"	4	.75	5.96	3.09	4.00	7.50	4.44	6.00	.48	2.09	3.31	5.58	14
90EF-449B4-3.5-64	3-1/2"	8	.75	6.75	3.88	4.62	8.50	5.17	7.00	.48	2.81	3.81	6.50	21
90EF-449B4-4-64	4"	8	.75	6.75	3.88	4.62	9.00	5.44	7.50	.48	2.81	4.28	6.50	22

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17966	C17968	C17969	C17970	C17971	C17310	Bronze
② Elbow	1	D17862	D17862	D17870	D17886	D17890	D17896	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

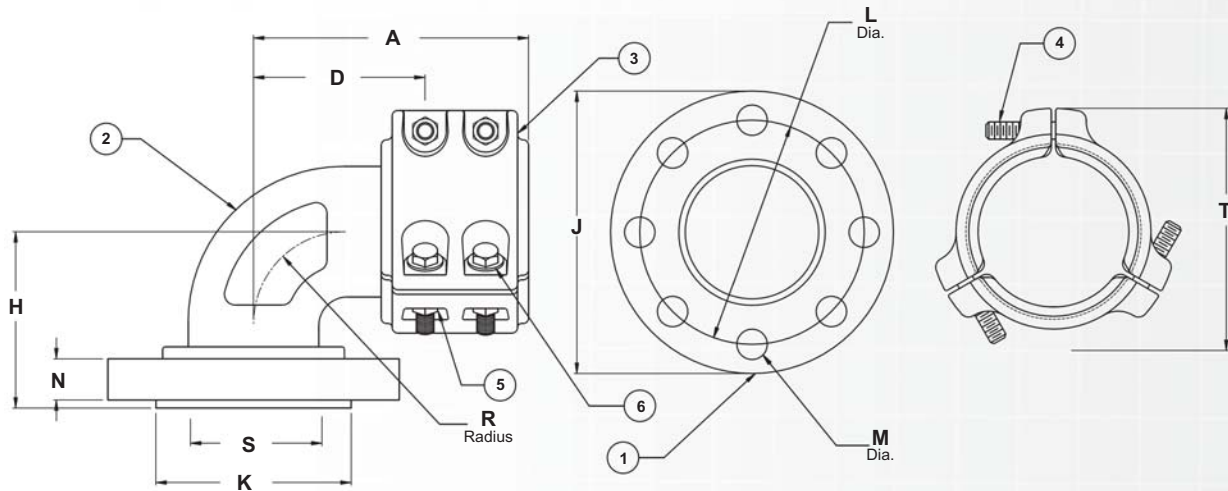
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Hose to Flange

Equal to Aeroquip P/N 413-190769

150Lb. Flange Per A.N.S.I. B16.5

Use with the following hose: HS4265, HS4224
2652, 150901



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-449B4-2-40-BSS	2"	4	.75	5.70	2.83	3.50	6.00	3.22	4.75	.42	1.88	2.24	5.35	9
90EF-449B4-2.5-40-BSS	2-1/2"	4	.75	5.70	2.83	3.50	7.00	3.22	5.50	.48	1.88	2.24	5.35	12
90EF-449B4-2.5-48-BSS	2-1/2"	4	.75	5.96	3.09	4.00	7.00	3.72	5.50	.48	2.09	2.71	5.58	13
90EF-449B4-3-48-BSS	3"	4	.75	5.96	3.09	4.00	7.50	4.44	6.00	.48	2.09	3.31	5.58	14
90EF-449B4-3.5-64-BSS	3-1/2"	8	.75	6.75	3.88	4.62	8.50	5.17	7.00	.48	2.81	3.81	6.50	21
90EF-449B4-4-64-BSS	4"	8	.75	6.75	3.88	4.62	9.00	5.44	7.50	.48	2.81	4.28	6.50	22

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	--	C18149	C18150	C18151	--	C19632	Stainless Steel
② Elbow	1	D17862	D17862	D17870	D17886	D17890	D17896	Alum. Bronze
③ Segment	3	D17299-1	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
④ Bolt	6	B17673-2	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑤ Lock Nut	6	B18176	B18176	B18176	B18176	B17984	B17984	Monel
⑥ Washer	6	B18175	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Female Sil-Braze to Hose

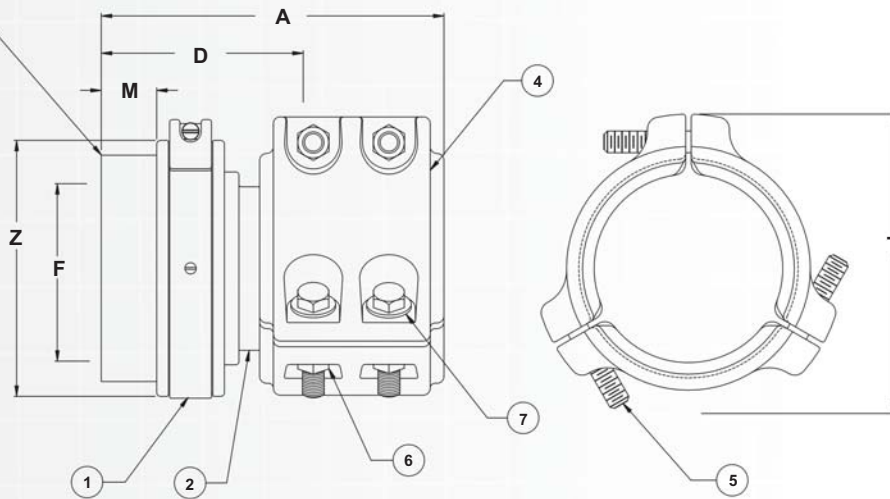
Equal to Aeroquip P/N 375-190781
& FC9073-375

MIL-F-24787/4,

Type E, Group IV

Use with the following hose: HS4265, HS4224
2652, 150901

Fittings



Part Number	I.P.S. Size	A	D	F	M	Z	T	Est. Wt. Lbs.
EF-449C-2-40	2"	6.00	3.09	2.38	.66	4.00	5.35	8
EF-449C-2.5-48	2-1/2"	6.20	3.31	2.88	.78	4.42	5.58	9
EF-449C-3-48	3"	6.09	3.39	3.50	.83	5.19	5.58	12
EF-449C-3.5-64	3-1/2"	6.40	3.56	4.00	.88	5.56	6.50	14
EF-449C-4-64	4"	6.63	3.73	4.50	.91	6.12	6.50	16

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Clamp Ass'y	1	B-CLMP-2S	B-CLMP-2.5S	B-CLMP-3S	B-CLMP-3.5S	B-CLMP-4S	Bronze
② Nipple	1	C18096	C18097	C18100	C18103	C18105	Alum. Bronze
③ Tailpiece	1	TP-2FSB	TP-2.5FSB	TP-3FSB	TP-3.5FSB	TP-4FSB	Bronze
④ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
⑤ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑥ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑦ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

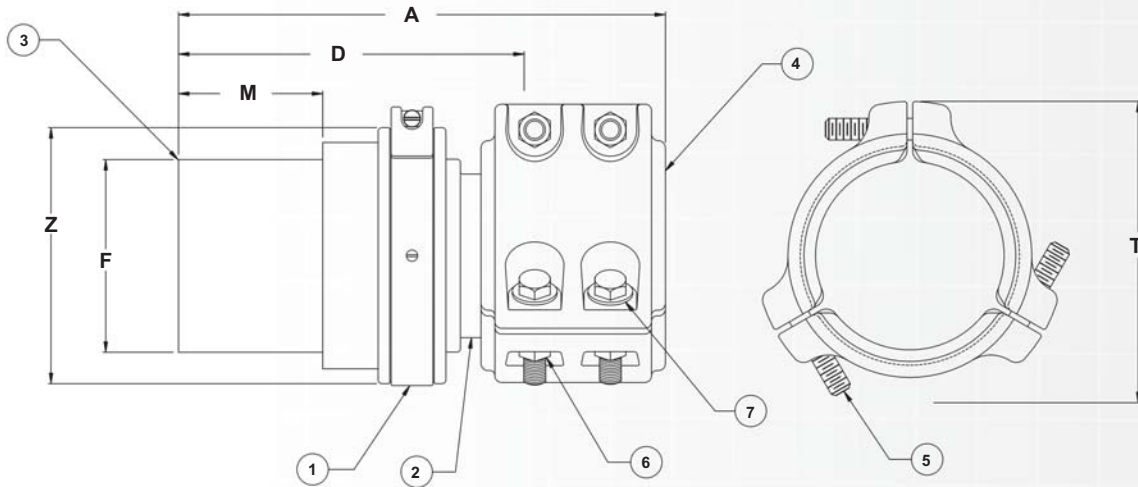


End Fitting - Straight - Male Sil-Braze to Hose

Equal to Aeroquip P/N 375-190780
& FC9583-375

MIL-F-24787/4,
Type E, Group IV

Use with the following hose: HS4265, HS4224
2652, 150901



Part Number	I.P.S. Size	A	D	F	M	Z	T	Est. Wt. Lbs.
EF-449CA-2-40	2"	6.51	3.62	2.38	1.31	4.00	5.00	8
EF-449CA-2.5-48	2-1/2"	6.38	3.50	2.88	1.12	4.42	5.50	10
EF-449CA-3-48	3"	7.79	4.90	3.50	2.50	5.19	5.50	13
EF-449CA-3.5-64	3-1/2"	7.86	5.03	4.00	2.50	5.56	6.56	16
EF-449CA-4-64	4"	8.20	5.30	4.50	2.64	6.12	6.56	17

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Clamp Ass'y	1	B-CLMP-2S	B-CLMP-2.5S	B-CLMP-3S	B-CLMP-3.5S	B-CLMP-4S	Bronze
② Nipple	1	C18096	C18097	C18100	C18103	C18105	Alum. Bronze
③ Tailpiece	1	TP-2MSB	TP-2.5MSB	TP-3MSB	TP-3.5MSB	TP-4MSB	Bronze
④ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
⑤ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑥ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑦ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

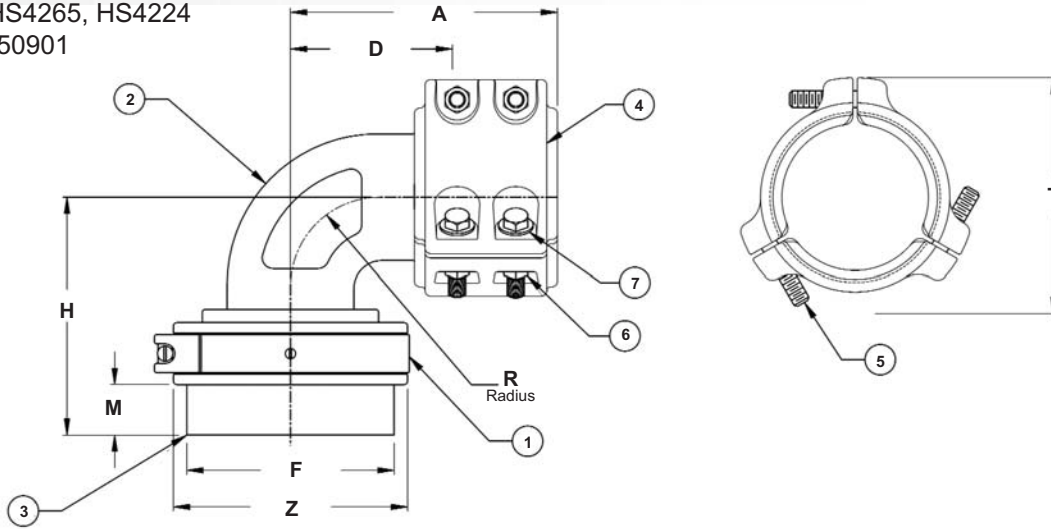
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Female Sil-Braze to Hose

Equal to Aeroquip P/N 375-190785
& FC9074-375

MIL-F-24787/4,
Type EL, Group IV

Use with the following
hose: HS4265, HS4224
2652, 150901



Part Number	I.P.S. Size	A	D	F	H	M	R	Z	T	Est. Wt. Lbs.
90EF-449D-2-40	2"	5.70	2.83	2.38	4.29	.66	1.88	4.00	5.35	10
90EF-449D-2.5-48	2-1/2"	5.88	3.09	2.88	5.04	.78	2.09	4.42	5.58	12
90EF-449D-3-48	3"	6.46	3.09	3.50	4.93	.83	2.09	5.19	5.58	14
90EF-449D-3.5-64	3-1/2"	6.75	3.88	4.00	5.53	.88	2.81	5.56	6.50	20
90EF-449D-4-64	4"	6.75	3.88	4.50	5.58	.91	2.81	6.12	6.50	22

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Clamp Ass'y	1	B-CLMP-2S	B-CLMP-2.5S	B-CLMP-3S	B-CLMP-3.5S	B-CLMP-4S	Bronze
② Elbow	1	D18124	D18125	D18126	D18127	D18128	Alum. Bronze
③ Tailpiece	1	TP-2FSB	TP-2.5FSB	TP-3FSB	TP-3.5FSB	TP-4FSB	Bronze
④ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
⑤ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑥ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑦ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



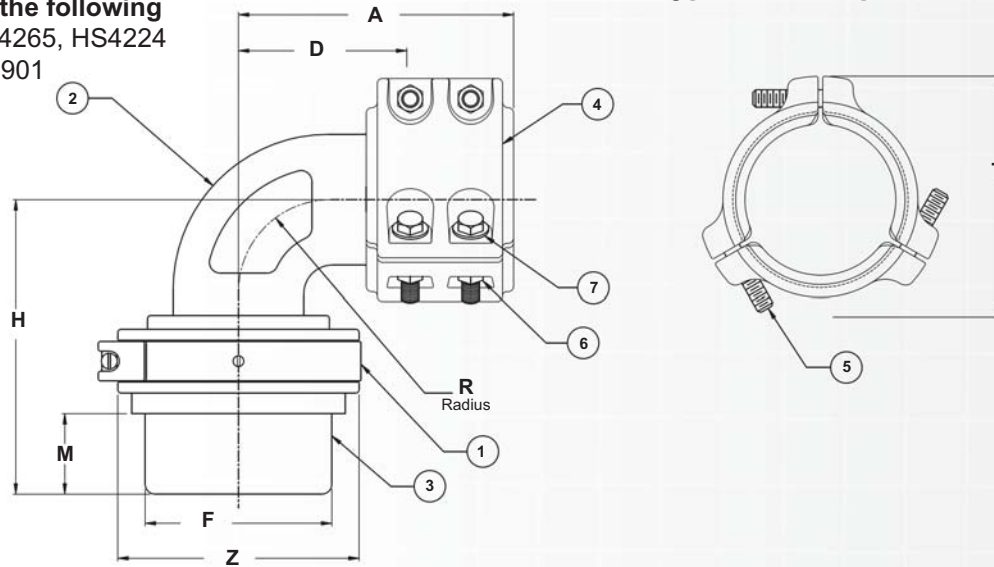
End Fitting - 90° - Male Sil-Braze to Hose

Equal to Aeroquip P/N 375-190784
& FC9589-375

MIL-F-24787/4,

Type EL, Group IV

Use with the following hose: HS4265, HS4224 2652, 150901



Part Number	I.P.S. Size	A	D	F	H	M	R	Z	T	Est. Wt. Lbs.
90EF-449DA-2-40	2"	5.70	2.83	2.38	4.82	1.31	1.88	4.00	5.35	10
90EF-449DA-2.5-48	2-1/2"	5.88	3.09	2.88	5.22	1.12	2.09	4.42	5.58	12
90EF-449DA-3-48	3"	6.46	3.09	3.50	6.63	2.50	2.09	5.19	5.58	16
90EF-449DA-3.5-64	3-1/2"	6.75	3.88	4.00	7.00	2.50	2.81	5.56	6.50	21
90EF-449DA-4-64	4"	6.75	3.88	4.50	7.15	2.64	2.81	6.12	6.50	24

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Clamp Ass'y	1	B-CLMP-2S	B-CLMP-2.5S	B-CLMP-3S	B-CLMP-3.5S	B-CLMP-4S	Bronze
② Elbow	1	D18124	D18125	D18126	D18127	D18128	Alum. Bronze
③ Tailpiece	1	TP-2MSB	TP-2.5MSB	TP-3MSB	TP-3.5MSB	TP-4MSB	Bronze
④ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
⑤ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑥ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑦ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

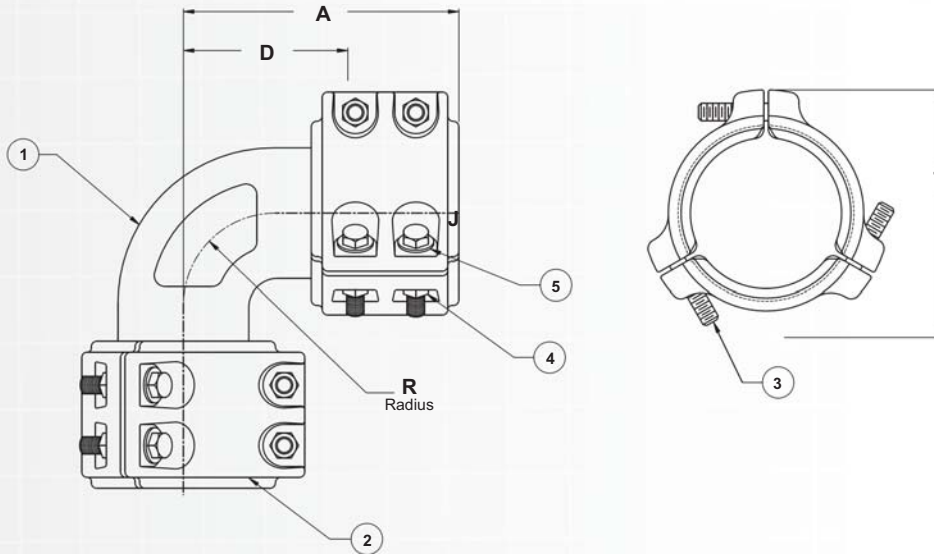
Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 375-190717

MIL-F-24787/5,

Type D, Group IV

Use with the following hose: HS4265, HS4224
2652, 150901



Fittings

28

Part Number	Hose Size	A	D	R	T	Est. Wt. Lbs.
90ELB-449E-40	2-1/2"	5.70	2.83	1.88	5.35	12
90ELB-449E-48	3"	5.96	3.09	2.09	5.58	14
90ELB-449E-64	4"	6.75	3.88	2.81	6.50	23

Components

Description	Req'd per Ass'y	40	48	64	Material
① Elbow	1	D19512-2	D19610-2	D20741-2	Alum. Bronze
② Segment	3	D17299-1	D17300-1	D17301-1	Alum. Bronze
③ Bolt	6	B17673-2	B17673-1	B17987	Monel
④ Lock Nut	6	B18176	B18176	B17984	Monel
⑤ Washer	6	B18175	B18175	B17986	Monel

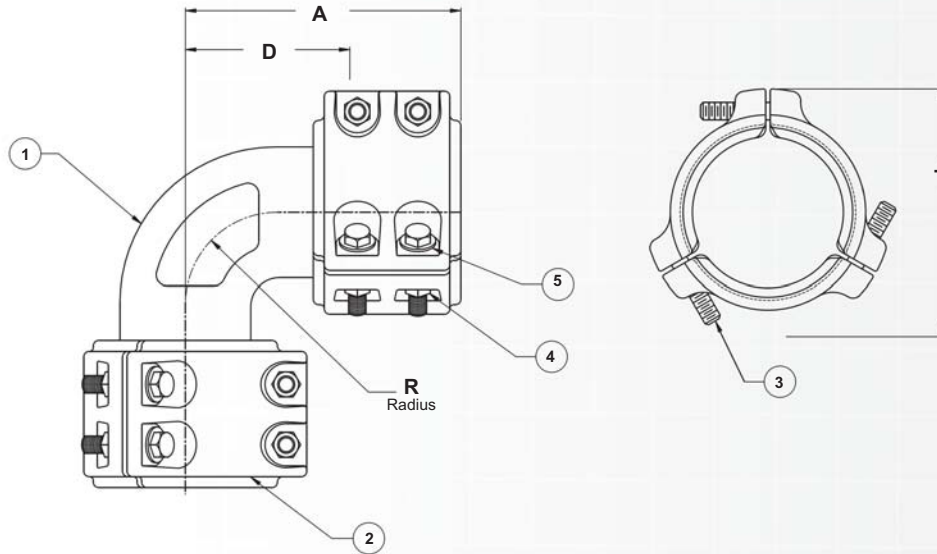
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 412-190717

Use with the following hose: HS4265, HS4224
2652, 150901



Part Number	Hose Size	A	D	R	T	Est. Wt. Lbs.
90ELB-449E-40-SS	2-1/2"	5.70	2.83	1.88	5.35	12
90ELB-449E-48-SS	3"	5.96	3.09	2.09	5.58	14
90ELB-449E-64-SS	4"	6.75	3.88	2.81	6.50	23

Components

Description	Req'd per Ass'y	40	48	64	Material
① Elbow	1	D19512-1	D19610-1	D20741-1	Stainless Steel
② Segment	3	D17299-1	D17300-1	D17301-1	Alum. Bronze
③ Bolt	6	B17673-2	B17673-1	B17987	Monel
④ Lock Nut	6	B18176	B18176	B17984	Monel
⑤ Washer	6	B18175	B18175	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

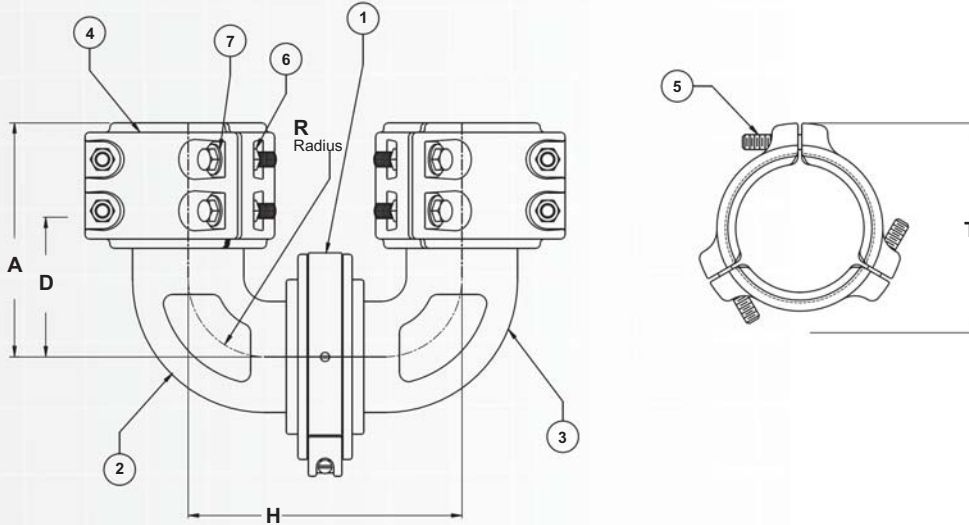
Elbow - 180° - Hose to Hose w/ Split Clamp

Equal to Aeroquip P/N 375-190786

MIL-F-24787/6,

Use with the following hose: HS4265, HS4224
2652, 150901

Type U, Group IV



Part Number	Hose Size	A	D	H	R	T	Est. Wt. Lbs.
180ELB-449F-2-40	2"	5.70	2.83	5.40	1.88	5.35	15
180ELB-449F-2.5-48	2-1/2"	5.96	3.09	5.92	2.09	5.58	21
180ELB-449F-3-48	3"	5.96	3.09	5.95	2.09	5.58	23
180ELB-449F-3.5-64	3-1/2"	6.75	3.88	7.32	2.81	6.50	34
180ELB-449F-4-64	4"	6.75	3.88	7.44	2.81	6.50	36

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Clamp Ass'y	1	B-CLMP-2S	B-CLMP-2.5S	B-CLMP-3S	B-CLMP-3.5S	B-CLMP-4S	Bronze
"O"-Ring	1	R-RNG/O-230	R-RNG/O-234	R-RNG/O-239	R-RNG/O-243	R-RNG/O-247	Buna-N
Back-Up Ring	1	R-RNG/BU-8	R-RNG/BU-12	--	--	--	Buna-N
② Female Elbow	1	D18129	D18130	D18131	D18132	D18133	Alum. Bronze
③ Male Elbow	1	D18124	D18125	D18126	D18127	D18128	Alum. Bronze
④ Segment	3	D17299-1	D17300-1	D17300-1	D17301-1	D17301-1	Alum. Bronze
⑤ Bolt	6	B17673-2	B17673-1	B17673-1	B17987	B17987	Monel
⑥ Lock Nut	6	B18176	B18176	B18176	B17984	B17984	Monel
⑦ Washer	6	B18175	B18175	B18175	B17986	B17986	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

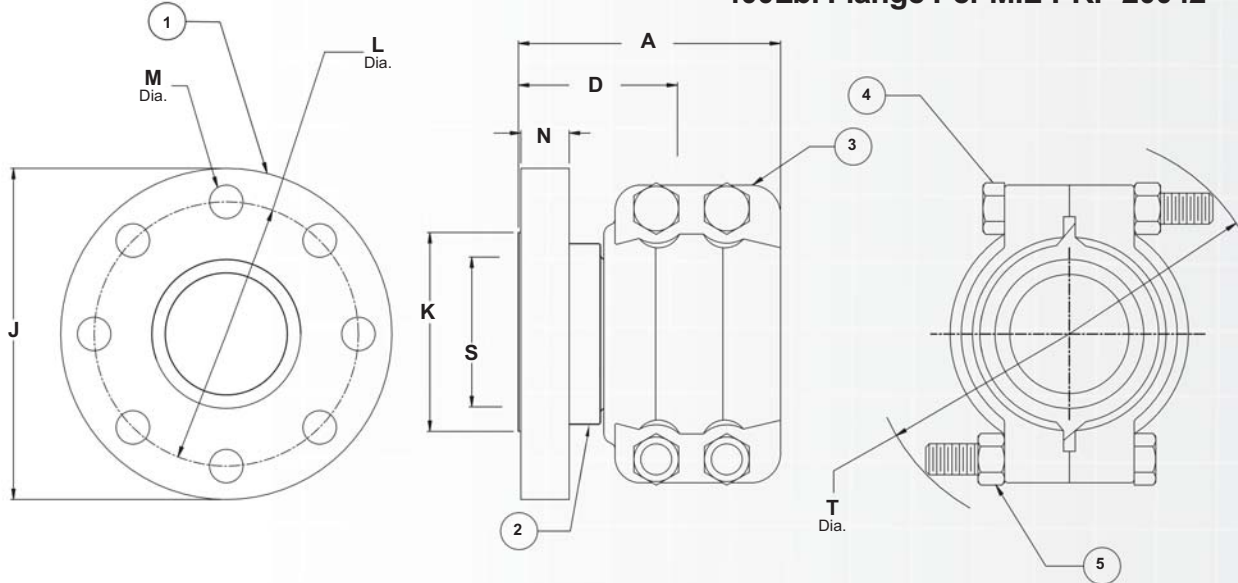
Equal to Aeroquip P/N FC9568-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

Type F, Group X, Class I,

400Lb. Flange Per MIL-PRF-20042



Part Number	IPS Size	No. of Bolt Holes	M	A	D	J	K	L	N	T	S	Est. Wt. Lbs.
EF-1546A1-2-40	2"	7	.69	4.40	1.96	6.50	3.28	5.19	.81	6.70	2.24	15
EF-1546A1-2.5-40	2-1/2"	8	.81	4.40	1.96	7.56	3.28	6.00	.94	6.70	2.24	16
EF-1546A1-2.5-48	2-1/2"	8	.81	4.86	1.96	7.56	3.78	6.00	.94	7.65	2.71	22
EF-1546A1-3-48	3"	8	.81	4.86	1.96	8.13	4.50	6.56	.94	7.65	3.31	23
EF-1546A1-3.5-64	3-1/2"	9	.81	5.28	2.37	8.69	5.22	7.13	1.00	8.91	3.81	31
EF-1546A1-4-64	4"	9	.81	5.28	2.37	9.25	5.27	7.69	1.00	8.91	4.28	34

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17798	C17799	C17801	C17802	C17803	C17804	Bronze
② Nipple	1	C17708	C17708	C17857	C17706	C17858	C17707	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

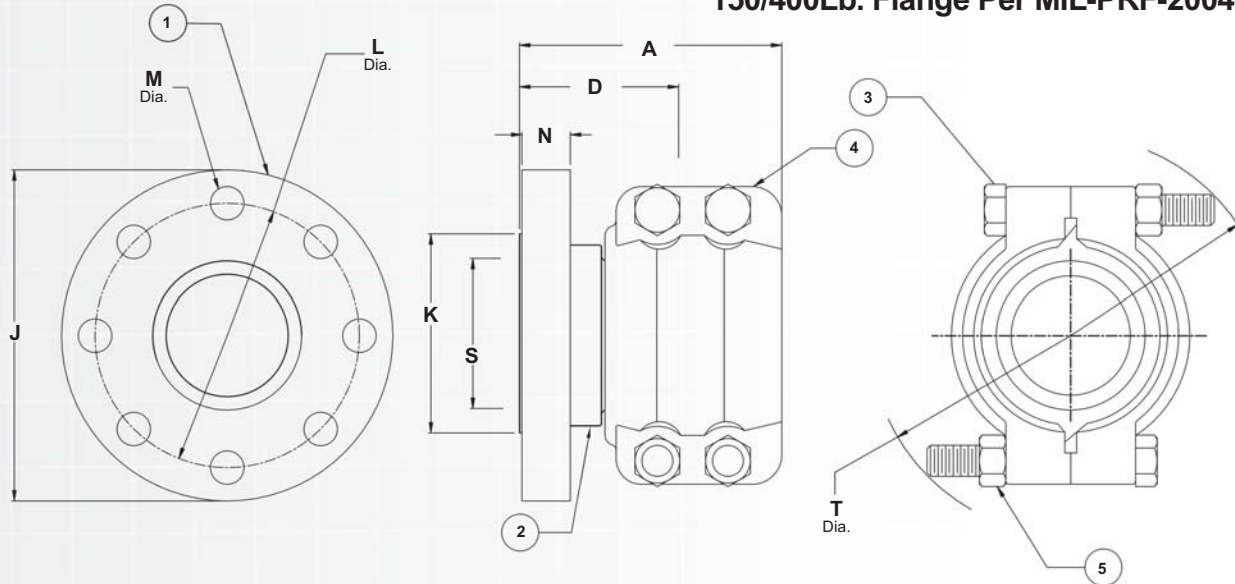
Equal to Aeroquip P/N FC9527-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

Type F, Group X, Class II,

150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	T	S	Est. Wt. Lbs.
EF-1546A2-2-40	2"	6	.56	4.40	1.96	5.56	3.28	4.44	.81	6.70	2.24	15
EF-1546A2-2.5-40	2-1/2"	6	.56	4.40	1.96	6.13	3.28	5.00	.94	6.70	2.24	16
EF-1546A2-2.5-48	2-1/2"	6	.56	4.86	1.96	6.13	3.78	5.00	.94	7.65	2.71	18
EF-1546A2-3-48	3"	8	.56	4.86	1.96	6.63	4.50	5.50	.94	7.65	3.31	18
EF-1546A2-3.5-64	3-1/2"	8	.56	5.28	2.37	7.19	5.22	6.06	1.00	8.91	3.81	26
EF-1546A2-4-64	4"	8	.56	5.28	2.37	7.69	5.27	6.56	1.00	8.91	4.28	28

Components

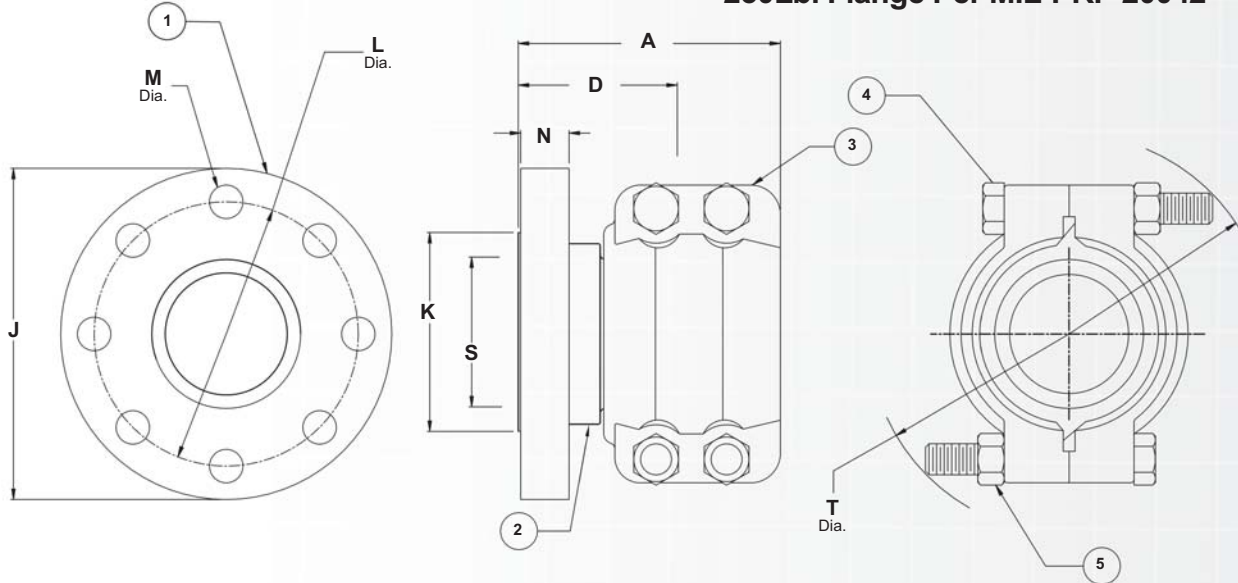
Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17765	C17796	C17795	C17766	C17794	C17767	Bronze
② Nipple	1	C17708	C17708	C17857	C17706	C17858	C17707	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,
 Type F, Group X, Class III,
 250Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	T	S	Est. Wt. Lbs.
EF-1546A3-2-40	2"	6	.69	4.40	1.96	5.56	3.28	4.44	.81	6.70	2.24	15
EF-1546A3-2.5-40	2-1/2"	6	.69	4.40	1.96	6.13	3.28	5.00	.94	6.70	2.24	16
EF-1546A3-2.5-48	2-1/2"	6	.69	4.86	1.96	6.13	3.78	5.00	.94	7.65	2.71	17
EF-1546A3-3-48	3"	8	.69	4.86	1.96	6.63	4.50	5.50	.94	7.65	3.31	18
EF-1546A3-3.5-64	3-1/2"	8	.69	5.28	2.37	7.19	5.22	6.06	1.00	8.91	3.81	27
EF-1546A3-4-64	4"	8	.69	5.28	2.37	7.69	5.27	6.56	1.00	8.91	4.28	28

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17812	C17307	C17813	C17309	C17815	C17310	Bronze
② Nipple	1	C17708	C17708	C17857	C17706	C17858	C17707	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

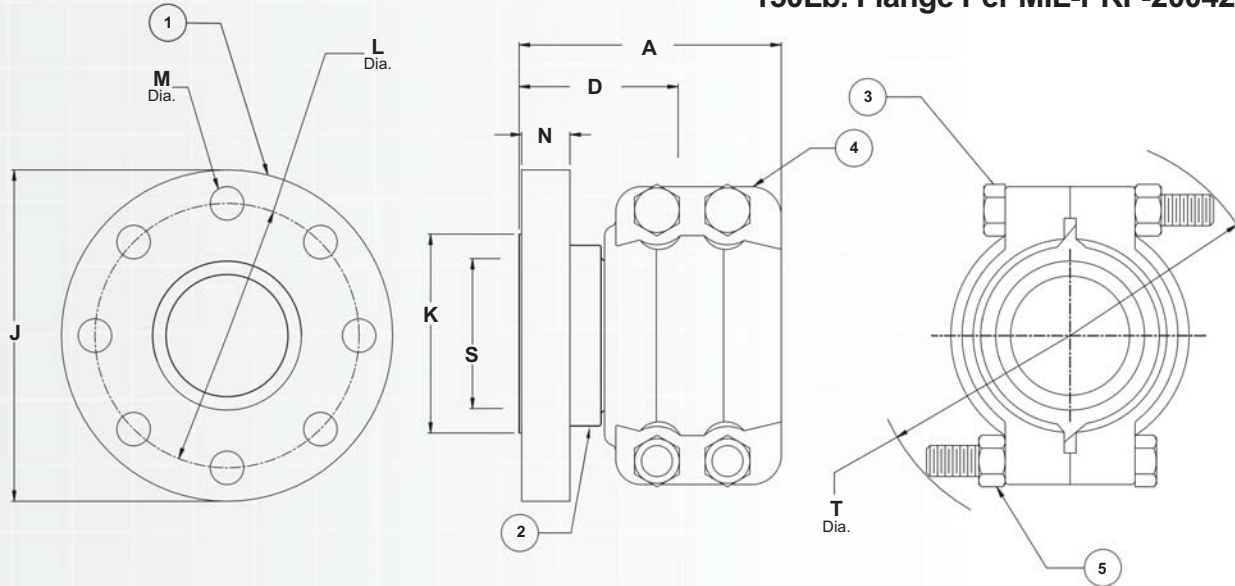
End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N FC5309-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

**Type F, Group X, Class IV,
150Lb. Flange Per MIL-PRF-20042**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	T	S	Est. Wt. Lbs.
EF-1546A4-2-40	2"	6	.56	4.40	1.96	5.56	3.28	4.44	.44	6.70	2.24	12
EF-1546A4-2.5-40	2-1/2"	6	.56	4.40	1.96	6.13	3.28	5.00	.50	6.70	2.24	13
EF-1546A4-2.5-48	2-1/2"	6	.56	4.86	1.96	6.13	3.78	5.00	.50	7.65	2.71	15
EF-1546A4-3-48	3"	8	.56	4.86	1.96	6.63	4.50	5.50	.50	7.65	3.31	16
EF-1546A4-3.5-64	3-1/2"	8	.56	5.28	2.37	7.19	5.22	6.06	.50	8.91	3.81	24
EF-1546A4-4-64	4"	8	.56	5.28	2.37	7.69	5.27	6.56	.50	8.91	4.28	25

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17925	C17929	C17931	C17933	C17938	C17940	Bronze
② Nipple	1	C17708	C17708	C17857	C17706	C17858	C17707	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

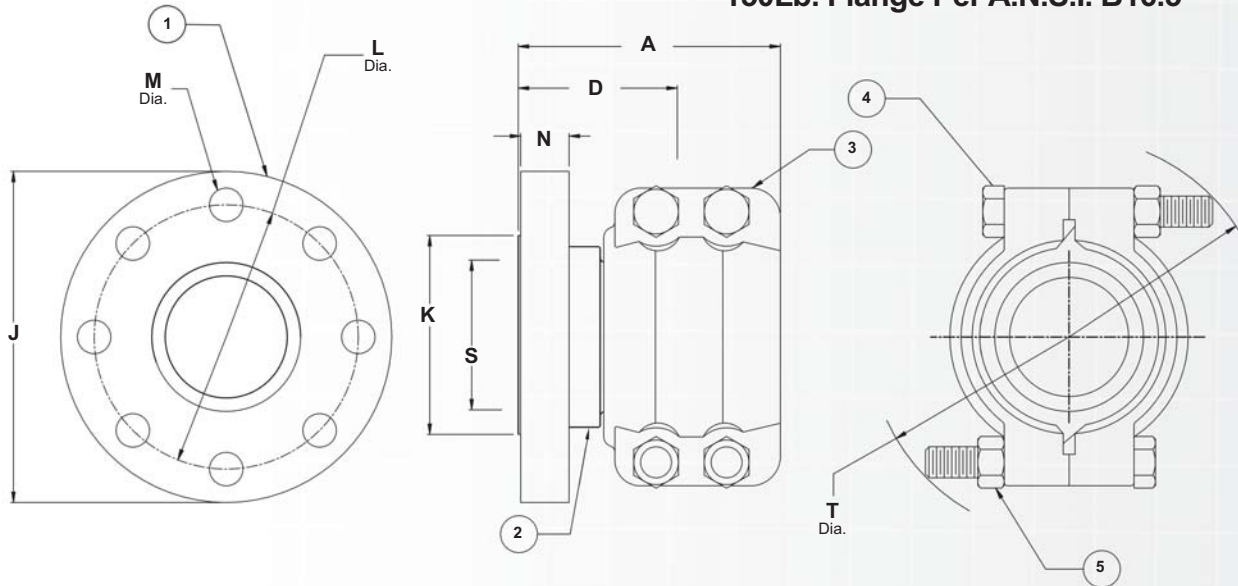
End Fitting - Straight- Flange to Hose

Equal to Aeroquip P/N FC5048-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

Type F, Group X, Class V,
150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	T	S	Est. Wt. Lbs.
EF-1546A5-2-40	2"	4	.75	4.40	1.96	6.00	3.28	4.75	.42	6.70	2.24	12
EF-1546A5-2.5-40	2-1/2"	4	.75	4.40	1.96	7.00	3.28	5.50	.48	6.70	2.24	13
EF-1546A5-2.5-48	2-1/2"	4	.75	4.86	1.96	7.00	3.78	5.50	.48	7.65	2.71	15
EF-1546A5-3-48	3"	4	.75	4.86	1.96	7.50	4.50	6.00	.48	7.65	3.31	16
EF-1546A5-3.5-64	3-1/2"	8	.75	5.28	2.37	8.50	5.22	7.00	.48	8.91	3.81	24
EF-1546A5-4-64	4"	8	.75	5.28	2.37	9.00	5.27	7.50	.48	8.91	4.28	25

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17966	C17968	C17969	C17970	C17971	C17972	Bronze
② Nipple	1	C17708	C17708	C17857	C17706	C17858	C17707	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

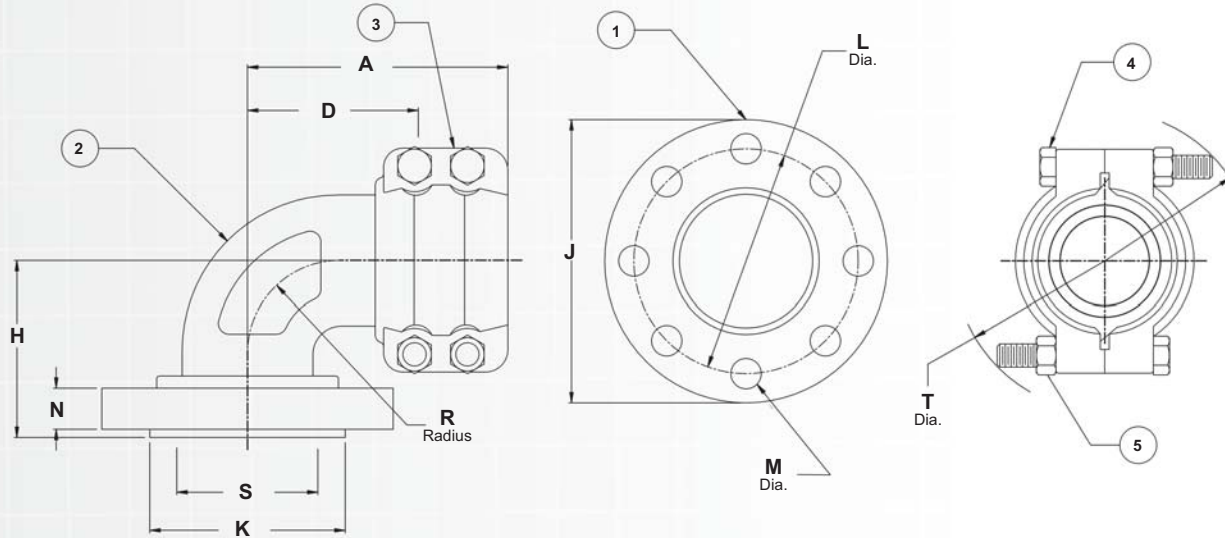
End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N FC9638-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

**Type FL, Group X, Class I,
400Lb. Flange Per MIL-PRF-20042**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	T	R	S	Est. Wt. Lbs.
90EF-1546B1-2-40	2"	7	.69	5.47	2.83	3.50	6.50	3.28	5.19	.81	6.70	1.88	2.24	17
90EF-1546B1-2.5-40	2-1/2"	8	.81	5.47	2.83	3.50	7.56	3.28	6.00	.94	6.70	1.88	2.24	18
90EF-1546B1-2.5-48	2-1/2"	8	.81	5.65	3.09	4.00	7.56	3.78	6.00	.94	7.65	2.09	2.71	24
90EF-1546B1-3-48	3"	8	.81	5.65	3.09	4.00	8.13	4.50	6.56	.94	7.65	2.09	3.31	25
90EF-1546B1-3.5-64	3-1/2"	9	.81	6.48	3.88	4.62	8.69	5.22	7.13	1.00	8.91	2.81	3.81	37
90EF-1546B1-4-64	4"	9	.81	6.48	3.88	4.62	9.25	5.28	7.69	1.00	8.91	2.81	4.28	39

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17798	C17799	C17801	C17802	C17803	C17804	Bronze
② Elbow	1	C18052	C18052	C18305	C18306	C18307	C18308	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - 90° - Flange to Hose

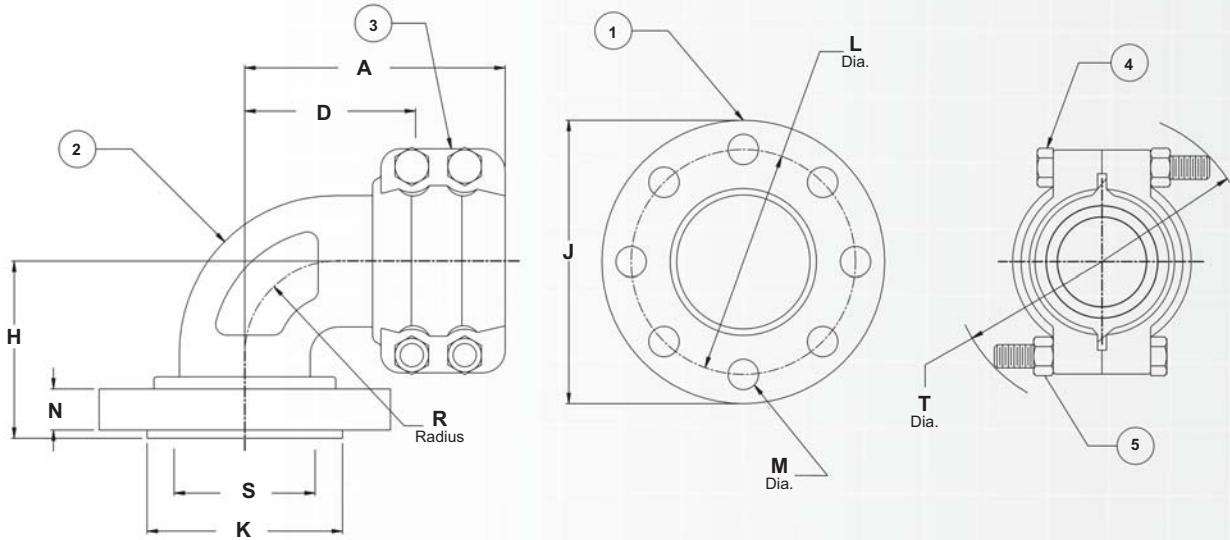
Equal to Aeroquip P/N FC9637-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

Type FL, Group X, Class II,

150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	T	R	S	Est. Wt. Lbs.
90EF-1546B2-2-40	2"	6	.56	5.47	2.83	3.50	5.56	3.28	4.44	.81	6.70	1.88	2.24	16
90EF-1546B2-2.5-40	2-1/2"	6	.56	5.47	2.83	3.50	6.13	3.28	5.00	.94	6.70	1.88	2.24	20
90EF-1546B2-2.5-48	2-1/2"	6	.56	5.65	3.09	4.00	6.13	3.78	5.00	.94	7.65	2.09	2.71	20
90EF-1546B2-3-48	3"	8	.56	5.65	3.09	4.00	6.63	4.50	5.50	.94	7.65	2.09	3.31	20
90EF-1546B2-3.5-64	3-1/2"	8	.56	6.48	3.88	4.62	7.19	5.22	6.06	1.00	8.91	2.81	3.81	32
90EF-1546B2-4-64	4"	8	.56	6.48	3.88	4.62	7.69	5.22	6.56	1.00	8.91	2.81	4.28	33

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17765	C17796	C17795	C17766	C17794	C17767	Bronze
② Elbow	1	C18052	C18052	C18305	C18306	C18307	C18308	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

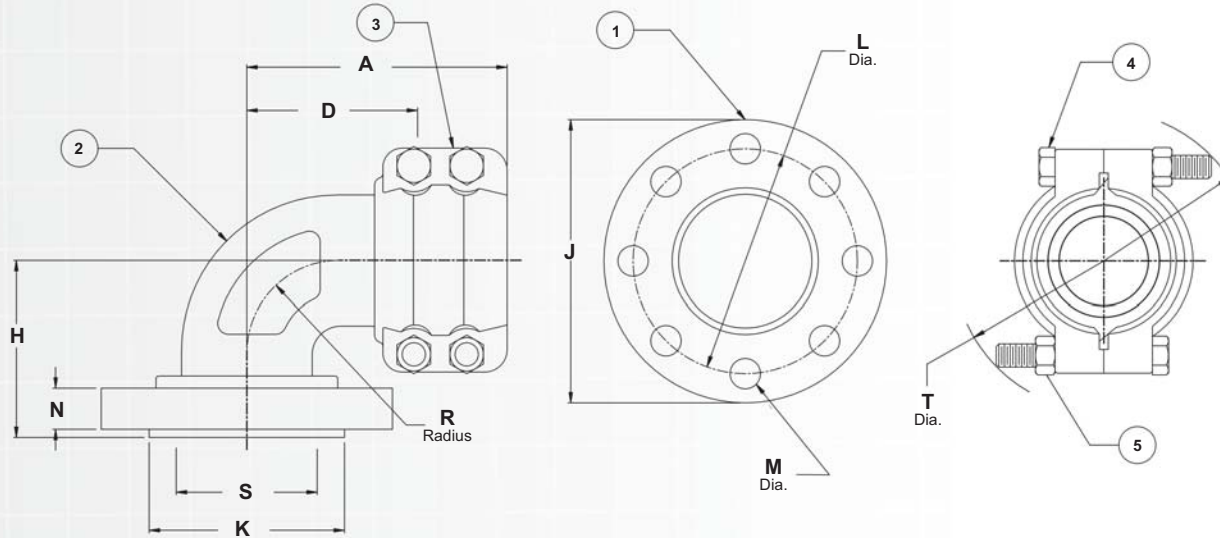
End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N FJ9838-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

**Type FL, Group X, Class III,
250Lb. Flange Per MIL-PRF-20042**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	T	R	S	Est. Wt. Lbs.
90EF-1546B3-2-40	2"	6	.69	5.47	2.83	3.50	5.56	3.28	4.44	.81	6.70	1.88	2.24	17
90EF-1546B3-2.5-40	2-1/2"	6	.69	5.47	2.83	3.50	6.13	3.28	5.00	.94	6.70	1.88	2.24	18
90EF-1546B3-2.5-48	2-1/2"	6	.69	5.65	3.09	4.00	6.13	3.78	5.00	.94	7.65	2.09	2.71	21
90EF-1546B3-3-48	3"	8	.69	5.65	3.09	4.00	6.63	4.50	5.50	.94	7.65	2.09	3.31	22
90EF-1546B3-3.5-64	3-1/2"	8	.69	6.48	3.88	4.62	7.19	5.22	6.06	1.00	8.91	2.81	3.81	31
90EF-1546B3-4-64	4"	8	.69	6.48	3.88	4.62	7.69	5.22	6.56	1.00	8.91	2.81	4.28	32

Components

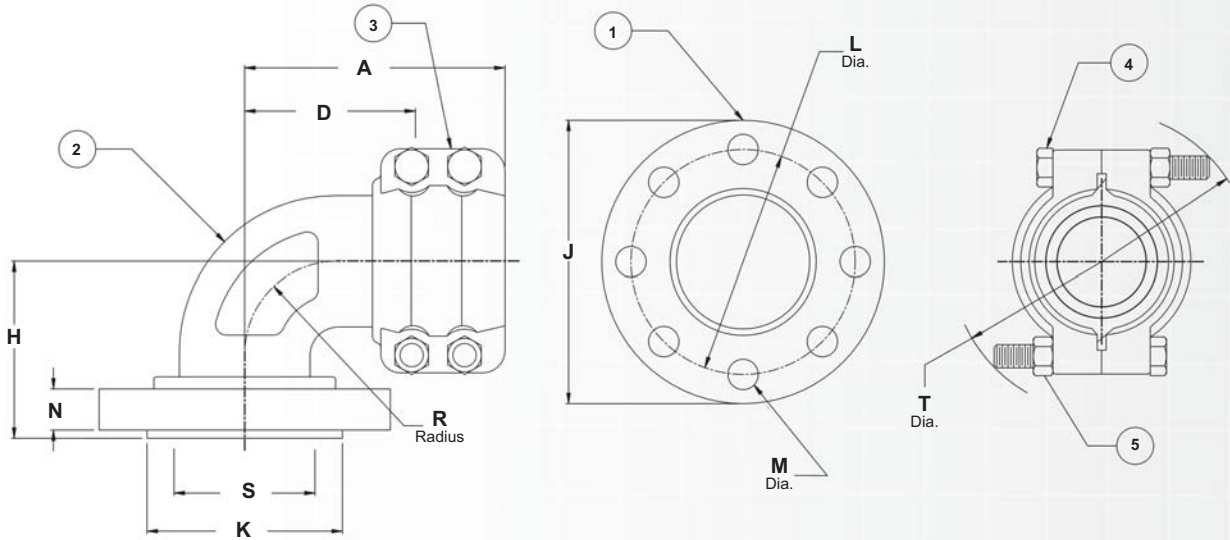
Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17812	C17307	C17813	C17309	C17815	C17310	Bronze
② Elbow	1	C18052	C18052	C18305	C18306	C18307	C18308	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,
 Type FL, Group X, Class IV,
 150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	T	R	S	Est. Wt. Lbs.
90EF-1546B4-2-40	2"	6	.56	5.47	2.83	3.50	5.56	3.28	4.44	.44	6.70	1.88	2.24	15
90EF-1546B4-2.5-40 2-1/2"	2.5"	6	.56	5.47	2.83	3.50	6.13	3.28	5.00	.50	6.70	1.88	2.24	16
90EF-1546B4-2.5-48 2-1/2"	2.5"	6	.56	5.65	3.09	4.00	6.13	3.78	5.00	.50	7.65	2.09	2.71	19
90EF-1546B4-3-48	3"	8	.56	5.65	3.09	4.00	6.63	4.50	5.50	.50	7.65	2.09	3.31	20
90EF-1546B4-3.5-64 3-1/2"	3.5"	8	.56	6.48	3.88	4.62	7.19	5.22	6.06	.50	8.91	2.81	3.81	29
90EF-1546B4-4-64	4"	8	.56	6.48	3.88	4.62	7.69	5.27	6.56	.50	8.91	2.81	4.28	30

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17925	C17929	C17931	C17933	C17938	C17940	Bronze
② Elbow	1	C18052	C18052	C18305	C18306	C18307	C18308	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

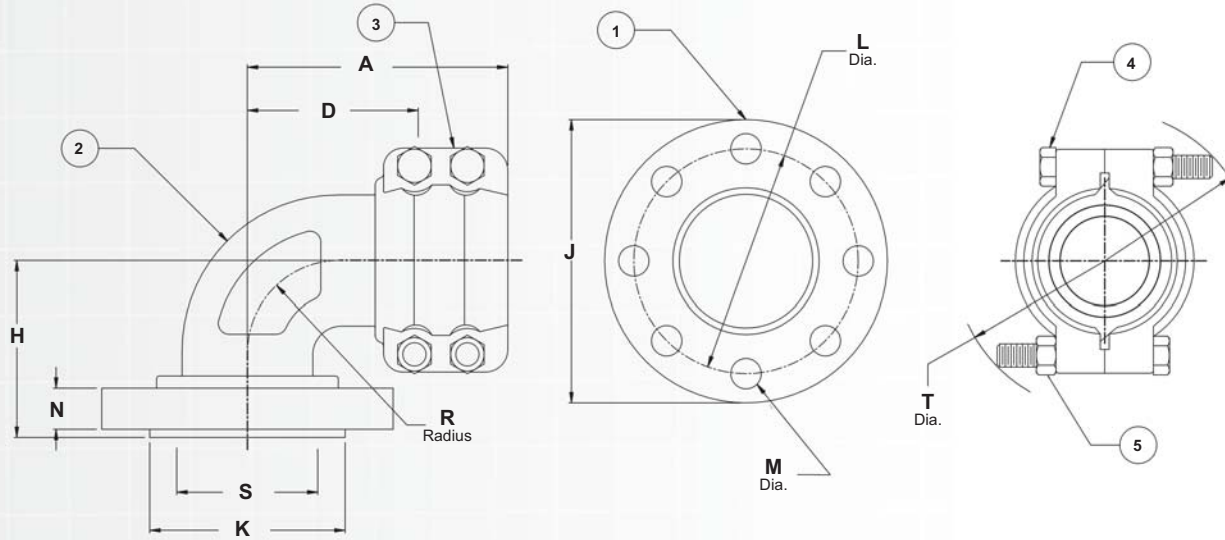
End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N FC7554-188

Use with the following hose: HS4182 & FC132

MIL-F-24787/1,

**Type FL, Group X, Class V,
150Lb. Flange Per A.N.S.I. B16.5**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	T	R	S	Est. Wt. Lbs.
90EF-1546B5-2-40	2"	4	.75	5.47	2.83	3.50	6.00	3.28	4.75	.42	6.70	1.88	2.24	15
90EF-1546B5-2.5-40	2-1/2"	4	.75	5.47	2.83	3.50	7.00	3.28	5.50	.48	6.70	1.88	2.24	16
90EF-1546B5-2.5-48	2-1/2"	4	.75	5.65	3.09	4.00	7.00	3.78	5.50	.48	7.65	2.09	2.71	19
90EF-1546B5-3-48	3"	4	.75	5.65	3.09	4.00	7.50	4.50	6.00	.48	7.65	2.09	3.31	20
90EF-1546B5-3.5-64	3-1/2"	8	.75	6.48	3.88	4.62	8.50	5.22	7.00	.48	8.91	2.81	3.81	29
90EF-1546B5-4-64	4"	8	.75	6.48	3.88	4.62	9.00	5.27	7.50	.48	8.91	2.81	4.28	30

Components

Description	Req'd per Ass'y	2-40	2.5-40	2.5-48	3-48	3.5-64	4-64	Material
① Swivel Flange	1	C17966	C17968	C17969	C17970	C17971	C17972	Bronze
② Elbow	1	C18052	C18052	C18305	C18306	C18307	C18308	Alum. Bronze
③ Segment	2	D17739-1	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
④ Bolt	4	B17747-1	B17747-1	B17748-1	B17748-1	B17749-1	B17749-1	Monel
⑤ Nut	4	B17747-2	B17747-2	B17748-2	B17748-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



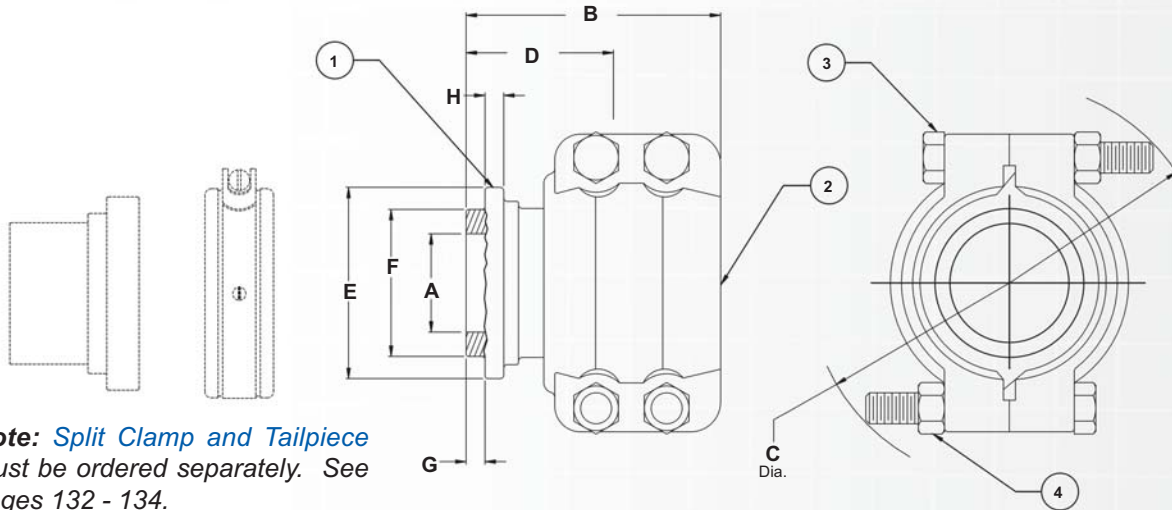
End Fitting - Straight - Male Split to Hose

Equal to Aeroquip P/N FC9635-188

MIL-F-24787/4,

Use with the following hose: HS4182 & FC132

Type E, Group X



Note: Split Clamp and Tailpiece must be ordered separately. See pages 132 - 134.

Part Number	I.P.S. Size	A (Max.)	B (Max.)	C (Max.)	D (Max.)	E ± .006	F +.006 - .000	G +.005 - .000	H +.005 - .000	Est. Wt. Lbs.
EF-1546C-2-40	2"	2.00	6.18	6.75	1.77	3.245	2.495	.332	.317	9
EF-1546C-2.5-48	2-1/2"	2.50	6.18	7.75	1.77	3.745	2.995	.332	.317	13
EF-1546C-3-48	3"	3.00	6.18	7.75	1.77	4.370	3.620	.332	.317	13
EF-1546C-3.5-64	3-1/2"	3.50	6.31	9.00	1.90	4.928	4.120	.332	.317	20
EF-1546C-4-64	4"	4.00	6.31	9.00	2.03	5.428	4.620	.404	.360	21

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Nipple	1	C18325	C18326	C18327	C18328	C18329	Alum. Bronze
② Segment	2	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
③ Bolt	4	B17747-1	B17747-1	B17747-1	B17749-1	B17749-1	Monel
④ Nut	4	B17747-2	B17747-2	B17747-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

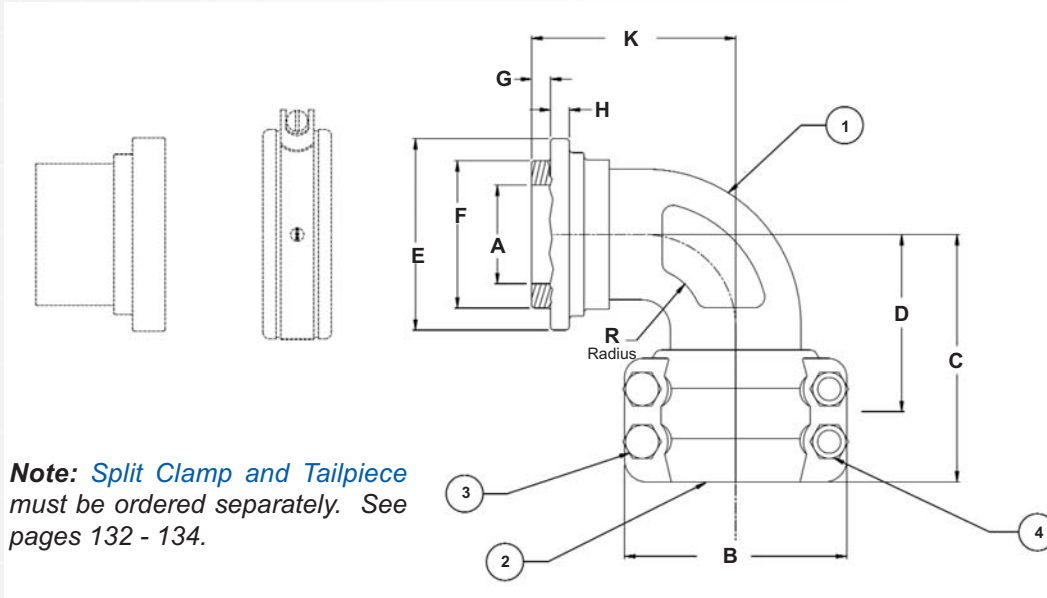
End Fitting - 90° - Male Split to Hose

Equal to Aeroquip P/N FC9636-188

MIL-F-24787/4,

Use with the following hose: HS4182 & FC132

Type EL, Group X



Part Number	IPS Size	A (Max.)	B (Max.)	C (Max.)	D (Max.)	E ± .006	F +.006 -.000	G +.005 -.000	H +.005 -.000	R (Nom.)	K (Nom.)	Est. Wt. Lbs.
90EF-1546D-2-40	2"	2.00	6.75	6.25	2.83	3.245	2.495	.332	.317	2.12	3.50	10
90EF-1546D-2.5-48	2-1/2"	2.50	7.75	6.87	3.09	3.745	2.995	.332	.317	2.50	3.75	13
90EF-1546D-3-48	3"	3.00	7.75	6.87	3.09	4.370	3.620	.332	.317	2.50	3.75	16
90EF-1546D-3.5-64	3-1/2"	3.50	9.00	7.00	3.88	4.928	4.120	.332	.317	3.00	4.50	25
90EF-1546D-4-64	4"	4.00	9.00	7.00	3.88	5.428	4.620	.404	.360	3.00	4.50	26

Components

Description	Req'd per Ass'y	2-40	2.5-48	3-48	3.5-64	4-64	Material
① Elbow	1	C18330	C18331	C18332	C18333	C18334	Alum. Bronze
② Segment	2	D17739-1	D17743-1	D17743-1	D17726-1	D17726-1	Alum. Bronze
③ Bolt	4	B17747-1	B17747-1	B17747-1	B17749-1	B17749-1	Monel
④ Nut	4	B17747-2	B17747-2	B17747-2	B17749-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



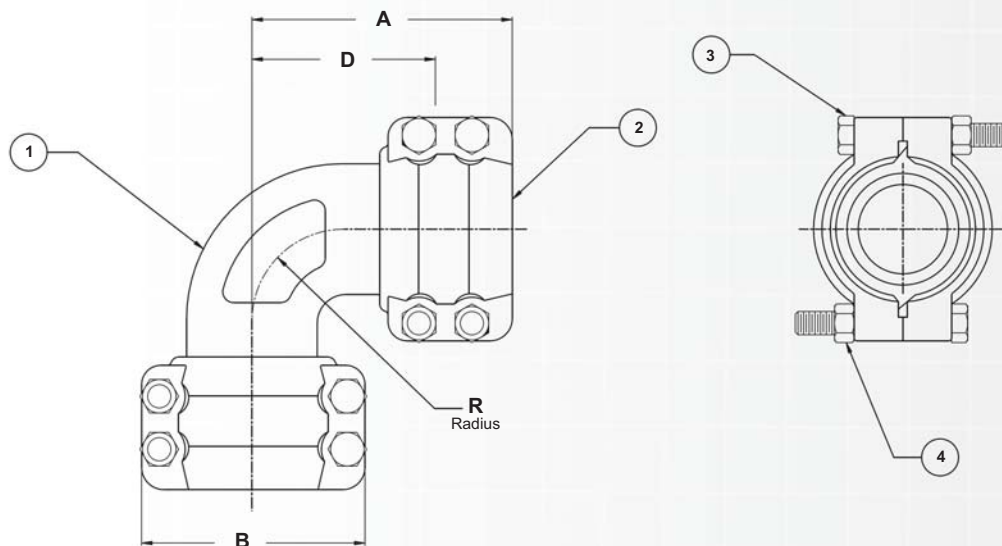
Elbow Fitting - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N FC9528-188

MIL-F-24787/5,

Use with the following hose: HS4182 & FC132

Type D, Group X



Part Number	Hose Size	A (Max.)	B (Max.)	D (Max.)	R (Nom.)	Est. Wt. Lbs.
90ELB-1546E-40	2-1/2"	6.25	6.75	2.83	2.12	15
90ELB-1546E-48	3"	6.87	7.75	3.09	2.50	23
90ELB-1546E-64	4"	7.00	9.00	3.88	3.00	36

Components

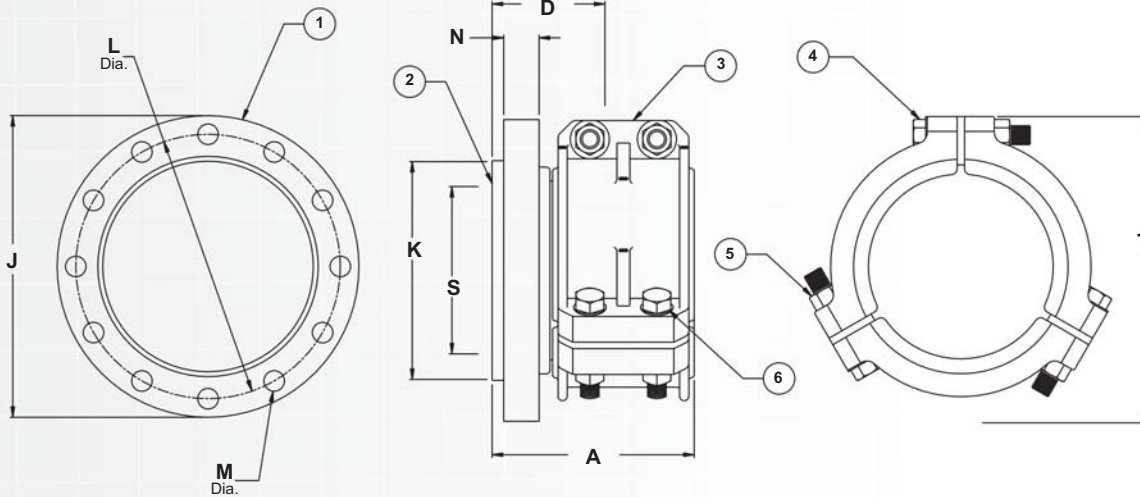
Description	Req'd per Ass'y	40	48	64	Material
① Elbow	1	C18051	C18309	D18310	Bronze
② Segment	3	D17739-1	D17743-1	D17726-1	Alum. Bronze
③ Bolt	8	B17747-1	B17748-1	B17749-1	Monel
④ Nut	8	B17747-2	B17748-2	B17749-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Use with the following hose: ER512 & 2580

MIL-F-24787/1,
Type F, Group IX, Class I,
400Lb. Flange Per MIL-PRF-20042



Fittings

44

Part Number	IPS Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-5-400F	5"	11	.81	6.75	2.65	10.38	6.37	8.81	1.06	5.32	9.25	50
EF-6-400F	6"	12	.94	6.75	2.65	11.94	7.37	10.19	1.19	6.36	10.38	63
EF-8-400F	8"	13	1.06	7.00	2.65	14.75	9.82	12.75	1.31	8.32	13.00	93
EF-10-400F	10"	15	1.06	7.01	2.89	17.00	12.00	15.00	1.44	10.38	14.50	105

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	Material
① Swivel Flange	1	C16912-1	C16912-2	C16912-3	C18825	Bronze
② Nipple	1	D16195	D16199	D16185	D18324	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



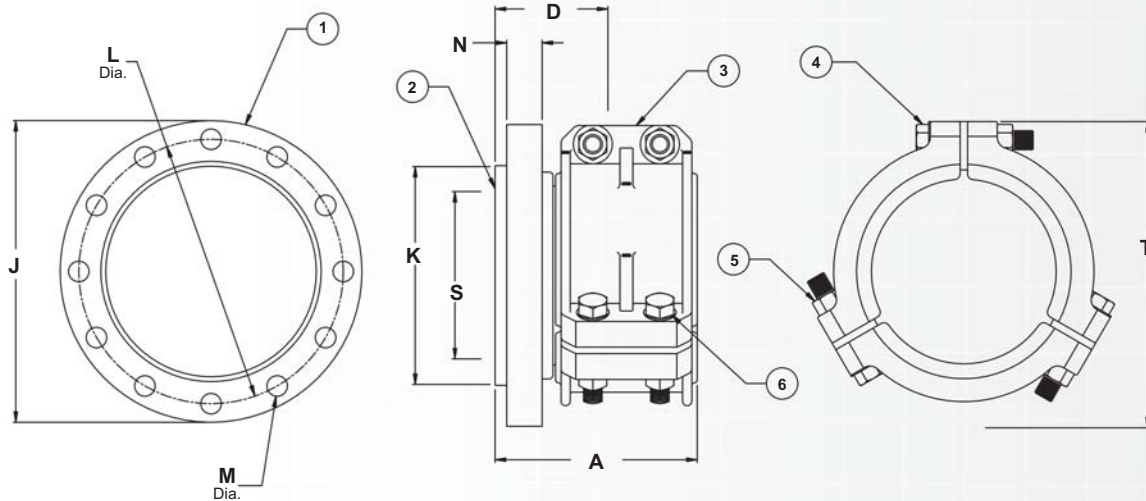
End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N FC7750-188

MIL-F-24787/1,

Type F, Group IX, Class II,
150/400Lb. Flange Per MIL-PRF-20042

Use with the following hose: ER512 & 2580



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-5-150/400F	5"	10	.69	6.75	2.65	9.06	6.37	7.81	1.06	5.32	9.25	46
EF-6-150/400F	6"	12	.69	6.75	2.65	10.13	7.37	8.88	1.19	6.36	10.38	55
EF-8-150/400F	8"	14	.69	7.00	2.65	12.38	9.82	11.06	1.31	8.32	13.00	79
EF-10-150/400F	10"	15	.81	7.01	2.89	15.00	12.00	13.44	1.44	10.38	14.50	95
EF-12-150/400F	12"	18	.81	8.49	3.24	17.62	14.50	16.06	1.48	12.32	17.10	--

Components

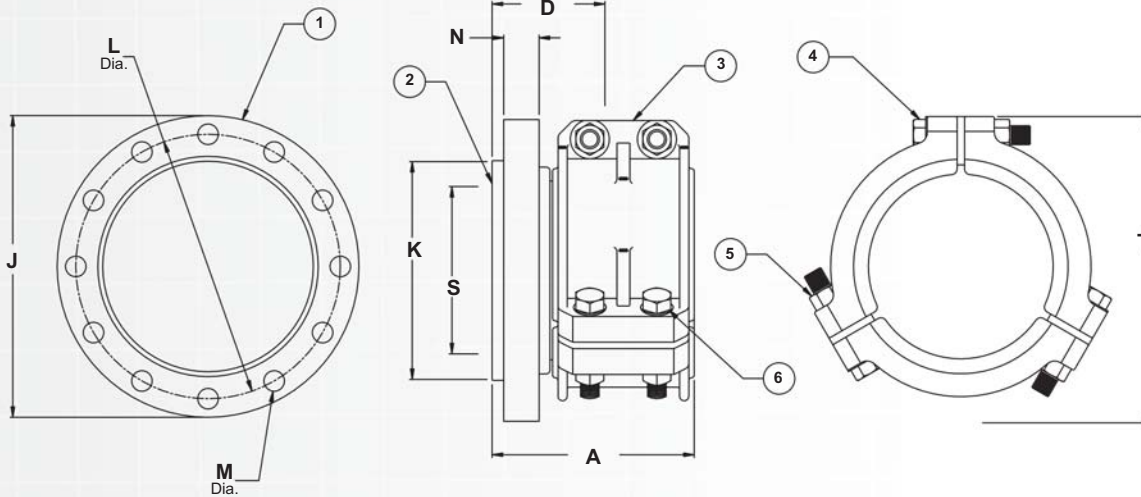
Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16915-1	C16915-2	C16915-3	C18456	C18257	Bronze
② Nipple	1	D16195	D16199	D16185	D18324	D18319	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Use with the following hose: ER512 & 2580

MIL-F-24787/1,
Type F, Group IX, Class III,
250Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-5-250F	5"	10	.69	6.75	2.65	9.06	6.37	7.81	1.06	5.32	9.25	46
EF-6-250F	6"	12	.69	6.75	2.65	10.13	7.37	8.88	1.19	6.36	10.38	55
EF-8-250F	8"	14	.69	7.00	2.65	12.38	9.82	11.06	1.31	8.32	13.00	79
EF-10-250F	10"	15	.81	7.01	2.89	15.00	12.00	13.44	1.44	10.38	14.50	95
EF-12-250F	12"	18	.81	8.49	3.24	17.63	14.50	16.06	1.50	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16915-1	C16915-2	C16915-3	C18827	C18828	Bronze
② Nipple	1	D16195	D16199	D16185	D18324	D18319	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

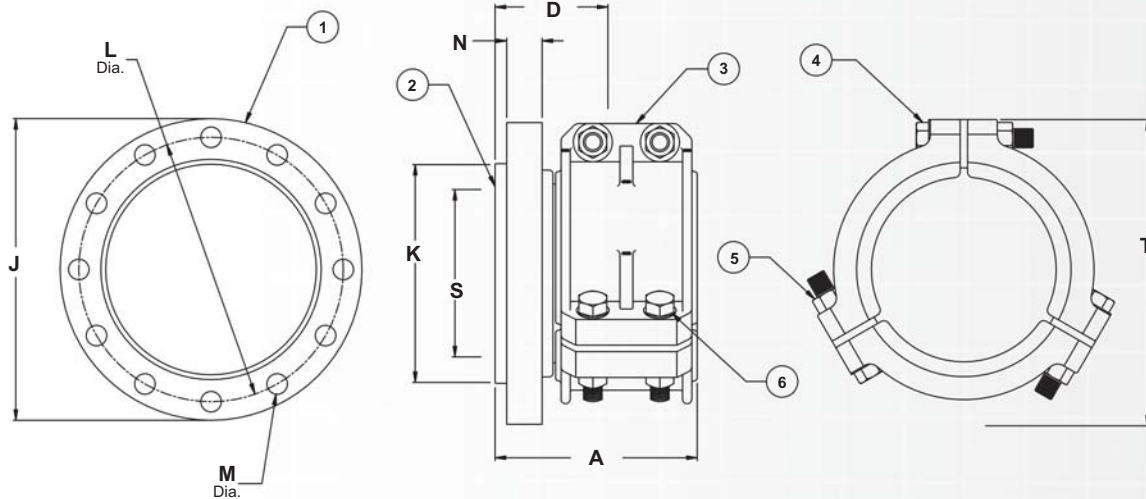
End Fitting - Straight - Flange to Hose

Use with the following hose: ER512 & 2580

MIL-F-24787/1,

Type F, Group IX, Class IV,

150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-5-150F	5"	10	.69	6.75	2.65	9.06	6.37	7.81	.56	5.32	9.25	47
EF-6-150F	6"	12	.69	6.75	2.65	10.13	7.37	8.88	.56	6.36	10.38	51
EF-8-150F	8"	14	.69	7.00	2.65	12.38	9.82	11.06	.63	8.32	13.00	71
EF-10-150F	10"	15	.81	7.01	2.89	15.00	12.00	13.44	.69	10.38	14.50	--
EF-12-150F	12"	18	.81	8.49	3.24	17.63	14.50	16.00	.75	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16913-1	C16913-2	C16913-3	C18829	C18830	Bronze
② Nipple	1	D16195	D16199	D16185	D18324	D18319	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

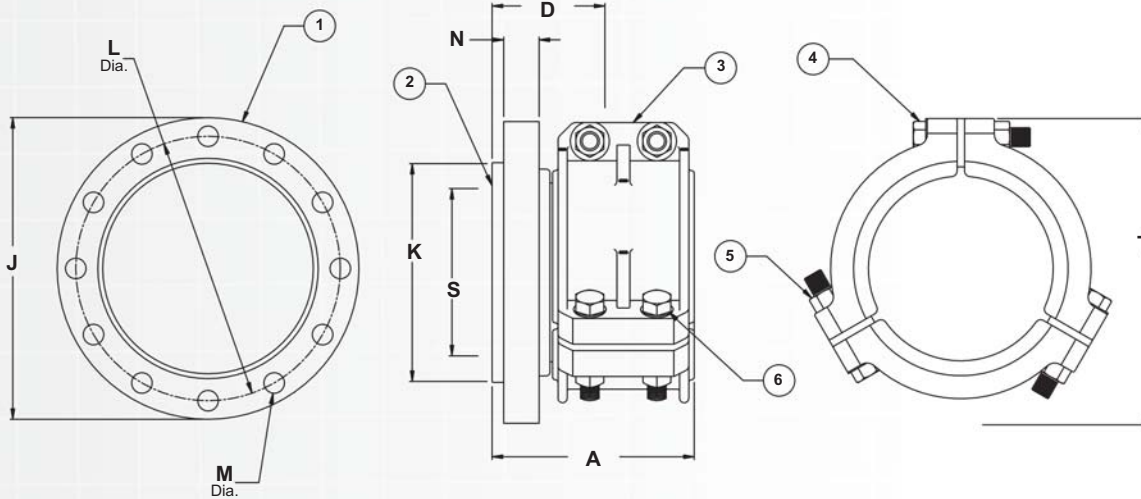
End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N FC7781-188

MIL-F-24787/1,

Type F, Group IX, Class V,
150Lb. Flange Per A.N.S.I. B16.5

Use with the following hose: ER512 & 2580



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-5-150F-B16.5	5"	8	.88	6.75	2.65	10.00	6.37	8.50	1.05	5.32	9.25	47
EF-6-150F-B16.5	6"	8	.88	6.75	2.65	11.00	7.37	9.50	1.17	6.36	10.38	59
EF-8-150F-B16.5	8"	8	.88	7.00	2.65	13.50	9.82	11.75	1.30	8.32	13.00	82
EF-10-150F-B16.5	10"	12	1.00	7.01	2.89	16.00	12.00	14.25	1.42	10.38	14.50	98
EF-12-150F-B16.5	12"	12	1.00	8.49	3.24	19.00	14.50	17.00	1.48	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16914-1	C16914-2	C16914-3	C18831	C18832	Bronze
② Nipple	1	D16195	D16199	D16185	D18324	D18319	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

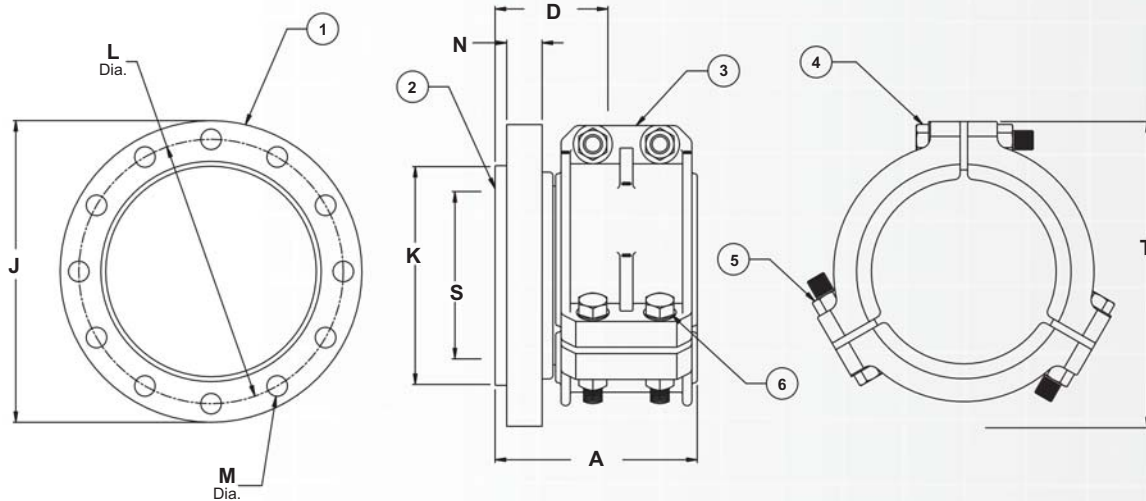
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N FC7781-410

150Lb. Flange Per MIL-PRF-20042

Use with the following hose: ER512 & 2580



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	T	Est. Wt. Lbs.
EF-5-150F-B16.5-SS	5"	8	.88	6.75	2.65	10.00	6.37	8.50	1.05	5.32	9.25	47
EF-6-150F-B16.5-SS	6"	8	.88	6.75	2.65	11.00	7.37	9.50	1.17	6.36	10.38	59
EF-8-150F-B16.5-SS	8"	8	.88	7.00	2.65	13.50	9.82	11.75	1.30	8.32	13.00	82
EF-10-150F-B16.5-SS	10"	12	1.00	7.01	2.89	16.00	12.00	14.25	1.42	10.38	14.50	98
EF-12-150F-B16.5-SS	12"	12	1.00	8.49	3.24	19.00	14.50	17.00	1.48	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C18361	C17639-1	C17639-2	C18459	--	Stainless Steel
② Nipple	1	D18363	D17640	D17744	D18458	--	Stainless Steel
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

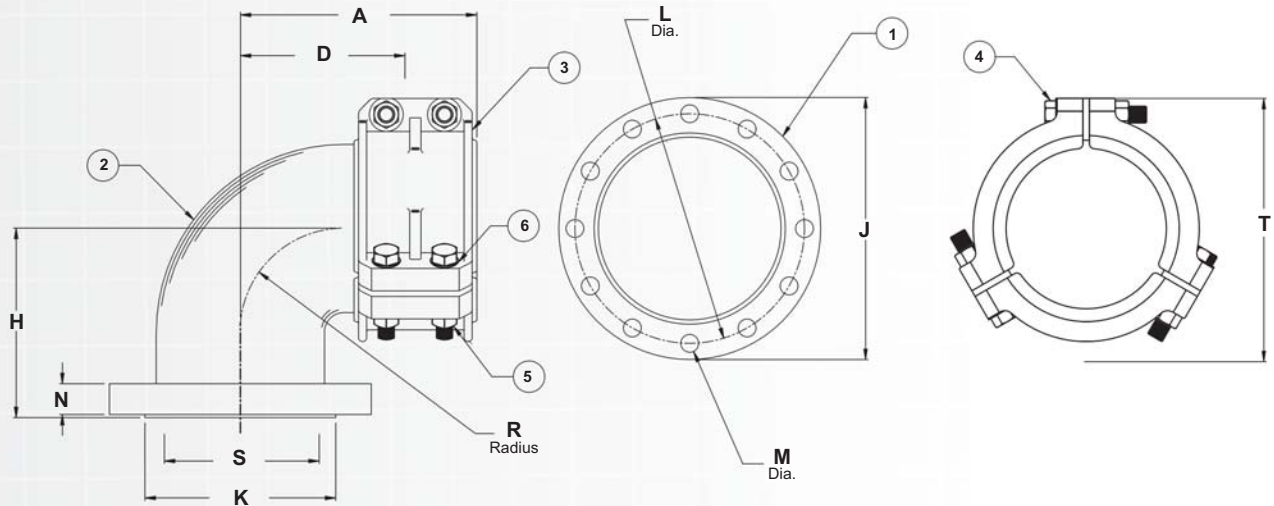
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Use with the following hose: ER512 & 2580

MIL-F-24787/1,
Type FL, Group IX, Class I,
400Lb. Flange Per MIL-PRF-20042

Fittings



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-5-400F	5"	11	.81	8.64	4.52	6.81	10.38	6.37	8.81	1.06	3.50	5.32	9.25	59
90EF-6-400F	6"	12	.94	9.14	5.02	7.31	11.94	7.37	10.19	1.19	4.00	6.36	10.38	73
90EF-8-400F	8"	13	1.06	10.34	6.22	8.81	14.75	9.82	12.75	1.31	5.00	8.32	13.00	110
90EF-10-400F	10"	15	1.06	11.89	7.77	9.70	17.00	12.00	15.00	1.44	6.38	10.38	14.50	161

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	Material
① Swivel Flange	1	C16912-1	C16912-2	C16912-3	C18825	Bronze
② Elbow	1	D16920	D16921	D16922	D18826	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



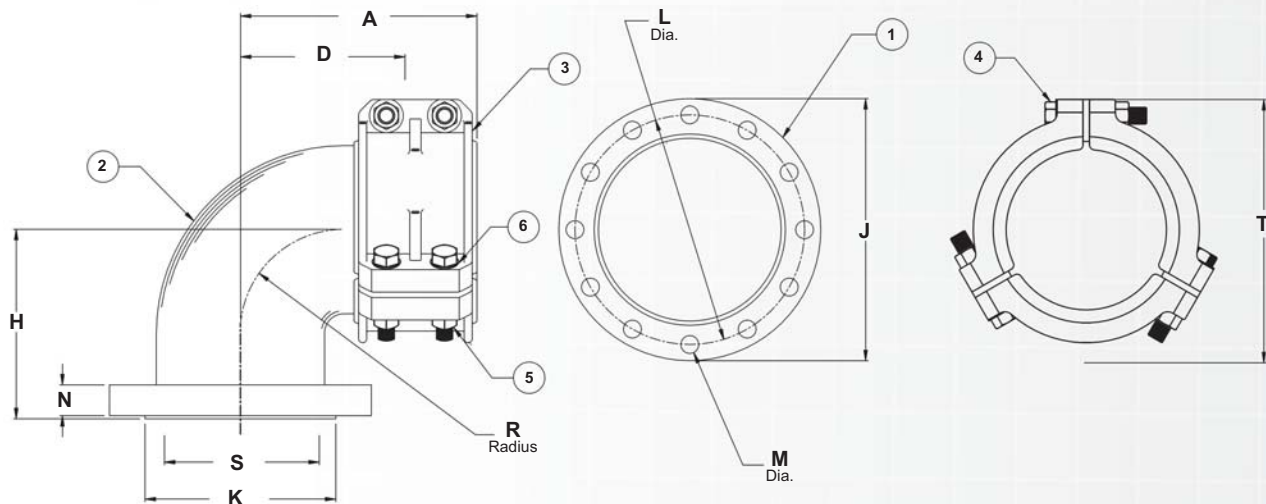
End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N FC7751-188

MIL-F-24787/1,

Type FL, Group IX, Class II,
150/400Lb. Flange Per MIL-PRF-20042

Use with the following hose: ER512 & 2580



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-5-150/400F	5"	10	.69	8.64	4.52	6.81	9.06	6.37	7.81	1.06	3.50	5.32	9.25	59
90EF-6-150/400F	6"	12	.69	9.14	5.02	7.31	10.13	7.37	8.88	1.19	4.00	6.36	10.38	68
90EF-8-150/400F	8"	14	.69	10.34	6.22	8.81	12.38	9.82	11.06	1.31	5.00	8.32	13.00	101
90EF-10-150/400F	10"	15	.81	11.89	7.77	9.70	15.00	12.00	13.44	1.44	6.38	10.38	14.50	147

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	Material
① Swivel Flange	1	C16915-1	C16915-2	C16915-3	C18456	Bronze
② Elbow	1	D16920	D16921	D16922	D18826	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	Monel

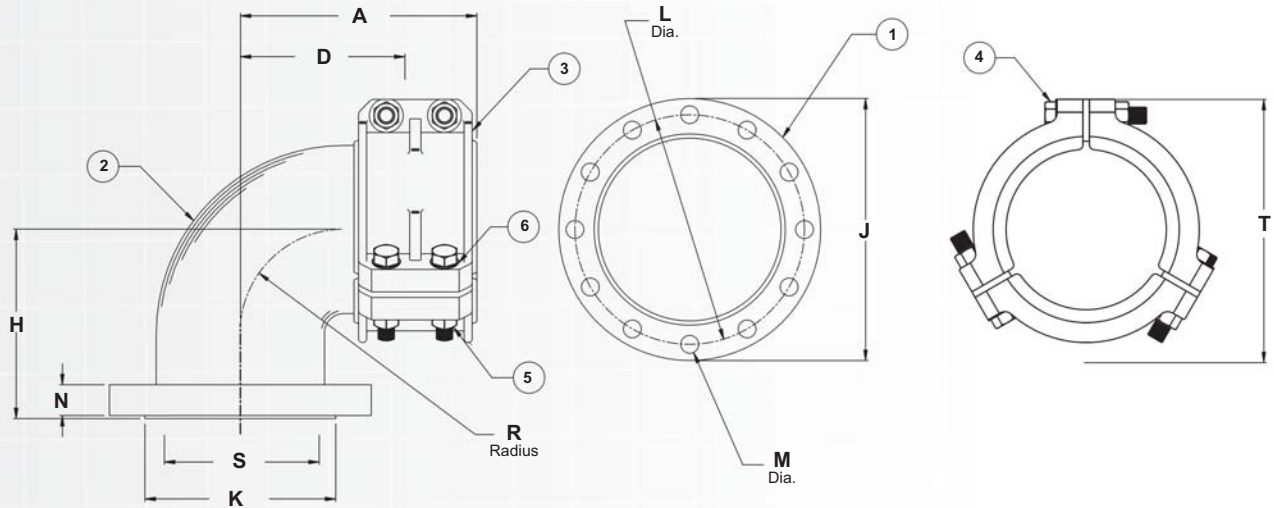
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Use with the following hose: ER512 & 2580

MIL-F-24787/1,
 Type FL, Group IX, Class III,
 250Lb. Flange Per MIL-PRF-20042

Fittings



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-5-250F	5"	10	.69	8.64	4.52	6.81	9.06	6.37	7.81	1.06	3.50	5.32	9.25	59
90EF-6-250F	6"	12	.69	9.14	5.02	7.31	10.13	7.37	8.88	1.19	4.00	6.36	10.38	68
90EF-8-250F	8"	14	.69	10.34	6.22	8.81	12.38	9.82	11.06	1.31	5.00	8.32	13.00	101
90EF-10-250F	10"	15	.81	11.89	7.77	9.70	15.00	12.00	13.44	1.44	6.38	10.38	14.50	147
90EF-12-250F	12"	18	.81	14.24	9.00	10.70	17.63	14.50	16.06	1.50	7.38	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16915-1	C16915-2	C16915-3	C18827	C18828	Bronze
② Elbow	1	D16920	D16921	D16922	D18826	D18833	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



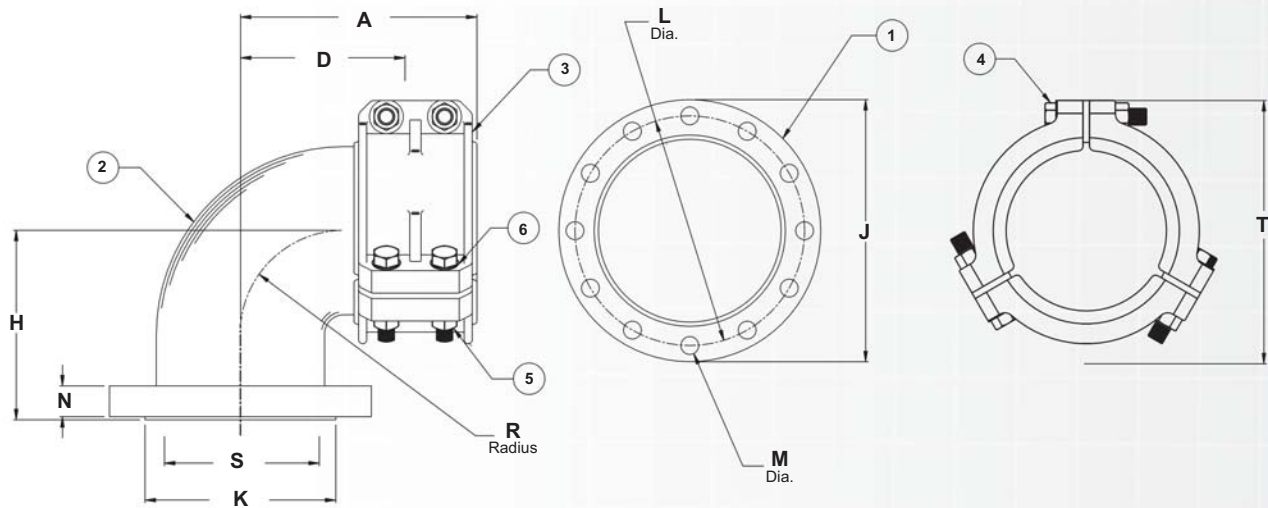
End Fitting - 90° - Flange to Hose

Use with the following hose: ER512 & 2580

MIL-F-24787/1,

Type FL, Group IX, Class IV,

150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-5-150F	5"	10	.69	8.64	4.52	6.81	9.06	6.37	7.81	.56	3.50	5.32	9.25	59
90EF-6-150F	6"	12	.69	9.14	5.02	7.31	10.13	7.37	8.88	.56	4.00	6.36	10.38	68
90EF-8-150F	8"	14	.69	10.34	6.22	8.81	12.38	9.82	11.06	.63	5.00	8.32	13.00	101
90EF-10-150F	10"	15	.81	11.89	7.77	9.70	15.00	12.00	13.44	.69	6.38	10.38	14.50	147
90EF-12-150F	12"	18	.81	14.24	9.00	10.70	17.63	14.50	16.06	.75	7.38	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16913-1	C16913-2	C16913-3	C18829	C18830	Bronze
② Elbow	1	D16920	D16921	D16922	D18826	D18833	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

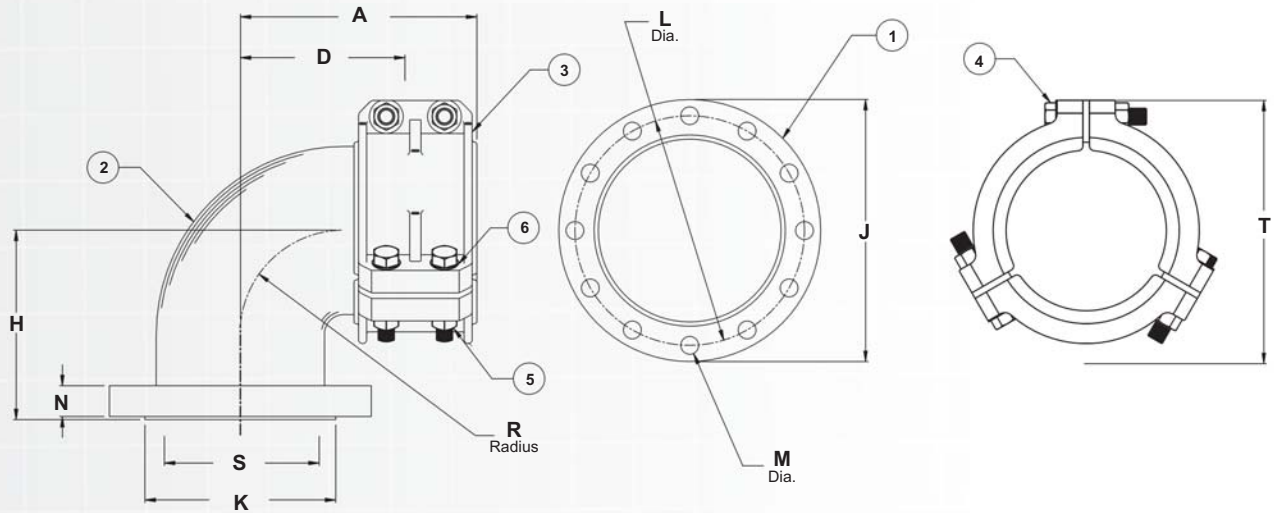
End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N FC7780-188

Use with the following hose: ER512 & 2580

MIL-F-24787/1,

**Type FL, Group IX, Class V,
150Lb. Flange Per A.N.S.I. B16.5**



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	H	J	K	L	N	R	S	T	Est. Wt. Lbs.
90EF-5-150F-B16.5	5"	8	.88	8.64	4.52	6.81	10.00	6.37	8.50	1.05	3.50	5.32	9.25	59
90EF-6-150F-B16.5	6"	8	.88	9.14	5.02	7.31	11.00	7.37	9.50	1.17	4.00	6.36	10.38	73
90EF-8-150F-B16.5	8"	8	.88	10.34	6.22	8.81	13.50	9.82	11.75	1.30	5.00	8.32	13.00	110
90EF-10-150F-B16.5	10"	12	1.00	11.89	7.77	9.70	16.00	12.00	14.25	1.42	6.38	10.38	14.50	143
90EF-12-150F-B16.5	12"	12	1.00	14.24	9.00	10.70	19.00	14.50	17.00	1.48	7.38	12.32	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Swivel Flange	1	C16914-1	C16914-2	C16914-3	C18831	C18832	Bronze
② Elbow	1	D16920	D16921	D16922	D18826	D18833	Alum. Bronze
③ Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
④ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
⑤ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑥ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Male Split Clamp to Hose

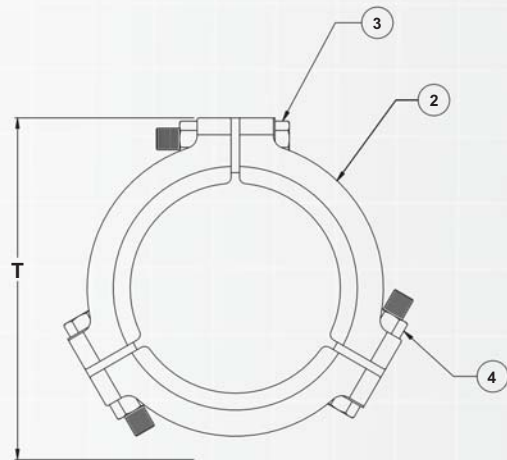
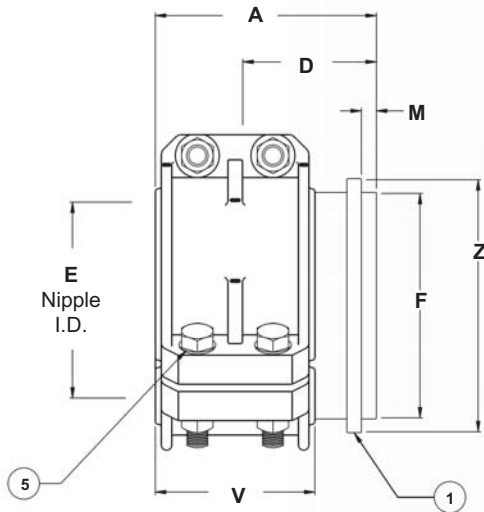
Equal to Aeroquip P/N FC7755-188

MIL-F-24787/4,

Use with the following hose: ER512 & 2580

Type E, Group IX

See pages 132 - 134 for [Split Clamps and Tailpieces](#).



Part Number	I.P.S. Size	A	D	E	F	M	T	V	Z	Est. Wt. Lbs.
EF-5MS-ER512	5"	6.22	2.10	4.38	5.62	.40	9.25	4.75	6.63	36
EF-6MS-ER512	6"	6.58	2.46	5.38	6.75	.45	10.38	4.75	7.57	44
EF-8MS-ER512	8"	7.05	2.86	7.38	9.00	.82	13.00	5.00	9.97	60
EF-10MS-ER512	10"	6.84	2.86	9.40	11.00	.86	14.50	5.00	12.06	77
EF-12MS-ER512	12"	8.16	2.86	11.40	12.00	.86	17.10	5.00	13.38	120

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Nipple	1	D16936	D16937	D16938	D18834	D18835	Alum. Bronze
② Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
③ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
④ Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑤ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

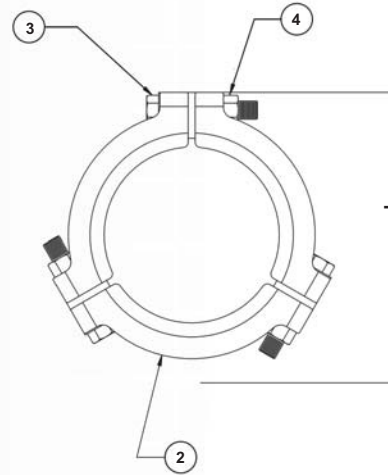
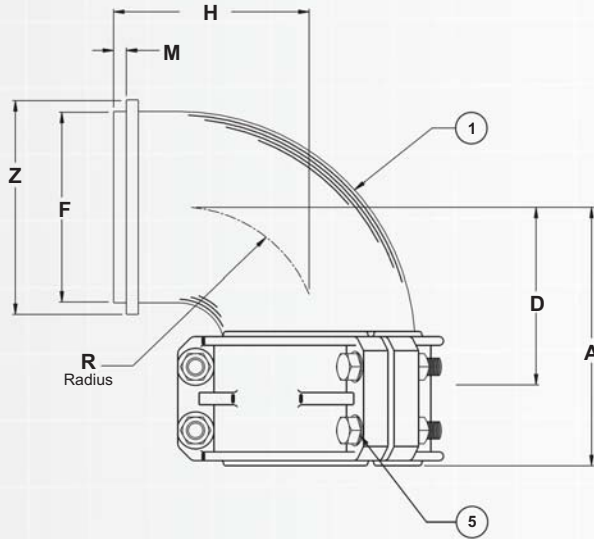
End Fitting - 90° - Male Split Clamp to Hose

Equal to Aeroquip P/N 7752-188

Use with the following hose: ER512 & 2580

See pages 132 - 134 for [Split Clamps and Tailpieces](#).

MIL-F-24787/4,
Type EL, Group IX



Part Number	I.P.S. Size	A	D	F	H	M	R	T	Z	Est. Wt. Lbs.
90EF-5MS-ER512	5"	8.64	4.52	5.62	6.81	.40	3.50	9.25	6.63	46
90EF-6MS-ER512	6"	9.14	5.02	6.75	7.31	.45	4.00	10.38	7.57	56
90EF-8MS-ER512	8"	10.34	6.22	9.00	8.81	.82	5.00	13.00	9.97	83
90EF-10MS-ER512	10"	11.89	7.77	11.00	9.70	.86	6.38	14.50	12.06	115
90EF-12MS-ER512	12"	14.24	9.00	12.00	10.70	.88	7.38	17.10	13.38	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Elbow	1	D16930	D16931	D16932	D18838	D18839	Alum. Bronze
② Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
③ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
④ Lock Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑤ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



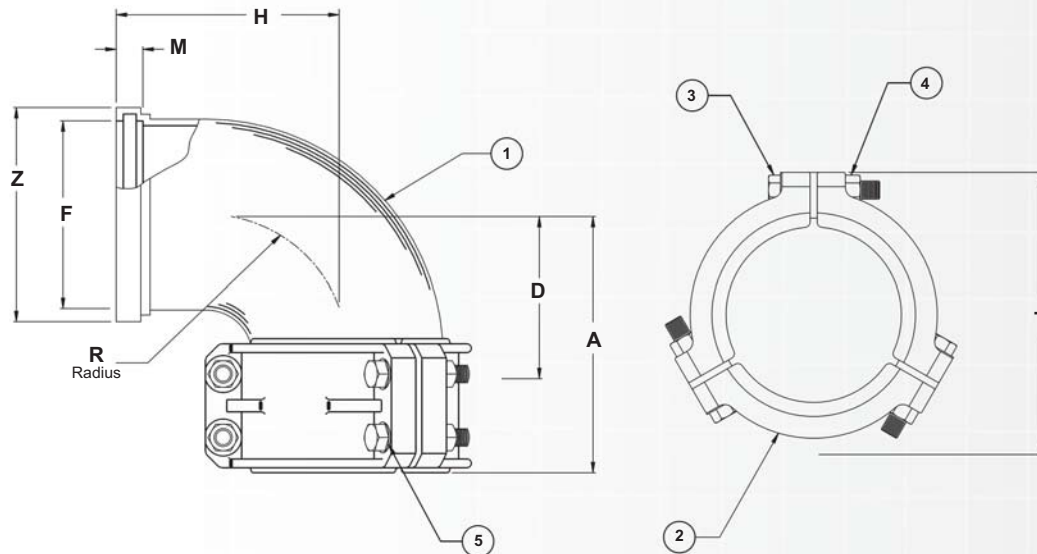
End Fitting - 90° - Female Split Clamp to Hose

Equal to Aeroquip P/N 7753-188

Use with the following hose: ER512 & 2580

See pages 132, 135 & 136 for [Split Clamps and Tailpieces](#).

MIL-F-24787/4,
Type EL, Group IX



Part Number	I.P.S. Size	A	D	F	H	M	R	T	Z	Est. Wt. Lbs.
90EF-5FS-ER512	5"	8.64	4.52	5.64	6.81	.42	3.50	9.25	6.63	45
90EF-6FS-ER512	6"	9.14	5.02	6.76	7.31	.47	4.00	10.38	7.57	56
90EF-8FS-ER512	8"	10.34	6.22	9.01	8.81	.84	5.00	13.00	9.97	83
90EF-10FS-ER512	10"	11.89	7.77	11.01	9.70	.88	6.38	14.50	12.06	120
90EF-12FS-ER512	12"	14.24	9.00	12.01	10.70	.90	7.38	17.10	13.38	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Elbow	1	D16933	D16934	D16935	D18840	D18841	Alum. Bronze
② Segment	3	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
③ Bolt	6	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
④ Lock Nut	6	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑤ Washer	6	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

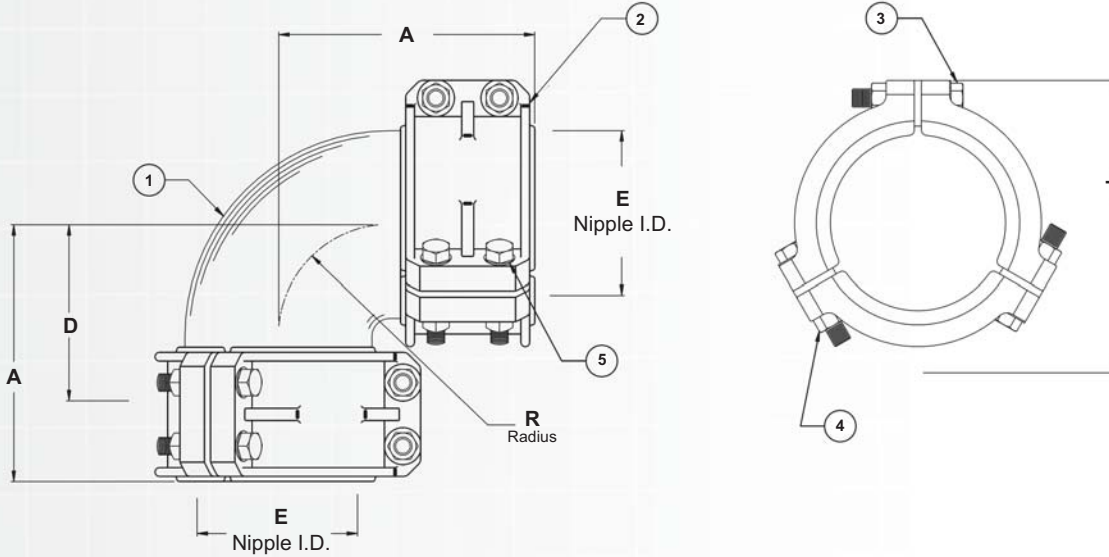
Elbow Fitting - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 7754-188

MIL-F-24787/5,
Type D, Group IX

Use with the following hose: ER512 & 2580

Fittings



Part Number	I.P.S. Size	A	D	E	R	T	Est. Wt. Lbs.
90ELB-5-ER512	5"	8.64	4.52	4.38	3.50	9.25	71
90ELB-6-ER512	6"	9.14	5.02	5.38	4.00	10.38	85
90ELB-8-ER512	8"	10.34	6.22	7.38	5.00	13.00	115
90ELB-10-ER512	10"	11.89	7.77	9.40	6.38	14.50	171
90ELB-12-ER512	12"	14.24	9.00	11.40	7.38	17.10	--

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Elbow	1	D16924	D16925	D16926	D18836	D18837	Alum. Bronze
② Segment	6	D16194	D16198	D16080-1	D18345-1	D18282-1	Alum. Bronze
③ Bolt	12	D16197-4	D16197-4	B16551-1	B16551-1	B18346	Monel
④ Lock Nut	12	D16197-6	D16197-6	B16551-3	B16551-3	B18347	Monel
⑤ Washer	12	D16197-5	D16197-5	B16551-2	B16551-2	B18348	Monel

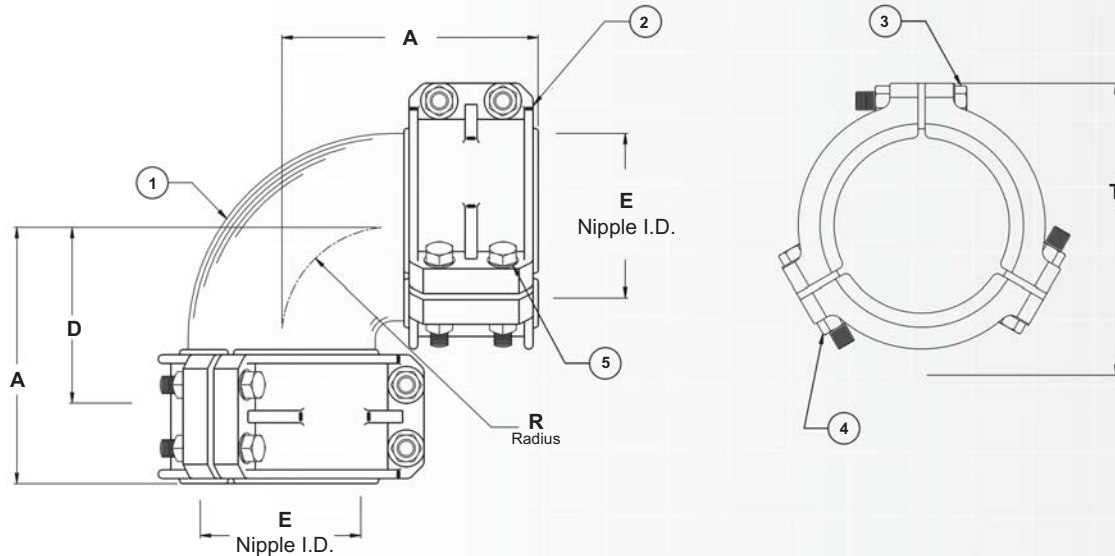
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Elbow Fitting - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 7754-410

Use with the following hose: ER512 & 2580



Part Number	I.P.S. Size	A	D	E	R	T	Est. Wt. Lbs.
90ELB-5-ER512-SS	5"	8.64	4.52	4.38	3.50	9.25	68
90ELB-6-ER512-SS	6"	9.14	5.02	5.38	4.00	10.38	80
90ELB-8-ER512-SS	8"	10.34	6.22	7.38	5.00	13.00	116
90ELB-10-ER512-SS	10"	11.89	7.77	9.40	6.38	14.50	163

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	Material
① Elbow	1	D18362	D18111	D17759	D18317	Stainless Steel
② Segment	6	D16194	D16198	D16080-1	D18345-1	Alum. Bronze
③ Bolt	12	D16197-4	D16197-4	B16551-1	B16551-1	Monel
④ Lock Nut	12	D16197-6	D16197-6	B16551-3	B16551-3	Monel
⑤ Washer	12	D16197-5	D16197-5	B16551-2	B16551-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

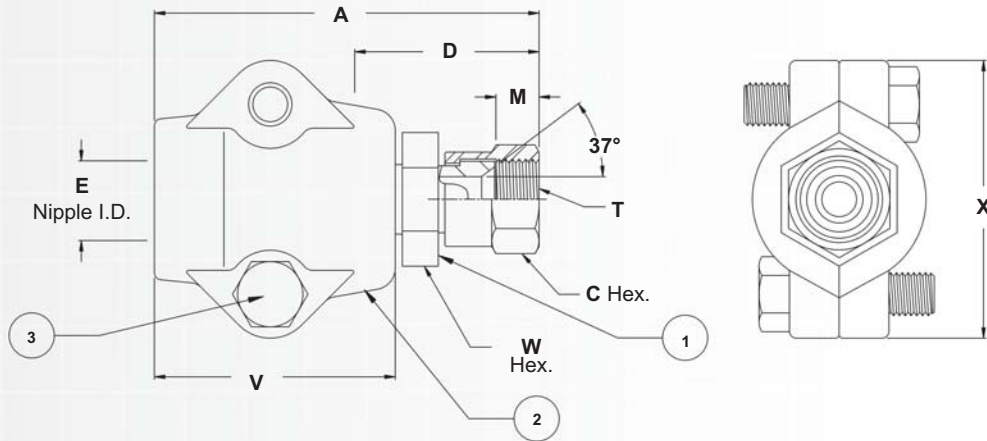
End Fitting - Straight - S.A.E. 37° Flare Swivel (J.I.C.) to Hose

Equal to Aeroquip P/N FC7100-4

MIL-F-24787/2,

Use with the following hose: HS133

Type A, Group XI



Part Number	I.P.S. Size	T Thread CL-2B	A	C	D	E	M	V	W	X	Est. Wt. Lbs.
EF-1489A-0606	3/8"	9/16"-18	3.10	.69	1.48	.26	.40	2.00	.94	2.34	.8
EF-1489A-0806	3/8"	3/4"-16	3.10	.88	1.48	.26	.44	2.00	.94	2.34	.8
EF-1489A-0808	1/2"	3/4"-16	3.31	.88	1.59	.39	.44	2.10	1.00	2.66	1.1
EF-1489A-1008	1/2"	7/8"-14	3.42	1.00	1.70	.39	.52	2.10	1.00	2.66	1.2
EF-1489A-1208	1/2"	1-1/16"-12	3.52	1.25	1.80	.39	.57	2.10	1.25	2.66	1.5
EF-1489A-1212	3/4"	1-1/16"-12	3.85	1.25	1.95	.61	.57	2.42	1.31	3.27	1.7
EF-1489A-1412	3/4"	1-3/16"-12	3.85	1.50	1.95	.61	.57	2.42	1.25	3.27	1.8
EF-1489A-1612	3/4"	1-5/16"-12	4.05	1.50	2.15	.61	.60	2.42	1.62	3.27	1.9

Components

Description	Req'd per Ass'y	0606	0806	0808	1008	Material
① Nipple Ass'y	1	C18882	C18883	C18884	C18885	Monel
② Segment	2	D18758-1	D18758-1	C18640-1	C18640-1	Monel
③ Bolt	2	B18759	B18759	B18645	B18645	Monel

Description	Req'd per Ass'y	1208	1212	1412	1612	Material
① Nipple Ass'y	1	C18886	C18887	C18888	C18889	Monel
② Segment	2	C18640-1	D18743-1	D18743-1	D18743-1	Monel
③ Bolt	2	B18645	B18745	B18745	B18745	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



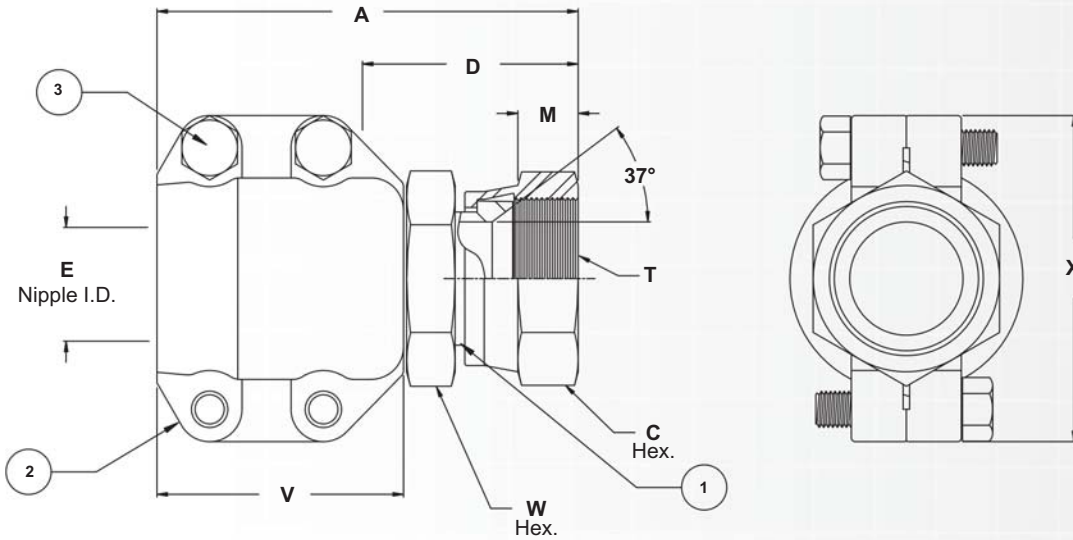
End Fitting - Straight - S.A.E. 37° Flare Swivel (J.I.C.) to Hose

Equal to Aeroquip P/N FC7100-4

MIL-F-24787/2,

Use with the following hose: HS133

Type A, Group XI



Part Number	I.P.S. Size	T Thread CL-2B	A	C	D	E	M	V	W	X	Est. Wt. Lbs.
EF-1489A-1616	1"	1-5/16"-12	4.05	1.50	2.14	.82	.60	2.42	1.62	4.02	2
EF-1489A-2016	1"	1-5/8"-12	4.05	2.00	2.14	.82	.64	2.42	1.62	4.02	2.5
EF-1489A-2020	1-1/4"	1-5/8"-12	4.62	2.00	2.53	1.05	.64	2.80	2.00	4.31	2.8
EF-1489A-2420	1-1/4"	1-7/8"-12	4.89	2.25	2.80	1.05	.74	2.80	2.25	4.31	3.3
EF-1489A-2424	1-1/2"	1-7/8"-12	5.12	2.25	2.66	1.30	.74	3.00	2.25	4.42	4.5
EF-1489A-3232	2"	2-1/2"-12	6.37	2.88	3.29	1.75	.93	3.88	2.88	5.65	6.3

Components

Description	Req'd per Ass'y	1616	2016	2020	Material
① Nipple Ass'y	1	C18890	C18891	C18892	Monel
② Segment	2	D18747-1	D18747-1	C18748-1	Monel
③ Bolt	4	B18746	B18746	B18746	Monel

Description	Req'd per Ass'y	2420	2424	3232	Material
① Nipple Ass'y	1	C18893	C18894	C18895	Monel
② Segment	2	C18748-1	D18750-1	D18704-1	Monel
③ Bolt	4	B18746	B18755	B18718	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

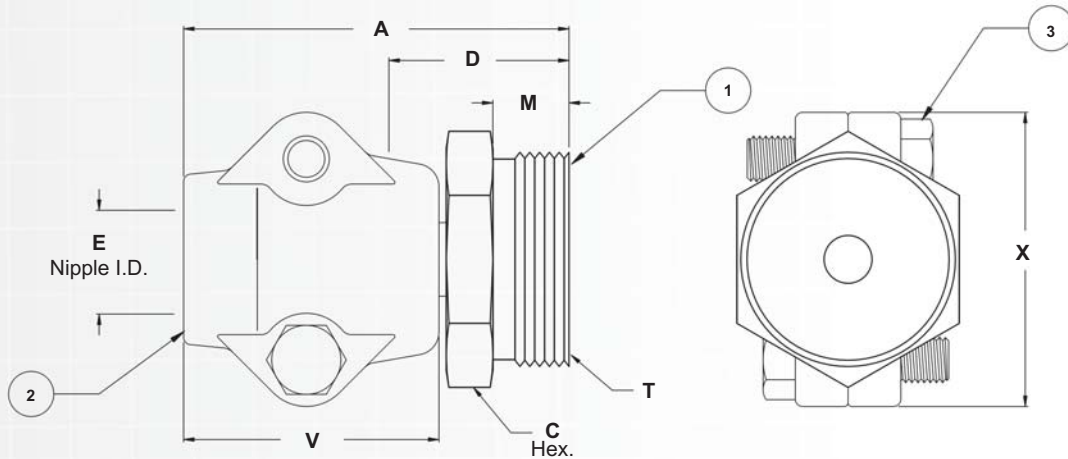
End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N FC7180-4

MIL-F-24787/3,

Use with the following hose: HS133

Type C, Group XI



Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	M	V	X	Est. Wt. Lbs.
EF-1489C-0406	1/4"	1-3/16"-12	2.90	1.25	1.28	.26	.62	2.00	2.34	1
EF-1489C-0408	1/4"	1-3/16"-12	3.02	1.25	1.30	.31	.62	2.10	2.66	1.3
EF-1489C-0606	3/8"	1-3/8"-12	2.90	1.44	1.28	.26	.62	2.00	2.34	1.3
EF-1489C-0608	3/8"	1-3/8"-12	3.08	1.44	1.36	.39	.62	2.10	2.66	1.4
EF-1489C-0612	3/8"	1-3/8"-12	3.48	1.44	1.58	.50	.62	2.42	3.27	1.6
EF-1489C-0808	1/2"	1-3/4"-12	3.14	1.81	1.32	.39	.62	2.10	2.66	1.7
EF-1489C-0812	1/2"	1-3/4"-12	3.48	1.81	1.58	.50	.62	2.42	3.27	2.2

Components

Description	Req'd per Ass'y	0406	0408	0606	0608	Material
① Nipple	1	C18842	C18843	C18875	C18844	Monel
② Segment	2	C18758-1	C18640-1	D18758-1	C18640-1	Monel
③ Bolt	2	B18759	B18645	B18759	B18645	Monel

Description	Req'd per Ass'y	0612	0808	0812	Material
① Nipple	1	C18876	C18845	C18846	Monel
② Segment	2	D18743-1	C18640-1	D18743-1	Monel
③ Bolt	2	B18745	B18645	B18745	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



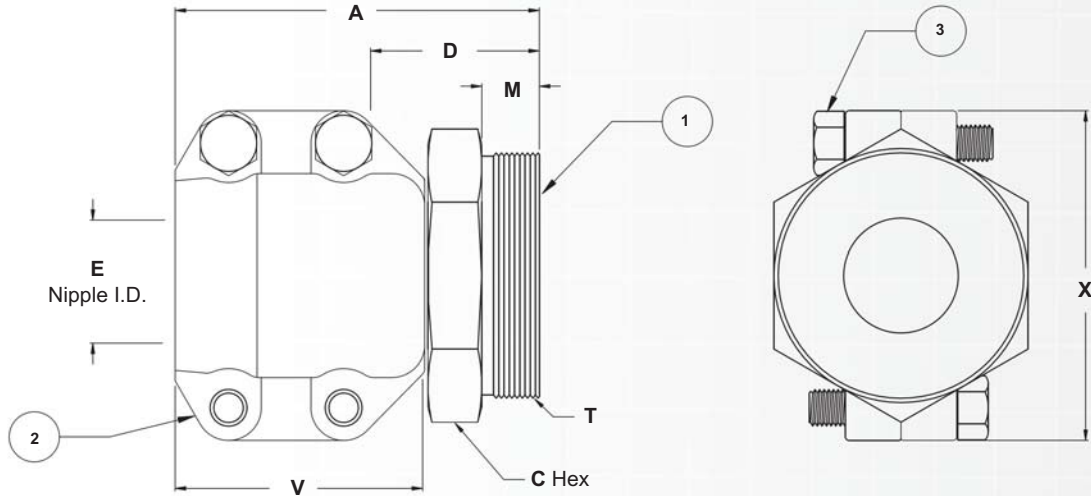
End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N FC7180-4

MIL-F-24787/3,

Use with the following hose: HS133

Type C, Group XI



Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	M	V	X	Est. Wt. Lbs.
EF-1489C-0816	1/2"	1-3/4"-12	3.48	1.81	1.58	.62	.62	2.42	4.02	3.8
EF-1489C-1216	3/4"	2"-12	3.60	2.12	1.69	.62	.62	2.42	4.02	3.8
EF-1489C-1616	1"	2-5/16"-12	3.84	2.38	1.93	.81	.75	2.42	4.02	4.3
EF-1489C-1620	1"	2-5/16"-12	4.20	2.38	2.11	.81	.75	2.80	4.31	5.4
EF-1489C-2016	1-1/4"	2-3/4"-12	4.34	2.88	2.24	.81	.75	2.42	4.02	5.6
EF-1489C-2020	1-1/4"	2-3/4"-12	4.34	2.88	2.24	1.05	.75	2.80	4.31	6
EF-1489C-2024	1-1/4"	2-3/4"-12	4.42	2.88	2.12	1.30	.75	3.01	4.69	7.5
EF-1489C-2424	1-1/2"	3-1/16"-12	4.68	3.12	2.38	1.30	.88	3.01	4.69	8
EF-1489C-2432	1-1/2"	3-1/16"-12	5.56	3.12	2.48	1.39	.88	3.88	5.65	11.4
EF-1489C-3232	2"	3-3/4"-12	5.56	3.88	2.48	1.75	.88	3.88	5.65	12.8

Components

Description	Req'd per Ass'y	0816	1216	1616	1620	2016	Material
① Nipple	1	C18877	C18847	C18848	C18849	C18878	Monel
② Segment	2	D18747-1	D18747-1	D18747-1	D18748-1	D18747-1	Monel
③ Bolt	4	B18746	B18746	B18746	B18746	B18746	Monel

Description	Req'd per Ass'y	2020	2024	2424	2432	3232	Material
① Nipple	1	C18850	C18851	C18852	C18853	C18854	Monel
② Segment	2	D18748-1	D18750-1	D18750-1	D18704-1	D18704-1	Monel
③ Bolt	4	B18746	B18755	B18755	B18718	B18718	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Male "O"Ring Seal to Hose

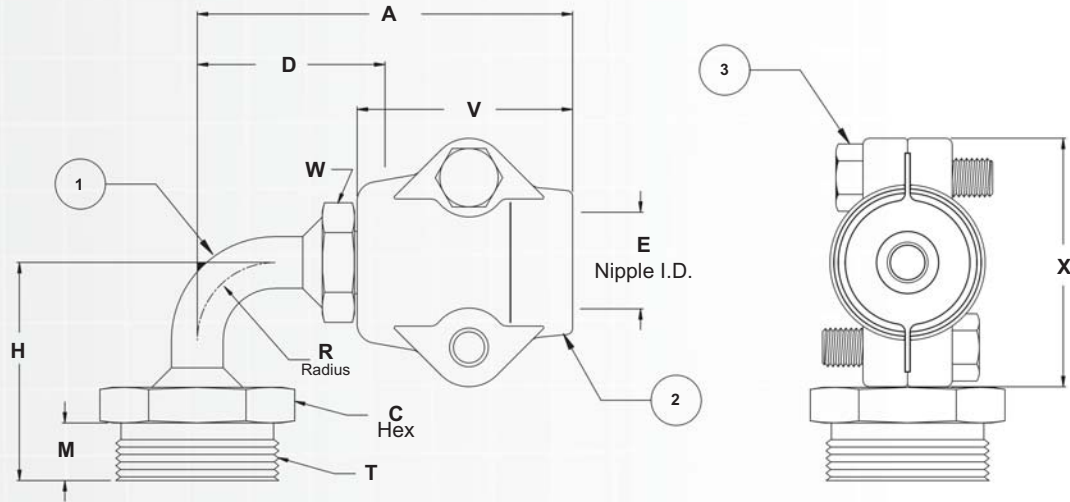
Equal to Aeroquip P/N FC7182-4

MIL-F-24787/3,

Use with the following hose: HS133

Type CL, Group XI

Fittings



Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	H	M	R	V	W	X	Est. Wt. Lbs.
90EF-1489CL-0406	1/4"	1-3/16"-12	3.20	1.25	1.58	.26	1.43	.62	.50	2.00	.94	2.34	1.5
90EF-1489CL-0408	1/4"	1-3/16"-12	3.56	1.25	1.84	.39	1.68	.62	.75	2.10	1.00	2.66	2
90EF-1489CL-0608	3/8"	1-3/8"-12	3.56	1.44	1.84	.39	1.74	.62	.75	2.10	1.00	2.66	2.3
90EF-1489CL-0812	1/2"	1-3/4"-12	4.51	1.81	2.61	.61	2.31	.62	1.25	2.42	1.31	3.27	2.6

64

Components

Description	Req'd per Ass'y	0406	0408	0608	0812	Material
① Elbow Ass'y	1	C19443	C19444	C19445	C19446	Monel
② Segment	2	D18758-1	C18640-1	C18640-1	D18743-1	Monel
③ Bolt	2	B18759	B18645	B18645	B18745	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

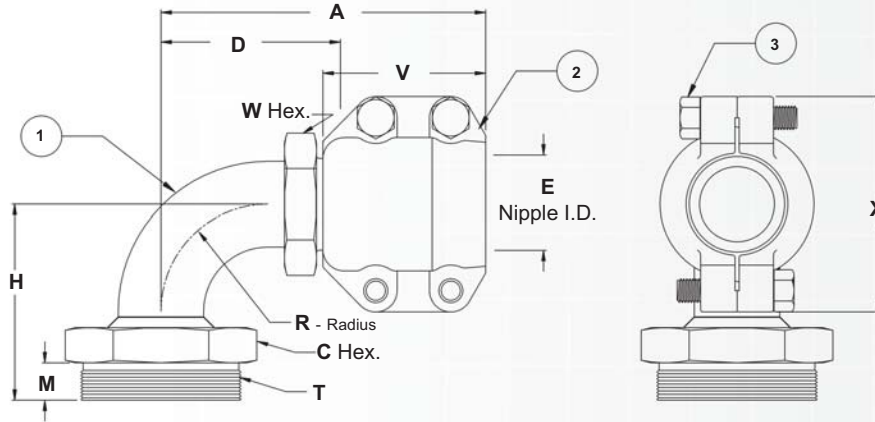


End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N FC7182-4

MIL-F-24787/3,
Type CL, Group XI

Use with the following hose: HS133



Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	H	M	R	V	W	X	Est. Wt. Lbs.
90EF-1489CL-1216	3/4"	2"-12	4.76	2.12	2.85	.82	2.68	.62	1.50	2.42	1.62	4.02	4.5
90EF-1489CL-1616	1"	2-5/16"-12	4.76	2.38	2.85	.82	2.92	.75	1.50	2.42	1.62	4.02	5
90EF-1489CL-1620	1"	2-5/16"-12	5.50	2.38	3.40	1.05	3.17	.75	1.75	2.80	2.00	4.31	6.5
90EF-1489CL-2020	1-1/4"	2-3/4"-12	5.50	2.88	3.40	1.05	3.17	.75	1.75	2.80	2.00	4.31	10
90EF-1489CL-2024	1-1/4"	2-3/4"-12	5.96	2.88	3.66	1.30	3.55	.88	2.00	3.01	2.25	4.69	11
90EF-1489CL-2424	1-1/2"	3-1/16"-12	5.96	3.12	3.66	1.30	3.55	.88	2.00	3.01	2.25	4.69	12
90EF-1489CL-2432	1-1/2"	3-1/16"-12	7.60	3.12	4.52	1.75	4.05	.88	2.50	3.88	2.75	5.65	13.3
90EF-1489CL-3232	2"	3-3/4"-12	7.60	3.88	4.52	1.75	4.05	.88	2.50	3.88	2.75	5.65	15

Components

Description	Req'd per Ass'y	1216	1616	1620	2020	Material
① Elbow Ass'y	1	C19447	C19448	C19449	C19450	See Below
Nipple	1	C18862	C18862	C18864	C18864	Monel
Adapter	1	B19273	B19135	B19274	B19136	Monel
Elbow	1	B18874-1	B18874-1	B18874-2	B18874-2	Copper Nickel
② Segment	2	D18747-1	D18747-1	D18748-1	D18748-1	Monel
③ Bolt	4	B18746	B18746	B18746	B18746	Monel

Description	Req'd per Ass'y	2024	2424	2432	3232	Material
① Elbow Ass'y	1	C19458	C19451	C19452	C19453	See Below
Nipple	1	C18866	C18866	C18868	C18868	Monel
Adapter	1	B19275	B19137	B19276	B19138	Monel
Elbow	1	B18874-3	B18874-3	B18874-4	B18874-4	Copper Nickel
② Segment	2	D18750-1	D18750-1	D18704-1	D18704-1	Monel
③ Bolt	4	B18755	B18755	B18718	B18718	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

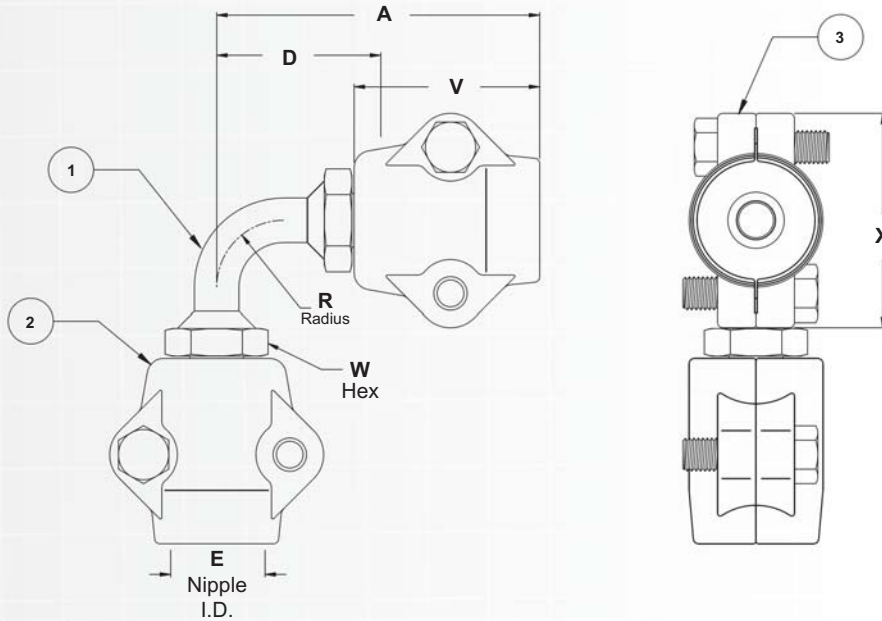
Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N FC7183-4

MIL-F-24787/5,

Use with the following hose: HS133

Type D, Group XI



Part Number	I.P.S. Size	A	D	E	R	X	V	W	Est. Wt. Lbs.
90ELB-1489D-0606	3/8"	3.20	1.58	.26	.50	2.34	2.00	.94	1.2
90ELB-1489D-0808	1/2"	3.56	1.84	.39	.75	2.66	2.10	1.00	2.4
90ELB-1489D-1212	3/4"	4.51	2.61	.61	1.25	3.27	2.42	1.31	3.7

Components

Description	Req'd per Ass'y	0606	0808	1212	Material
① Elbow Ass'y	1	C18857	C18859	C18861	Monel
② Segment	4	D18758-1	C18640-1	D18743-1	Monel
③ Bolt	4	B18759	B18645	B18745	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



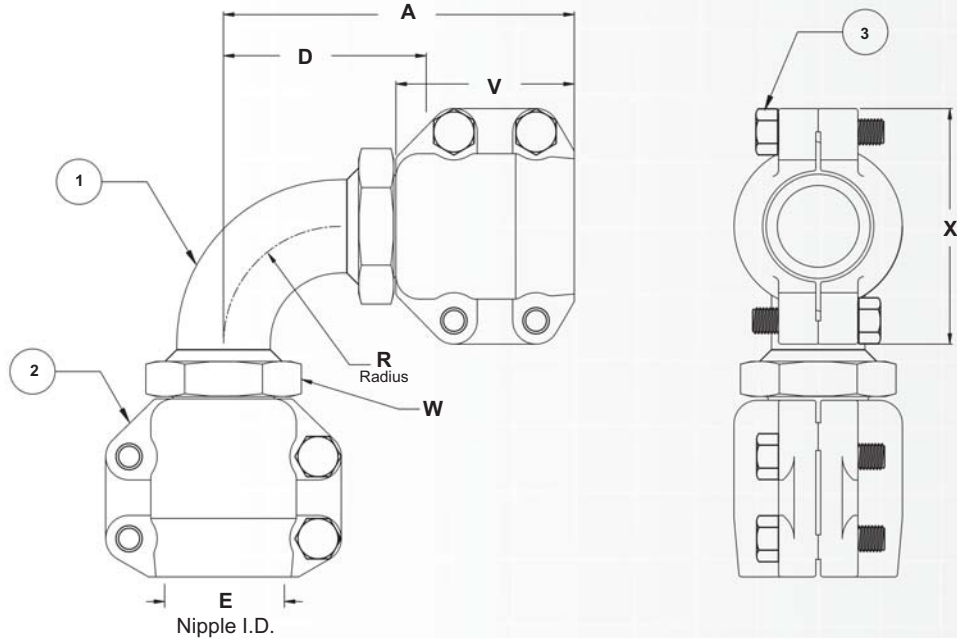
Elbow Fitting - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N FC7183-4

MIL-F-24787/5,

Use with the following hose: HS133

Type D, Group XI



Part Number	I.P.S. Size	A	D	E	R	V	W	X	Est. Wt. Lbs.
90ELB-1489D-1616	1"	4.76	2.85	.82	1.50	2.42	1.62	4.02	6
90ELB-1489D-2020	1-1/4"	5.50	3.40	1.05	1.75	2.80	2.00	4.31	9.3
90ELB-1489D-2424	1-1/2"	5.96	3.66	1.30	2.00	3.01	2.25	4.69	13
90ELB-1489D-3232	2"	7.60	4.52	1.75	2.50	3.88	2.75	5.65	20

Components

Description	Req'd per Ass'y	1616	2020	2424	3232	Material
① Elbow Ass'y	1	C18863	C18865	C18867	C18869	See Below
Nipple	2	C18862	C18864	C18866	C18868	Monel
Elbow	1	B18874-1	B18874-2	B18874-3	B18874-4	Copper Nickel
② Segment	4	D18747-1	D18748-1	D18750-1	D18704-1	Monel
③ Bolt	8	B18746	B18746	B18755	B18718	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Hose to Male NPTF

Equal to Aeroquip P/N 412B & 44-412

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

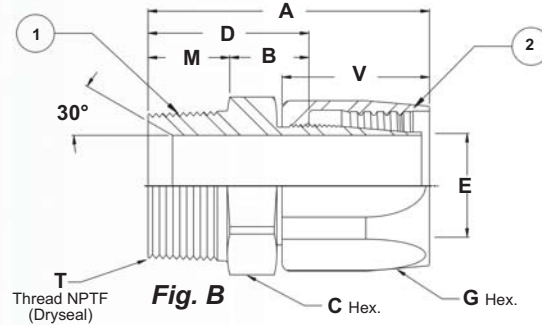
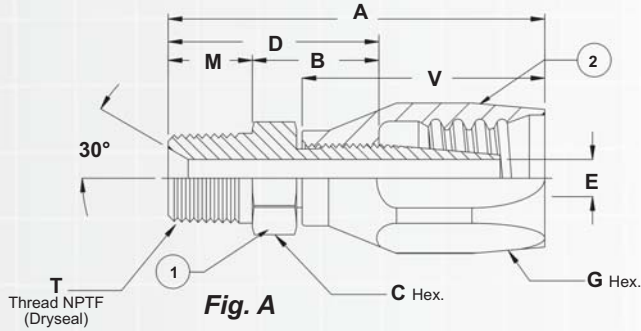


Fig. A Dimensions

Part Number	Hose Size	T Thread CL-2A	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-B1488MP-0204	1/4"	1/8"-27	1.68	.54	.44	.92	.17	.62	.38	1.10	.08
EF-B1488MP-0404	1/4"	1/4"-18	1.86	.55	.56	1.11	.17	.62	.56	1.10	.09
EF-B1488MP-0405	5/16"	1/4"-18	1.96	.62	.56	1.18	.23	.69	.56	1.20	.11
EF-B1488MP-0406	3/8"	1/4"-18	2.13	.67	.56	1.23	.30	.81	.56	1.30	.16
EF-B1488MP-0608	1/2"	3/8"-18	2.48	.77	.75	1.33	.39	.94	.56	1.65	.23
EF-B1488MP-0810	5/8"	1/2"-14	2.88	.84	.88	1.59	.48	1.12	.75	1.80	.39
EF-B1488MP-1212	3/4"	3/4"-14	3.24	.92	1.06	1.67	.61	1.25	.75	2.10	.5

Fig. B Dimensions

Part Number	Hose Size	T Thread CL-2A	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-B1488MP-1616	1"	1"-11-1/2	2.99	.78	1.38	1.72	.82	1.44	.94	1.66	.62
EF-B1488MP-2020	1-1/4"	1-1/4"-11-1/2	3.23	.90	1.75	1.87	1.05	1.75	.97	1.75	1.1
EF-B1488MP-2424	1-1/2"	1-1/2"-11-1/2	3.48	1.03	2.00	2.03	1.28	1.94	1.00	1.84	1.3
EF-B1488MP-3232	2"	2"-11-1/2	4.05	1.17	2.44	2.20	1.75	2.44	1.03	2.25	2.3
EF-B1488MP-4040	2-1/2"	2-1/2"-8	5.03	1.61	3.00	3.13	2.12	3.25	1.52	2.50	4.6
EF-B1488MP-4848	3"	3"-8	5.09	1.61	3.88	3.19	2.69	3.88	1.58	2.50	7.3

Components Fig. A

Description	Req'd per Ass'y	0204	0404	0405	0406	0608	0810	1212	Material
① Nipple	1	B19064	B20759	B19065	B19066	C19067	C19068	C19069	Brass
② Socket	1	C18984-1	C18984-1	C18985-1	C18986-1	C18648-1	C18987-1	C18988-1	Brass

Components Fig. B

Description	Req'd per Ass'y	1616	2020	2424	3232	4040	4848	Material
① Nipple	1	C19070	C18028	C18027	C18026	--	--	Brass
① Nipple	1	--	--	--	--	C19156	C19171	Bronze
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	C18822	C17901	Brass

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - S.A.E. 37° Female Flare (J.I.C.) to Hose

Equal to Aeroquip P/N 4-411

**MIL-F-24787/2,
Type A, Group VIII,**

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

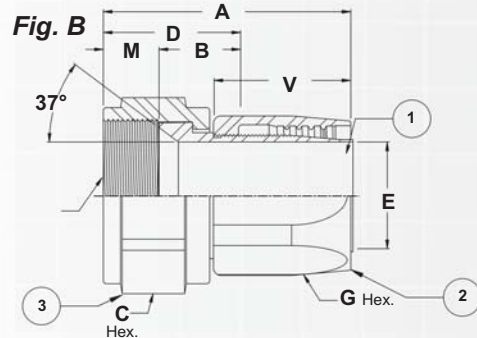
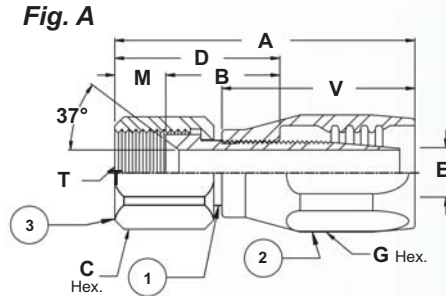


Fig. A Dimensions

Part Number	Hose Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-1488A-0404	1/4"	7/16"-20	1.75	.65	.56	1.00	.17	.62	.35	1.10	.1
EF-1488A-0505	5/16"	1/2"-20	1.90	.74	.62	1.12	.23	.69	.38	1.20	.1
EF-1488A-0606	3/8"	9/16"-18	2.05	.77	.69	1.15	.30	.81	.38	1.30	.2
EF-1488A-0808	1/2"	3/4"-16	2.52	.95	.88	1.38	.39	.94	.43	1.65	.3
EF-1488A-1010	5/8"	7/8"-14	2.80	1.00	1.00	1.51	.48	1.12	.51	1.80	.4
EF-1488A-1212	3/4"	1-1/16"-12	3.15	1.01	1.25	1.58	.61	1.25	.57	2.10	.6

Fig. B Dimensions

Part Number	Hose Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-1488A-1616	1"	1-5/16"-12	2.82	.95	1.50	1.55	.82	1.44	.60	1.66	.7
EF-1488A-2020	1-1/4"	1-5/8"-12	3.00	1.00	2.00	1.64	1.05	1.75	.64	1.75	1.3
EF-1488A-2424	1-1/2"	1-7/8"-12	3.28	1.09	2.25	1.83	1.28	1.94	.74	1.84	1.6
EF-1488A-3232	2"	2-1/2"-12	3.88	1.27	2.88	2.03	1.75	2.44	.76	2.25	2.6
EF-1488A-4040	2-1/2"	3"-12	4.16	1.45	3.38	2.25	2.12	3.25	.80	2.50	4.5
EF-1488A-4848	3"	3-1/2"-12	4.28	1.51	4.00	2.38	2.69	3.88	.87	2.50	6.2

Components Fig. A

Description	Req'd per Ass'y	0404	0505	0606	0808	1010	1212	Material
① Nipple	1	B18978-2	B18979-2	C18980-2	C18647-2	B18981-2	B18982-2	Monel
② Socket	1	C18984-2	C18985-2	C18986-2	C18648-2	C18987-2	C18988-2	Monel
③ Nut	1	B18972-2	B18973-2	B18974-2	B18778-2	B18975-2	B18976-2	Monel

Components Fig. B

Description	Req'd per Ass'y	1616	2020	2424	3232	4040	4848	Material
① Nipple	1	B18668-2	B18675-2	C18983-2	C18654-2	C18995-2	C18996-2	Monel
② Socket	1	C18667-2	C18703-2	C18990-2	C18662	C18991	C18992	Monel
③ Nut	1	B18673-2	C18677-2	C18977-2	C18650-2	C18997-2	C18998-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - S.A.E. 37° Female Swivel (J.I.C.) to Hose Equal to Aeroquip P/N 411-B & 44-411

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

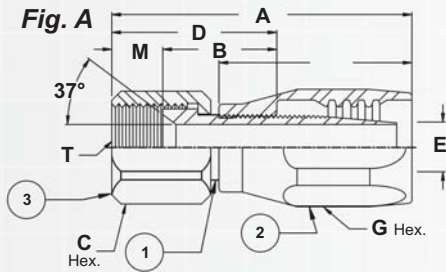


Fig. A Dimensions

Part Number	Hose Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-B1488A-0404	1/4"	7/16"-20	1.75	.65	.56	1.00	.17	.62	.35	1.10	.1
EF-B1488A-0604	1/4"	9/16"-18	1.85	.65	.69	1.00	.17	.62	.38	1.10	.1
EF-B1488A-0505	5/16"	1/2"-20	1.90	.74	.62	1.12	.23	.69	.38	1.20	.1
EF-B1488A-0606	3/8"	9/16"-18	2.05	.77	.69	1.15	.30	.81	.38	1.30	.2
EF-B1488A-0808	1/2"	3/4"-16	2.52	.95	.88	1.38	.39	.94	.43	1.65	.3
EF-B1488A-1008	1/2"	7/8"-14	2.65	.95	1.00	1.50	.39	.94	.51	1.65	.3
EF-B1488A-1010	5/8"	7/8"-14	2.80	1.00	1.00	1.51	.48	1.12	.51	1.80	.4
EF-B1488A-1210	5/8"	1-1/16"-12	2.85	1.00	1.25	1.56	.48	1.12	.57	1.80	.4
EF-B1488A-1212	3/4"	1-1/16"-12	3.15	1.01	1.25	1.58	.61	1.25	.57	2.10	.5
EF-B1488A-1612	3/4"	1-5/16"-12	3.26	1.01	1.50	1.69	.61	1.25	.60	2.10	.5

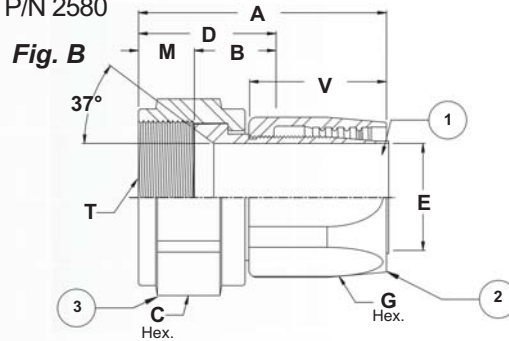


Fig. B Dimensions

Part Number	Hose Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-B1488A-1616	1"	1-5/16"-12	2.82	.95	1.50	1.55	.82	1.44	.60	1.66	.70
EF-B1488A-2020	1-1/4"	1-5/8"-12	3.00	1.00	2.00	1.64	1.05	1.75	.64	1.75	1.30
EF-B1488A-2424	1-1/2"	1-7/8"-12	3.28	1.09	2.25	1.83	1.28	1.94	.74	1.84	1.50
EF-B1488A-3232	2"	2-1/2"-12	3.88	1.27	2.88	2.03	1.75	2.44	.76	2.25	2.70
EF-B1488A-4040	2-1/2"	3"-12	4.16	1.45	3.38	2.25	2.20	3.25	.80	2.50	4.50
EF-B1488A-4848	3"	3-1/2"-12	4.28	1.51	4.00	2.38	2.80	3.88	.87	2.50	6.20

Components Fig. A

Description	Req'd per Ass'y	0404	0604	0505	0606	0808	1008	1010	1210	1212	1612	Material
① Nipple	1	B18978-1	--	B18979-1	B18980-1	C18647-1	--	B18981-1	--	B18982-1	--	Brass
② Socket	1	C18984-1	--	C18985-1	C18986-1	C18648-1	--	C18987-1	--	C18988-1	--	Brass
③ Nut	1	B18972-1	--	B18973-1	B18974-1	B18778-1	--	B18975-1	--	B18976-1	--	Brass

Components Fig. B

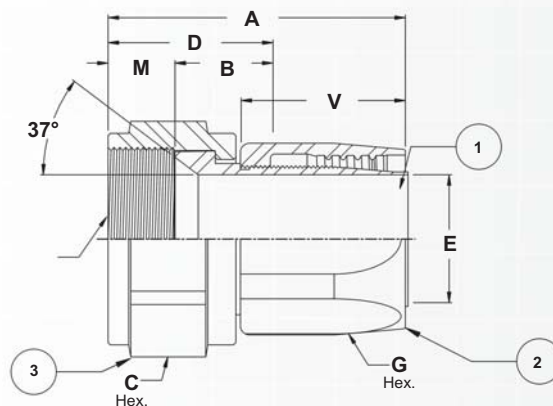
Description	Req'd per Ass'y	1616	2020	2424	3232	4040	4848	Material
① Nipple	1	B18668-1	B18675-1	C18983-1	C18654-1	--	--	Brass
① Nipple	1	--	--	--	--	C18995-1	C18996	Bronze
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	C18822	C17901	Brass
③ Nut	1	B18673-1	C18677-1	C18977-1	C18650-1	--	--	Brass
③ Nut	1	--	--	--	--	C18997-1	--	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - S.A.E. 37° Female Swivel (J.I.C.) to Hose

Equal to Aeroquip P/N 23-411

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	IPS Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-MB1488A-1616	1"	1-5/16"-12	2.82	.95	1.50	1.55	.82	1.44	.60	1.66	.7
EF-MB1488A-2020	1-1/4"	1-5/8"-12	3.00	1.00	2.00	1.64	1.05	1.75	.64	1.75	1.3
EF-MB1488A-2424	1-1/2"	1-7/8"-12	3.28	1.09	2.25	1.83	1.28	1.94	.74	1.84	1.5
EF-MB1488A-3232	2"	2-1/2"-12	3.88	1.27	2.88	2.03	1.75	2.44	.76	2.25	2.7

Components

Description	Req'd per Ass'y	1616	2020	2424	3232	Material
① Nipple	1	B18668-2	B18675-2	C18983-2	C18654-2	Monel
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	Brass
③ Nut	1	B18673-1	C18677-1	C18977-1	C18650-1	Brass

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - S.A.E. 37° Female Flare (J.I.C.) to Hose

Equal to Aeroquip P/N 10-411 & 259-411

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

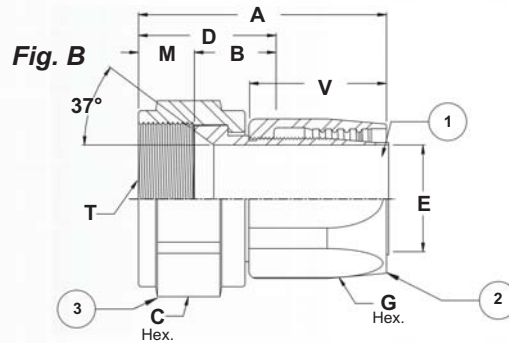
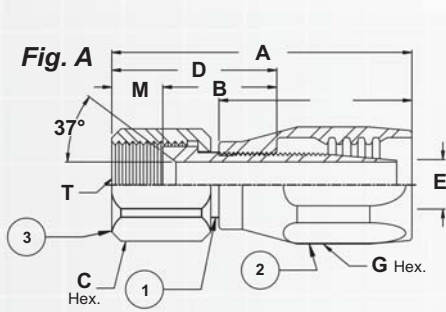


Fig. A Dimensions

Part Number	Hose Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-SS1488A-0404	1/4"	7/16"-20	1.75	.65	.56	1.00	.17	.62	.35	1.10	.1
EF-SS1488A-0604	1/4"	9/16"-18	1.85	.65	.69	1.00	.17	.62	.38	1.10	.1
EF-SS1488A-0505	5/16"	1/2"-20	1.90	.74	.62	1.12	.23	.69	.38	1.20	.1
EF-SS1488A-0606	3/8"	9/16"-18	2.05	.77	.69	1.15	.30	.81	.38	1.30	.2
EF-SS1488A-0808	1/2"	3/4"-16	2.52	.95	.88	1.38	.39	.94	.43	1.65	.3
EF-SS1488A-1008	1/2"	7/8"-14	2.65	.95	1.00	1.50	.39	.94	.51	1.65	.3
EF-SS1488A-1010	5/8"	7/8"-14	2.80	1.00	1.00	1.51	.48	1.12	.51	1.80	.4
EF-SS1488A-1210	5/8"	1-1/16"-12	2.85	1.00	1.25	1.56	.48	1.12	.57	1.80	.4
EF-SS1488A-1212	3/4"	1-1/16"-12	3.15	1.01	1.25	1.58	.61	1.25	.57	2.10	.5
EF-SS1488A-1612	3/4"	1-5/16"-12	3.26	1.01	1.50	1.69	.61	1.25	.60	2.10	.5

Fig. B Dimensions

Part Number	Hose Size	T Thread CL-2B	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-SS1488A-1616	1"	1-5/16"-12	2.82	.94	1.50	1.54	.82	1.44	.60	1.66	.6
EF-SS1488A-2020	1-1/4"	1-5/8"-12	3.00	1.00	2.00	1.64	1.05	1.75	.64	1.75	1.2
EF-SS1488A-2424	1-1/2"	1-7/8"-12	3.28	1.09	2.25	1.83	1.28	1.94	.74	1.84	1.5
EF-SS1488A-3232	2"	2-1/2"-12	3.88	1.27	2.88	2.03	1.75	2.44	.76	2.25	2.3

Components Fig. A

Description	Req'd per Ass'y	0404	0604	0505	0606	0808	1008	1010	1210	1212	1612	Material
① Nipple	1	B18978-3	--	B18979-3	B18980-3	C18647-3	--	B18981-3	--	B18982-3	--	Stainless Steel
② Socket	1	C18984-3	--	C18985-3	C18986-3	C18648-3	--	C18987-3	--	C18988-3	--	Stainless Steel
③ Nut	1	B18972-3	--	B18973-3	B18974-3	B18778-3	--	B18975-3	--	B18976-3	--	Stainless Steel

Components Fig. B

Description	Req'd per Ass'y	1616	2020	2424	3232	Material
① Nipple	1	B18668-3	B18675-3	C18983-3	C18654-3	Stainless Steel
② Socket	1	C18667-3	C18703-3	C18990-3	C19132	Stainless Steel
③ Nut	1	B18673-3	C18677-3	C18977-3	C18650-3	Stainless Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 4-190911

**MIL-F-24787/3,
Type C, Group VIII**

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

Fig. A

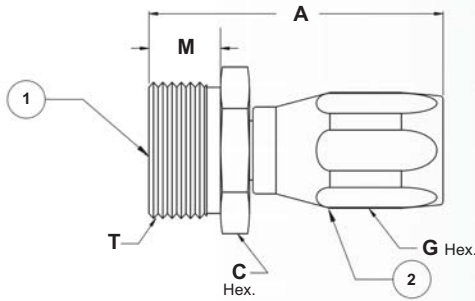


Fig. B

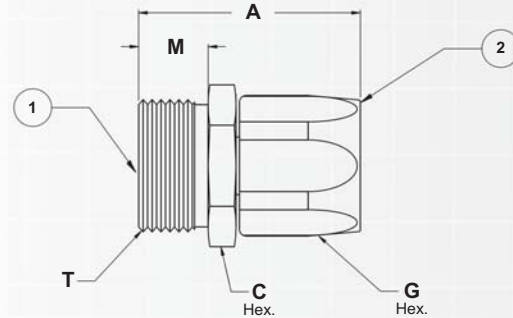


Fig. A Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	G	M	Est. Wt. Lbs.
EF-1488C-0206	1/8"	1"-14	2.06	1.06	1.00	.81	.50	.3
EF-1488C-0408	1/4"	1-3/16"-12	2.54	1.25	1.12	.94	.62	.5
EF-1488C-0610	3/8"	1-3/8"-12	2.75	1.44	1.15	1.12	.62	.6
EF-1488C-0812	1/2"	1-3/4"-12	3.12	1.81	1.38	1.25	.61	1

Fig. B Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	G	M	Est. Wt. Lbs.
EF-1488C-1216	3/4"	2"-12	2.80	2.12	1.44	.62	1.5
EF-1488C-1620	1"	2-5/16"-12	3.14	2.38	1.75	.75	2.4
EF-1488C-2024	1-1/4"	2-3/4"-12	3.23	2.88	1.94	.75	2.9
EF-1488C-2432	1-1/2"	3-1/16"-12	3.89	3.12	2.44	.88	4.1

Components Fig. A

Description	Req'd per Ass'y	0206	0408	0610	0812	Material
① Nipple	1	C19014	C19015	C19016-1	C19017-1	Monel
② Socket	1	C18986-2	C18648-2	C18987-2	C18988-2	Monel

Components Fig. B

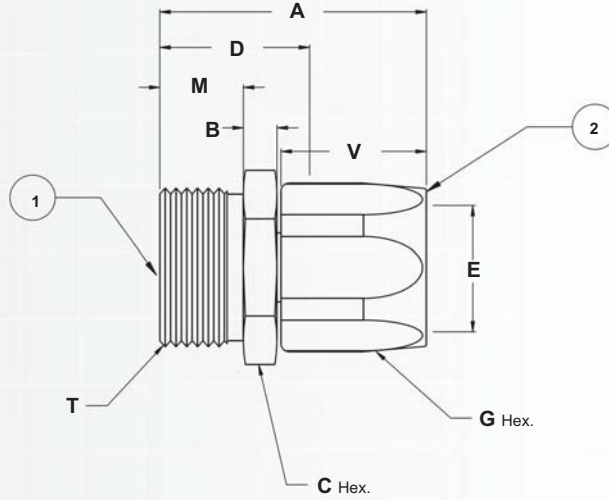
Description	Req'd per Ass'y	1216	1620	2024	2432	Material
① Nipple	1	C19018	C19019	C19020	C19021	Monel
② Socket	1	C18667-2	C18703-2	C18990-2	C18662	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Male "O"Ring Seal to Hose

Equal to Aeroquip P/N 66-190911

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	T Thread CL-3A	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-B1488C-1216	3/4"	2"-12	2.80	.50	2.12	1.53	.61	1.44	.62	1.66	1.5
EF-B1488C-1620	1"	2-5/16"-12	3.14	.62	2.38	1.77	.81	1.75	.75	1.75	2.4
EF-B1488C-2024	1-1/4"	2-3/4"-12	3.23	.62	2.88	1.78	1.25	1.94	.75	1.84	2.9
EF-B1488C-2432	1-1/2"	3-1/16"-12	3.89	.75	3.12	2.05	1.39	2.44	.88	2.25	4.1

Components

Description	Req'd per Ass'y	1216	1620	2024	2432	Material
① Nipple	1	C19256	C19257	C19258	C19249	Bronze
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	Brass

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 93-190911 & 375-190911

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

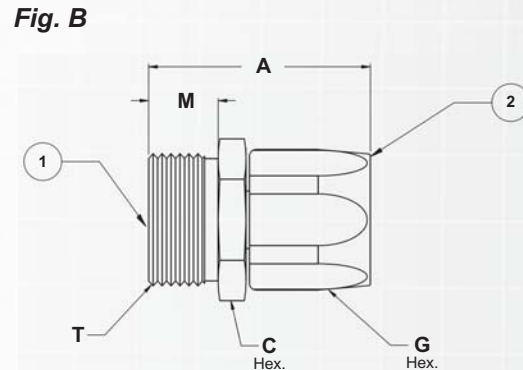
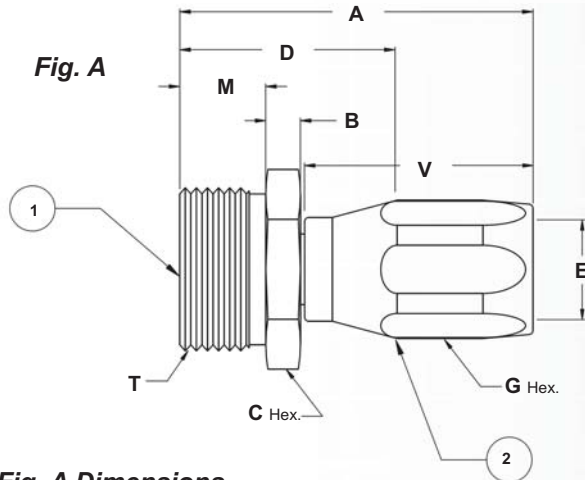


Fig. A Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-MB1488C-0206	1/8"	1"-14	2.06	.25	1.06	1.16	.24	.81	.50	1.30	.3
EF-MB1488C-0408	1/4"	1-3/16"-12	2.54	.25	1.25	1.39	.36	.94	.62	1.65	.5
EF-MB1488C-0610	3/8"	1-3/8"-12	2.75	.31	1.44	1.46	.46	1.12	.62	1.80	.6
EF-MB1488C-0812	1/2"	1-3/4"-12	3.12	.38	1.81	1.55	.55	1.25	.62	2.10	1

Fig. B Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	G	M	Est. Wt. Lbs.
EF-MB1488C-1216	3/4"	2"-12	2.80	2.12	1.44	.62	1.5
EF-MB1488C-1620	1"	2-5/16"-12	3.14	2.38	1.75	.75	2.4
EF-MB1488C-2024	1-1/4"	2-3/4"-12	3.23	2.88	1.94	.75	2.9
EF-MB1488C-2432	1-1/2"	3-1/16"-12	3.89	3.12	2.44	.88	4.1

Components Fig. A

Description	Req'd per Ass'y	0206	0408	0610	0812	Material
① Nipple	1	C19014	C19015	C19016-1	C19017-1	Monel
② Socket	1	C18986-1	C18648-1	C18987-1	C18988-1	Brass

Components Fig. B

Description	Req'd per Ass'y	1216	1620	2024	2432	Material
① Nipple	1	C19256-1	C19257	C19258	C19259	Alum. Bronze
② Socket	1	C18667-2	C18703-2	C18990-2	C18662	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 411-19011

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

Fittings

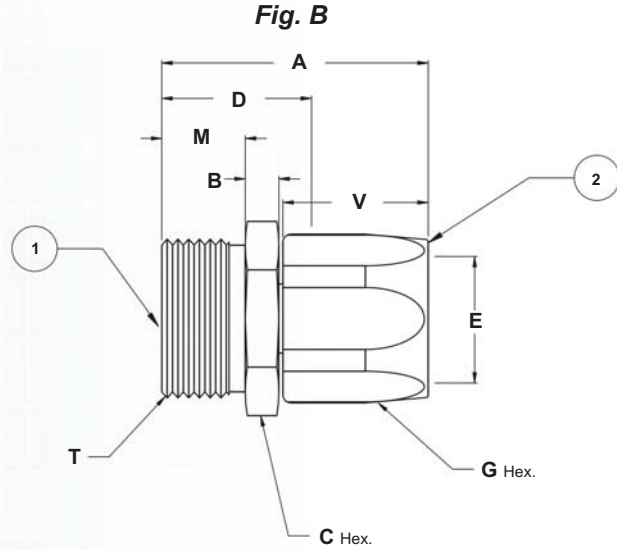
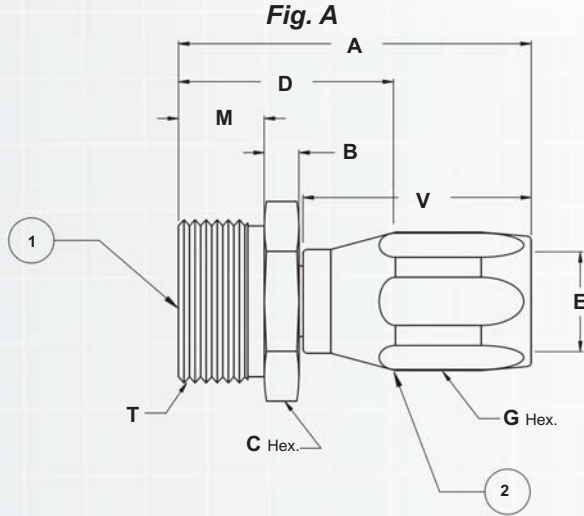


Fig. A Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-MSS1488C-0610	3/8"	1-3/8"-12	2.75	.31	1.44	1.46	.46	1.12	.62	1.80	.7
EF-MSS1488C-0812	1/2"	1-3/4"-12	3.12	.38	1.81	1.55	.55	1.25	.62	2.10	1

76

Fig. B Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	B	C	D	E	G	M	V	Est. Wt. Lbs.
EF-MSS1488C-1216	3/4"	2"-12	2.80	.50	2.12	1.53	.61	1.44	.62	1.66	.7
EF-MSS1488C-1620	1"	2"-12	2.80	.50	2.12	1.53	.61	1.44	.62	1.66	1

Components Fig. A

Description	Req'd per Ass'y	0610	0812	Material
① Nipple	1	C19253	C19254	Stainless Steel
② Socket	1	C18987-2	C18988-2	Monel

Components Fig. B

Description	Req'd per Ass'y	1216	1620	Material
① Nipple	1	C19255	C19019-2	Stainless Steel
② Socket	1	C18667-2	C18703-2	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 4-191301

**MIL-F-24787/3,
Type CL, Group VIII**

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

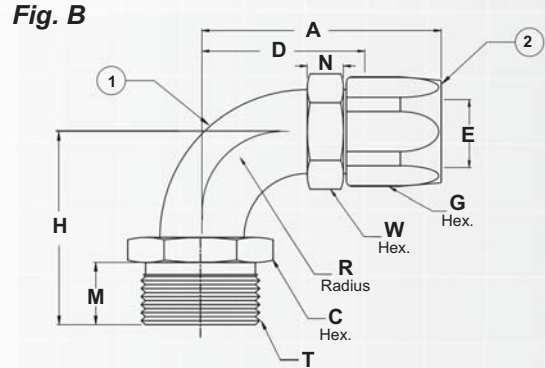
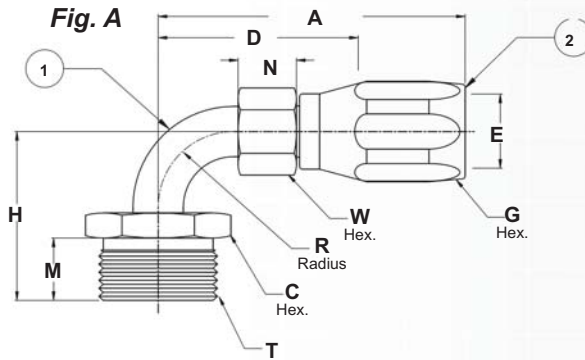


Fig. A Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	G	H	M	N	R	W	Est. Wt. Lbs.
90EF-1488CL-0206	1/8"	1"-14	2.45	1.06	1.55	.24	.81	1.30	.50	.58	.50	.56	.4
90EF-1488CL-0408	1/4"	1-3/16"-12	3.05	1.25	1.90	.36	.94	1.68	.62	.58	.75	.75	.6
90EF-1488CL-0610	3/8"	1-3/8"-12	3.57	1.44	2.28	.46	1.12	1.99	.62	.70	1.00	.81	.8
90EF-1488CL-0812	1/2"	1-3/4"-12	4.15	1.81	2.58	.55	1.25	2.31	.62	.74	1.25	1.00	1.3

Fig. B Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	G	H	M	N	R	W	Est. Wt. Lbs.
90EF-1488CL-1216	3/4"	2"-12	3.93	2.12	2.66	.82	1.44	2.68	.62	.70	1.50	1.38	2
90EF-1488CL-1620	1"	2-5/16"-12	4.27	2.38	2.91	1.05	1.75	3.17	.75	.70	1.75	1.62	3
90EF-1488CL-2024	1-1/4"	2-3/4"-12	4.65	2.88	3.19	1.28	1.94	3.42	.75	.74	2.00	1.81	4
90EF-1488CL-2432	1-1/2"	3-1/16"-12	5.68	3.12	3.84	1.75	2.44	4.05	.88	.86	2.50	2.38	5.4

Components Fig. A

Description	Req'd per Ass'y	0206	0408	0610	0812	Material
① Elbow Ass'y	1	C19027	C19028	C19029	C19030	Monel
② Socket	1	C18986-2	C18648-2	C18987-2	C18988-2	Monel

Components Fig. B

Description	Req'd per Ass'y	1216	1620	2024	2432	Material
① Elbow Ass'y	1	C19031	C19032	C19033	C19034	See Below
Nipple	1	C19265	C19266	C19267	C19268	Monel
Elbow	1	B19269-1	B19269-2	B19269-3	B19269-4	Copper Nickel
Adapter	1	B19273	B19274	B19275	B19276	Monel
② Socket	1	C18667-2	C18703-2	C18990-2	C18662	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 93-191301

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

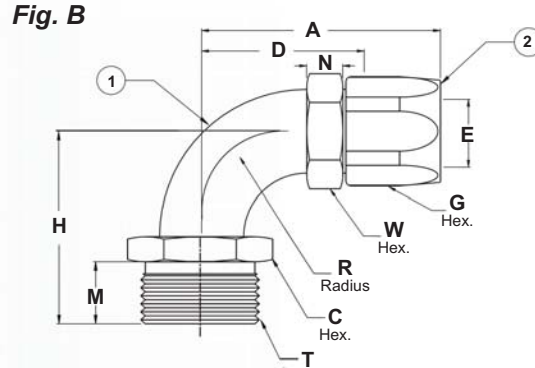
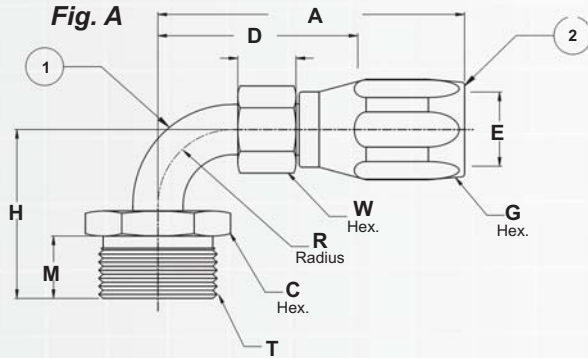


Fig. A Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	G	H	M	N	R	W	Est. Wt. Lbs.
90EF-BM1488CL-0206	1/8"	1"-14	2.45	1.06	1.55	.24	.81	1.30	.50	.58	.50	.56	.4
90EF-BM1488CL-0408	1/4"	1-3/16"-12	3.05	1.25	1.90	.36	.94	1.68	.62	.58	.75	.75	.6
90EF-BM1488CL-0610	3/8"	1-3/8"-12	3.57	1.44	2.28	.46	1.12	1.99	.62	.70	1.00	.81	.8
90EF-BM1488CL-0812	1/2"	1-3/4"-12	4.15	1.81	2.58	.55	1.25	2.31	.62	.74	1.25	1.00	1.3

Fig. B Dimensions

Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	G	H	M	N	R	W	Est. Wt. Lbs.
90EF-BMC1488CL-1216	3/4"	2"-12	3.93	2.12	2.66	.82	1.44	2.68	.62	.70	1.50	1.38	2
90EF-BMC1488CL-1620	1"	2-5/16"-12	4.27	2.38	2.91	1.05	1.75	3.17	.75	.70	1.75	1.62	3
90EF-BMC1488CL-2024	1-1/4"	2-3/4"-12	4.65	2.88	3.19	1.28	1.94	3.42	.75	.74	2.00	1.81	4
90EF-BMC1488CL-2432	1-1/2"	3-1/16"-12	5.68	3.12	3.84	1.75	2.44	4.05	.88	.86	2.50	2.38	5.4

Components Fig. A

Description	Req'd per Ass'y	0206	0408	0610	0812	Material
① Elbow Ass'y	1	C19027	C19028	C19029	C19030	Monel
② Socket	1	C18986-1	C18648-1	C18987-1	C18988-1	Brass

Components Fig. B

Description	Req'd per Ass'y	1216	1620	2024	2432	Material
① Elbow Ass'y	1	C19031	C19032	C19033	C19034	See Below
Nipple	1	C19265	C19266	C19267	C19268	Monel
Elbow	1	B18874-1	B18874-2	B18874-3	B18874-4	Copper Nickel
Adapter	1	B19273	B19274	B19275	B19276	Monel
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	Brass

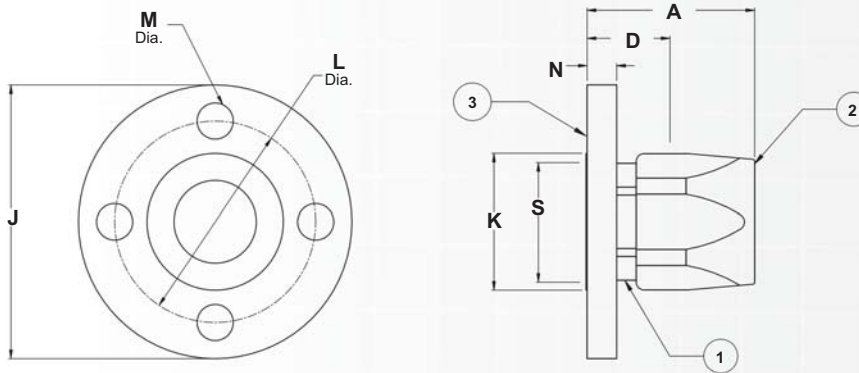
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type F, Group VIII, Class I,
400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	A	D	J	K	L	M	N	S	Est. Wt. Lbs.
EF-1488A1-0816	1/2"	4	2.80	1.53	4.00	1.50	2.88	.56	.69	.71	1.9
EF-1488A1-1216	3/4"	4	2.80	1.53	4.31	1.50	3.19	.56	.69	.71	2.5
EF-1488A1-1616	1"	5	2.80	1.53	5.06	1.50	3.75	.69	.75	.71	2.7
EF-1488A1-1220	3/4"	4	2.89	1.53	4.31	1.84	3.19	.56	.69	.92	2.5
EF-1488A1-1624	1"	5	2.92	1.47	5.06	2.12	3.75	.69	.75	1.18	3
EF-1488A1-2032	1-1/4"	5	3.51	1.66	5.38	2.74	4.06	.69	.81	1.53	3.7
EF-1488A1-2432	1-1/2"	6	3.51	1.66	5.94	2.74	4.63	.69	.81	1.77	4.2
EF-1488A1-3232	2"	7	3.51	1.66	6.50	2.74	5.19	.69	.81	1.75	5.2

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Nipple	1	C19039	C19040	C19041	C19042	Monel
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C19514	C19515	C19516	C19517	Bronze

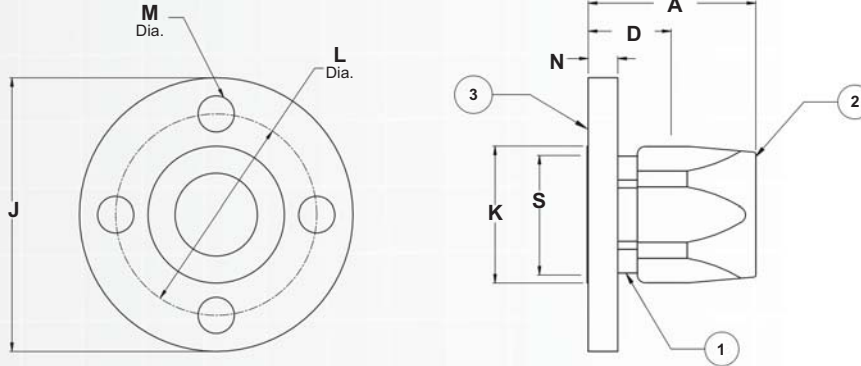
Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Nipple	1	C19043	C19044	C19045	C19046	Monel
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C19518	C19519	C19520	C19521	Bronze

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type F, Group VIII, Class II,
150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	A	D	J	K	L	M	N	S	Est. Wt. Lbs.
EF-1488A5-0816	1/2"	3	2.80	1.53	3.56	1.50	2.44	.56	.69	.71	1.7
EF-1488A5-1216	3/4"	4	2.80	1.53	3.81	1.50	2.69	.56	.69	.71	2.3
EF-1488A5-1616	1"	4	2.80	1.53	4.25	1.50	3.13	.56	.75	.71	2.5
EF-1488A5-1220	3/4"	4	2.89	1.53	3.81	1.84	2.69	.56	.69	.92	2.3
EF-1488A5-1624	1"	4	2.92	1.47	4.25	2.12	3.13	.56	.75	1.18	2.8
EF-1488A5-2032	1-1/4"	4	3.51	1.66	4.50	2.74	3.38	.56	.81	1.53	3.4
EF-1488A5-2432	1-1/2"	6	3.51	1.66	5.06	2.74	3.94	.56	.81	1.77	3.9
EF-1488A5-3232	2"	6	3.51	1.66	5.56	2.74	4.44	.56	.81	1.75	5

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Nipple	1	C19039	C19040	C19041	C19042	Monel
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C19522	C19523	C19524	C19525	Bronze

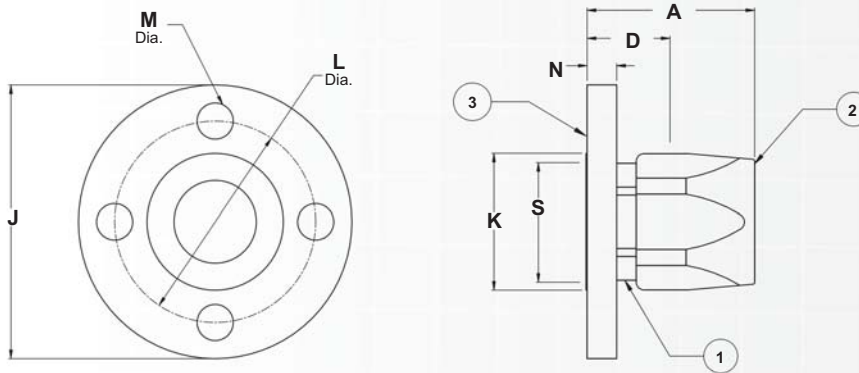
Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Nipple	1	C19043	C19044	C19045	C19046	Monel
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C19526	C19527	C19528	C19529	Bronze

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type F, Group VIII, Class III,
250Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S Size	No. of Bolt Holes	A	D	J	K	L	M	N	S	Est. Wt. Lbs.
EF-1488A2-0816	1/2"	3	2.80	1.53	3.56	1.50	2.44	.56	.69	.71	1.7
EF-1488A2-1216	3/4"	4	2.80	1.53	3.81	1.50	2.69	.56	.69	.71	2.3
EF-1488A2-1616	1"	4	2.80	1.53	4.25	1.50	3.13	.56	.75	.71	2.5
EF-1488A2-1220	3/4"	4	2.89	1.53	3.81	1.84	2.69	.56	.69	.92	2.3
EF-1488A2-1624	1"	4	2.92	1.47	4.25	2.12	3.13	.56	.75	1.18	2.8
EF-1488A2-2032	1-1/4"	4	3.51	1.66	4.50	2.74	3.38	.56	.81	1.53	3.4
EF-1488A2-2432	1-1/2"	6	3.51	1.66	5.06	2.74	3.94	.56	.81	1.77	3.9
EF-1488A2-3232	2"	6	3.51	1.66	5.06	2.74	4.44	.69	.81	1.75	5

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Nipple	1	C19039	C19040	C19041	C19042	Monel
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C19522	C19523	C19524	C19525	Bronze

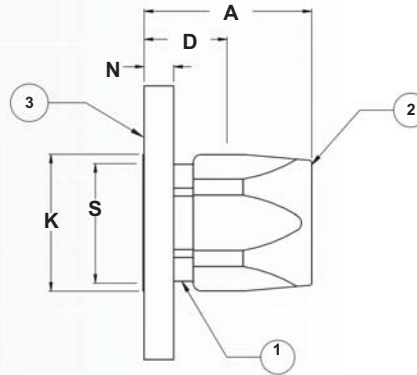
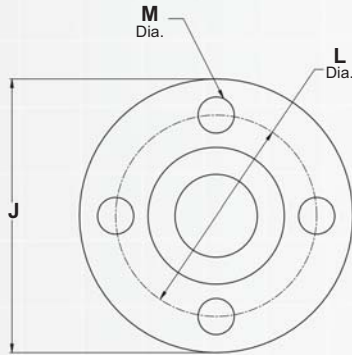
Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Nipple	1	C19043	C19044	C19045	C19046	Monel
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C19526	C19527	C19528	C19179	Bronze

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type F, Group VIII, Class IV,
150Lb. Flange Per MIL-PRF-20042



Fittings

Part Number	I.P.S. Size	No. of Bolt Holes	A	D	J	K	L	M	N	S	Est. Wt. Lbs.
EF-1488A3-0816	1/2"	3	2.80	1.53	3.56	1.50	2.44	.56	.38	.71	1.5
EF-1488A3-1216	3/4"	4	2.80	1.53	3.81	1.50	2.69	.56	.44	.71	2.1
EF-1488A3-1616	1"	4	2.80	1.53	4.25	1.50	3.13	.56	.44	.71	2.3
EF-1488A3-1220	3/4"	4	2.89	1.53	3.81	1.84	2.69	.56	.44	.92	2.1
EF-1488A3-1624	1"	4	2.92	1.47	4.25	2.12	3.13	.56	.44	1.18	2.5
EF-1488A3-2032	1-1/4"	4	3.51	1.66	4.50	2.74	3.38	.56	.44	1.53	3.1
EF-1488A3-2432	1-1/2"	6	3.51	1.66	5.06	2.74	3.94	.56	.44	1.77	3.6
EF-1488A3-3232	2"	6	3.51	1.66	5.56	2.74	4.44	.56	.44	1.75	4.7

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Nipple	1	C19039	C19040	C19041	C19042	Monel
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C18817	C18816	C18815	C18814	Bronze

Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Nipple	1	C19043	C19044	C19045	C19046	Monel
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C18813	C18812	C18810	C18809	Bronze

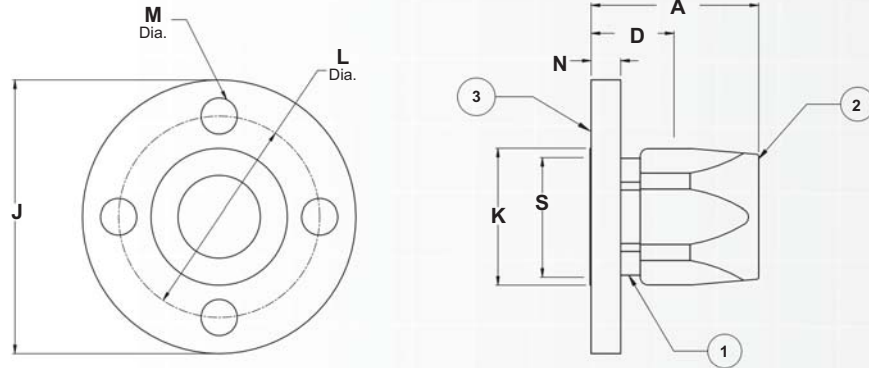
All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type F, Group VIII, Class V,
150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	D	J	K	L	M	N	S	Est. Wt. Lbs.
EF-1488A4-0816	1/2"	4	2.80	1.53	3.50	1.50	2.38	.62	.36	.71	1.5
EF-1488A4-1216	3/4"	4	2.80	1.53	3.88	1.50	2.75	.62	.42	.71	2.1
EF-1488A4-1616	1"	4	2.80	1.53	4.25	1.50	3.12	.62	.42	.71	2.5
EF-1488A4-1220	3/4"	4	2.89	1.53	3.88	1.84	2.75	.62	.42	.92	2.3
EF-1488A4-1624	1"	4	2.92	1.47	4.25	2.12	3.12	.62	.42	1.18	2.7
EF-1488A4-2032	1-1/4"	4	3.51	1.66	4.62	2.74	3.50	.62	.42	1.53	3.1
EF-1488A4-2432	1-1/2"	4	3.51	1.66	5.00	2.74	3.88	.62	.42	1.77	3.6
EF-1488A4-3232	2"	4	3.51	1.66	6.00	2.74	4.75	.62	.42	1.75	4.7

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Nipple	1	C19039	C19040	C19041	C19042	Monel
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C18803	C18802	C18801	C18800	Bronze

Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Nipple	1	C19043	C19044	C19045	C19046	Monel
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C18799	C18798	C18797	C18796	Bronze

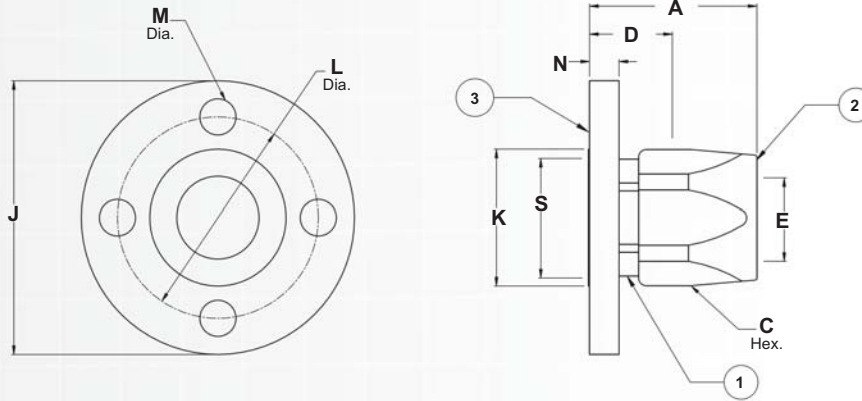
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N 66-190016

150Lb. Flange Per MIL-PRF-20042

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Fittings

Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	J	K	L	N	M	S	Est. Wt. Lbs.
EF-B1488F4-0816	1/2"	3	2.80	1.44	1.53	.82	3.56	1.50	2.44	.38	.56	.71	1.5
EF-B1488F4-1220	3/4"	4	2.89	1.75	1.53	1.05	3.81	1.84	2.69	.44	.56	.92	2.1
EF-B1488F4-1624	1"	4	2.92	1.94	1.47	1.28	4.25	2.12	3.13	.44	.56	1.18	2.5
EF-B1488F4-2032	1-1/4"	4	3.51	2.44	1.66	1.75	4.50	2.74	3.38	.44	.56	1.53	3.1
EF-B1488F4-2432	1-1/2"	6	3.51	2.44	1.66	1.75	5.06	2.74	3.94	.44	.56	1.77	3.6
EF-B1488F4-3232	2"	6	3.51	2.44	1.66	1.75	5.56	2.74	4.44	.44	.56	1.77	4.7
EF-B1488F4-3240	2"	6	3.89	3.25	1.98	2.21	5.56	3.28	4.44	.44	.56	2.24	5.8
EF-B1488F4-4040	2-1/2"	6	3.89	3.25	1.98	2.21	6.13	3.28	5.00	.50	.56	2.24	6.9
EF-B1488F4-4048	2-1/2"	6	3.89	3.88	1.98	2.83	6.13	3.78	5.00	.50	.56	2.71	7.4
EF-B1488F4-4848	3"	8	3.89	3.88	1.98	2.83	6.63	4.50	5.50	.50	.56	3.31	7.9

84

Components

Description	Req'd per Ass'y	0816	1220	1624	2032	2432	Material
① Nipple	1	C18018	C18019	C18020	C19155	C18808	Bronze
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	C18811	Brass
③ Flange	1	C18817	C18814	C18813	C18812	C18810	Bronze

Description	Req'd per Ass'y	3232	3240	4040	4048	4848	Material
① Nipple	1	C18808	C19170	C19170	C17893	C19173	Bronze
② Socket	1	C18811	C18822	C18822	C17901	C17901	Brass
③ Flange	1	C18809	C17925	C17929	C17931	C17933	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

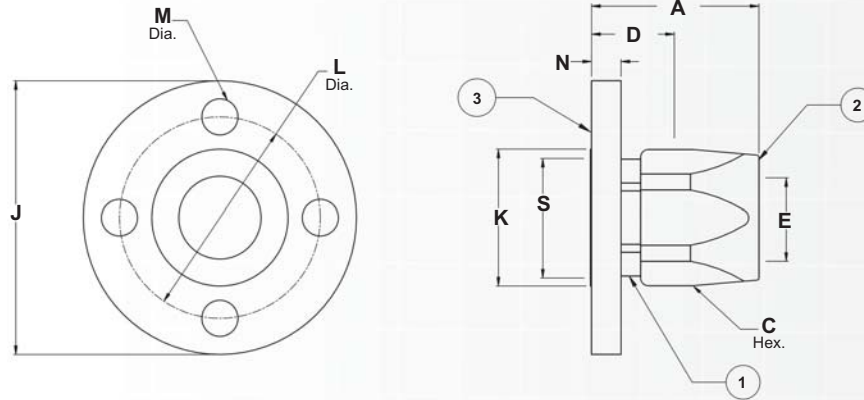


End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N 375-190109

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	J	K	L	N	M	S	Est. Wt. Lbs.
EF-MB1488F5-0816	1/2"	4	2.80	1.44	1.53	.82	3.50	1.50	2.38	.36	.62	.71	1.4
EF-MB1488F5-1220	3/4"	4	2.89	1.75	1.53	1.05	3.88	1.84	2.75	.42	.62	.92	2.2
EF-MB1488F5-1624	1"	4	2.92	1.94	1.47	1.28	4.25	2.12	3.12	.42	.62	1.18	2.4
EF-MB1488F5-2032	1-1/4"	4	3.51	2.44	1.66	1.75	4.62	2.74	3.50	.42	.62	1.53	3.3
EF-MB1488F5-2432	1-1/2"	4	3.51	2.44	1.66	1.75	5.00	2.74	3.88	.42	.62	1.77	3.9
EF-MB1488F5-3232	2"	4	3.51	2.44	1.66	1.75	6.00	2.74	4.75	.42	.75	1.77	5.4
EF-MB1488F5-3240	2"	4	3.89	3.25	1.98	2.18	6.00	3.28	4.75	.42	.75	2.24	6.3

Components

Description	Req'd per Ass'y	0816	1220	1624	2032	Material
① Nipple	1	C18018	C18019	C18020	C19155	Bronze
② Socket	1	C18667-2	C18703-2	C18990-2	C18662	Monel
③ Flange	1	C18803	C18800	C18799	C18798	Bronze

Description	Req'd per Ass'y	2432	3232	3240	Material
① Nipple	1	C18808	C18808	C19170	Bronze
② Socket	1	C18662	C18662	C18991	Monel
③ Flange	1	C18797	C18796	C17966	Bronze

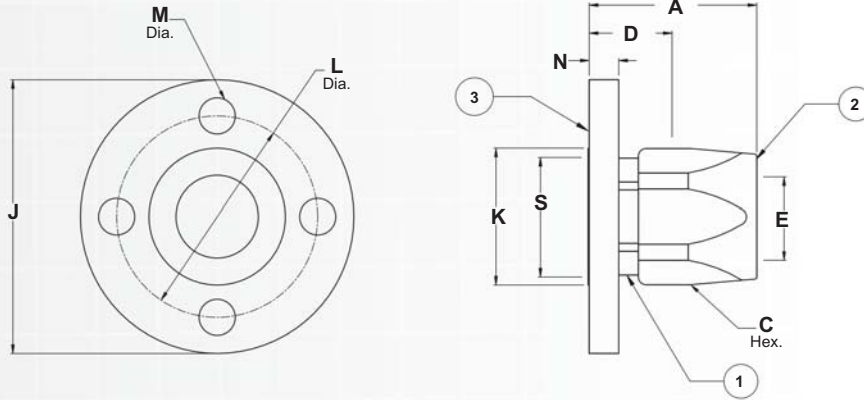
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N 412-190109

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	J	K	L	N	M	S	Est. Wt. Lbs.
EF-MSS1488F5-0816	1/2"	4	2.80	1.44	1.53	.82	3.50	1.50	2.38	.36	.62	.71	1.4
EF-MSS1488F5-1220	3/4"	4	2.89	1.75	1.53	1.05	3.88	1.84	2.75	.42	.62	.92	2.2
EF-MSS1488F5-1624	1"	4	2.92	1.94	1.47	1.28	4.25	2.12	3.12	.42	.62	1.18	2.4
EF-MSS1488F5-2032	1-1/4"	4	3.51	2.44	1.66	1.75	4.62	2.74	3.50	.42	.62	1.53	3.3
EF-MSS1488F5-2432	1-1/2"	4	3.51	2.44	1.66	1.75	5.00	2.74	3.88	.42	.62	1.77	3.6
EF-MSS1488F5-3232	2"	4	3.51	2.44	1.66	1.75	6.00	2.74	4.75	.42	.75	1.77	5.3
EF-MSS1488F5-3240	2"	4	3.89	3.25	1.98	2.18	6.00	3.28	4.75	.42	.75	2.24	6.3

Fittings

Components

Description	Req'd per Ass'y	0816	1220	1624	2032	Material
① Nipple	1	C19235	C19236	C18020-1	C19237	Stainless Steel
② Socket	1	C18667-2	C18703-2	C18990-2	C18662	Monel
③ Flange	1	C19240	C19241	C18799-1	C19242	Stainless Steel

Description	Req'd per Ass'y	2432	3232	3240	Material
① Nipple	1	C19238	C19238	C19239	Stainless Steel
② Socket	1	C18662	C18662	C18991	Monel
③ Flange	1	C19244	C19243	C19245	Stainless Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

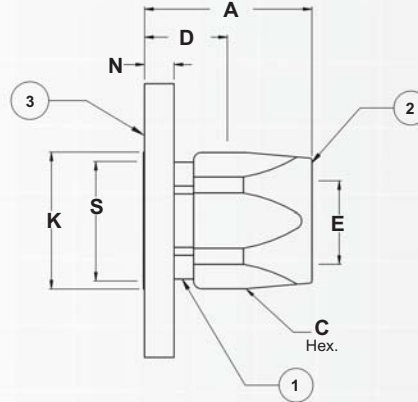
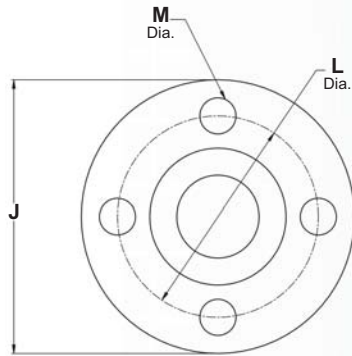


End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N 66-190109

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	J	K	L	N	M	S	Est. Wt. Lbs.
EF-B1488F5-0816	1/2"	4	2.80	1.44	1.53	.82	3.50	1.50	2.38	.36	.62	.71	1.4
EF-B1488F5-1220	3/4"	4	2.89	1.75	1.53	1.05	3.88	1.84	2.75	.42	.62	.92	2.2
EF-B1488F5-1624	1"	4	2.92	1.94	1.47	1.28	4.25	2.12	3.12	.42	.62	1.18	2.4
EF-B1488F5-2032	1-1/4"	4	3.51	2.44	1.66	1.75	4.62	2.74	3.50	.42	.62	1.53	3.3
EF-B1488F5-2432	1-1/2"	4	3.51	2.44	1.66	1.75	5.00	2.74	3.88	.42	.62	1.77	3.9
EF-B1488F5-3232	2"	4	3.51	2.44	1.66	1.75	6.00	2.74	4.75	.42	.75	1.77	5.4
EF-B1488F5-3240	2"	4	3.89	3.25	1.98	2.21	6.00	3.28	4.75	.42	.75	2.24	6.3
EF-B1488F5-4040	2-1/2"	4	3.89	3.25	1.98	2.21	7.00	3.28	5.50	.48	.75	2.24	8.5
EF-B1488F5-4048	2-1/2"	4	3.89	3.44	1.98	2.83	7.00	3.78	5.50	.48	.75	2.71	8.8
EF-B1488F5-4848	3"	4	3.89	3.44	1.98	2.83	7.50	3.78	6.00	.48	.75	2.71	8.9

Components

Description	Req'd per Ass'y	0816	1220	1624	2032	2432	Material
① Nipple	1	C18018	C18019	C18020	C19155	C18808	Bronze
② Socket	1	C18667-1	C18703-1	C18990-1	C18811	C18811	Brass
③ Flange	1	C18803	C18800	C18799	C18798	C18797	Bronze

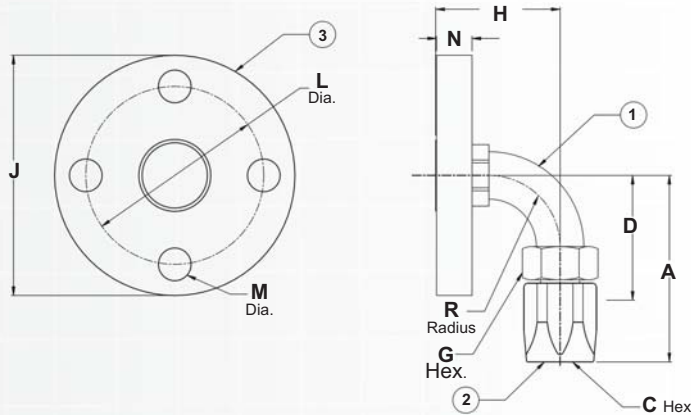
Description	Req'd per Ass'y	3232	3240	4040	4048	4848	Material
① Nipple	1	C18808	C19170	C19170	C17893	C19173	Bronze
② Socket	1	C18811	C18822	C18822	C17901	C17901	Brass
③ Flange	1	C18796	C17966	C17968	C17969	C17970	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type FL, Group VIII, Class I,
400Lb. Flange Per MIL-PRF-20042



Part Number	IPS Size	No. of Bolt Holes	A	C	D	G	H	J	L	M	N	R	Est. Wt. Lbs.
90EF-1488B1-0816	1/2"	4	3.93	1.44	2.66	1.38	2.62	4.00	2.88	.56	.69	1.50	2.4
90EF-1488B1-1216	3/4"	4	3.93	1.44	2.66	1.38	2.62	4.31	3.19	.56	.69	1.50	3
90EF-1488B1-1616	1"	5	3.93	1.44	2.66	1.38	2.62	5.06	3.75	.69	.75	1.50	3.2
90EF-1488B1-1220	3/4"	4	4.27	1.75	2.91	1.62	2.87	4.31	3.19	.56	.69	1.75	3
90EF-1488B1-1624	1"	5	4.65	1.94	3.19	2.12	3.06	5.06	3.75	.69	.75	2.00	3.5
90EF-1488B1-2032	1-1/4"	5	5.68	2.44	3.84	2.25	3.74	5.38	4.06	.69	.81	2.50	4.2
90EF-1488B1-2432	1-1/2"	6	5.68	2.44	3.84	2.25	3.74	5.94	4.63	.69	.81	2.50	4.7
90EF-1488B1-3232	2"	7	5.68	2.44	3.84	2.69	3.74	6.50	5.19	.69	.81	2.50	5.7

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Elbow Ass'y	1	C19094	C19095	C19096	C19097	Monel/Cuni
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C19514	C19515	C19516	C19517	Bronze

Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Elbow Ass'y	1	C19098	C19099	C19100	C19101	Monel/Cuni
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C19518	C19519	C19520	C19521	Bronze

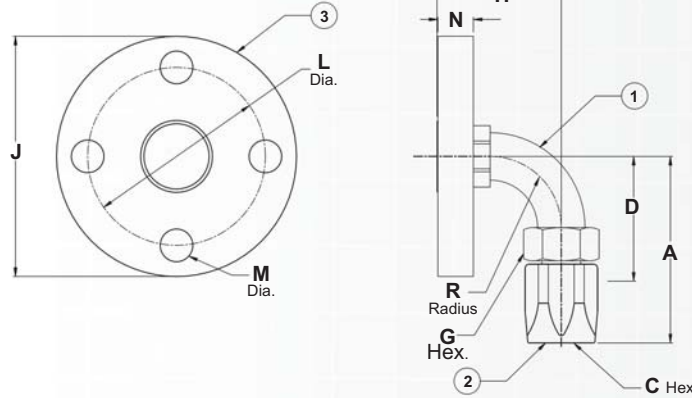
All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - 90° - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type FL, Group VIII, Class II,
150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	G	H	J	L	M	N	R	Est. Wt. Lbs.
90EF-1488B5-0816	1/2"	3	3.93	1.44	2.66	1.38	2.62	3.56	2.44	.56	.69	1.50	2.2
90EF-1488B5-1216	3/4"	4	3.93	1.44	2.66	1.38	2.62	3.81	2.69	.56	.69	1.50	2.8
90EF-1488B5-1616	1"	4	3.93	1.44	2.66	1.38	2.62	4.25	3.13	.56	.75	1.50	3.0
90EF-1488B5-1220	3/4"	4	4.27	1.75	2.91	1.62	2.87	3.81	2.69	.56	.69	1.75	2.8
90EF-1488B5-1624	1"	4	4.65	1.94	3.19	2.12	3.06	4.25	3.13	.56	.75	2.00	3.3
90EF-1488B5-2032	1-1/4"	4	5.68	2.44	3.84	2.25	3.74	4.50	3.38	.56	.81	2.50	3.9
90EF-1488B5-2432	1-1/2"	6	5.68	2.44	3.84	2.25	3.74	5.06	3.98	.56	.81	2.50	4.4
90EF-1488B5-3232	2"	6	5.68	2.44	3.84	2.69	3.74	5.56	4.44	.56	.81	2.50	5.5

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Elbow Ass'y	1	C19094	C19095	C19096	C19097	Monel/Cuni
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C19522	C19523	C19524	C19525	Bronze

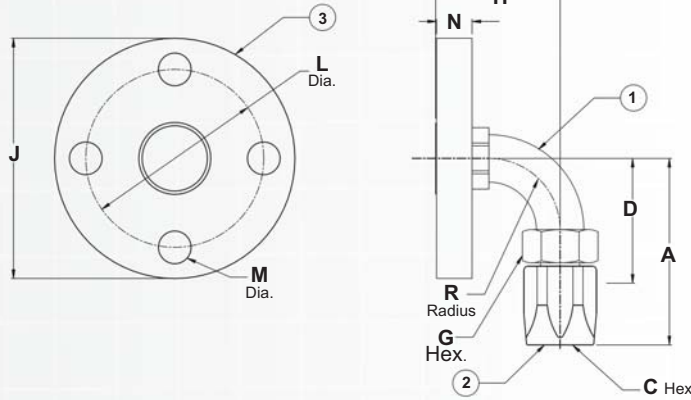
Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Elbow Ass'y	1	C19098	C19099	C19100	C19101	Monel/Cuni
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C19526	C19527	C19528	C19529	Bronze

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type FL, Group VIII, Class III,
250Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	G	H	J	L	M	N	R	Est. Wt. Lbs.
90EF-1488B2-0816	1/2"	3	3.93	1.44	2.66	1.38	2.62	3.56	2.44	.56	.69	1.50	2.2
90EF-1488B2-1216	3/4"	4	3.93	1.44	2.66	1.38	2.62	3.81	2.69	.56	.69	1.50	2.8
90EF-1488B2-1616	1"	4	3.93	1.44	2.66	1.38	2.62	4.25	3.13	.56	.75	1.50	3
90EF-1488B2-1220	3/4"	4	4.27	1.75	2.91	1.62	2.87	3.81	2.69	.56	.69	1.75	2.8
90EF-1488B2-1624	1"	4	4.65	1.94	3.19	2.12	3.06	4.25	3.13	.56	.75	2.00	3.3
90EF-1488B2-2032	1-1/4"	4	5.68	2.44	3.84	2.25	3.74	4.50	3.38	.56	.81	2.50	3.9
90EF-1488B2-2432	1-1/2"	6	5.68	2.44	3.84	2.25	3.74	5.06	3.94	.56	.81	2.50	4.4
90EF-1488B2-3232	2"	6	5.68	2.44	3.84	2.69	3.74	5.56	4.44	.69	.81	2.50	5.5

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Elbow Ass'y	1	C19094	C19095	C19096	C19097	Monel/Cuni
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C19522	C19523	C19524	C19525	Bronze

Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Elbow Ass'y	1	C19098	C19099	C19100	C19101	Monel/Cuni
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C19526	C19527	C19528	C19179	Bronze

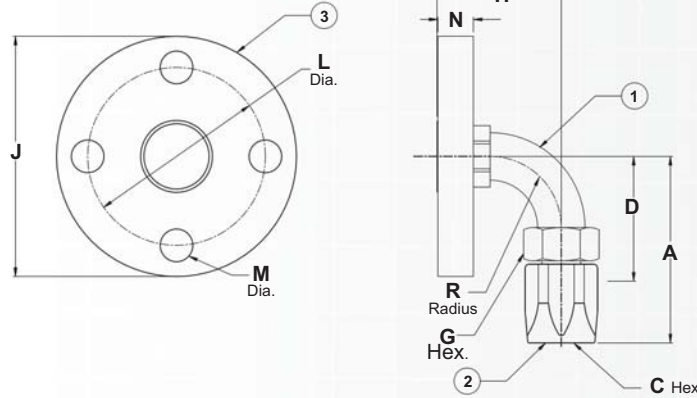
All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - 90° - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type FL, Group VIII, Class IV,
150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	G	H	J	L	M	N	R	Est. Wt. Lbs.
90EF-1488B3-0816	1/2"	3	3.93	1.44	2.66	1.38	2.62	3.56	2.44	.56	.38	1.50	1.9
90EF-1488B3-1216	3/4"	4	3.93	1.44	2.66	1.38	2.62	3.81	2.69	.56	.44	1.50	3.1
90EF-1488B3-1616	1"	4	3.93	1.44	2.66	1.38	2.62	4.25	3.13	.56	.44	1.50	3.2
90EF-1488B3-1220	3/4"	4	4.27	1.75	2.91	1.62	2.87	3.81	2.69	.56	.44	1.75	3.3
90EF-1488B3-1624	1"	4	4.65	1.94	3.19	2.12	3.06	4.25	3.13	.56	.44	2.00	3.3
90EF-1488B3-2032	1-1/4"	4	5.68	2.44	3.84	2.25	3.74	4.50	3.38	.56	.44	2.50	4.6
90EF-1488B3-2432	1-1/2"	6	5.68	2.44	3.84	2.25	3.74	5.06	3.98	.56	.44	2.50	5.4
90EF-1488B3-3232	2"	6	5.68	2.44	3.84	2.69	3.74	5.56	4.44	.56	.44	2.50	6.2

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Elbow Ass'y	1	C19094	C19095	C19096	C19097	Monel/Cuni
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C18817	C18816	C18815	C18814	Bronze

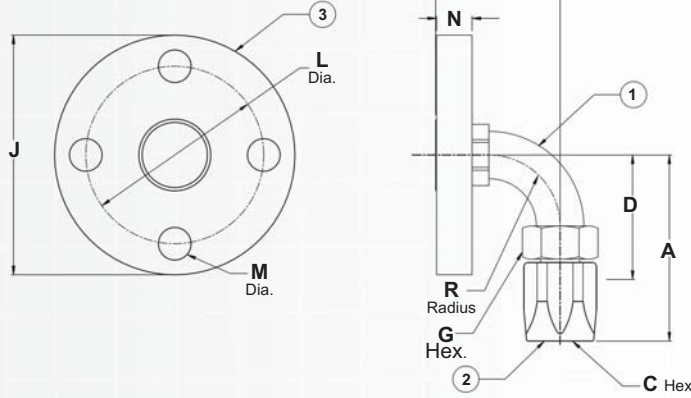
Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Elbow Ass'y	1	C19098	C19099	C19100	C19101	Monel/Cuni
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C18813	C18812	C18810	C18809	Bronze

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

MIL-F-24787/1,
Type FL, Group VIII, Class V,
150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	G	H	J	L	M	N	R	Est. Wt. Lbs.
90EF-1488B4-0816	1/2"	4	3.93	1.44	2.66	1.38	2.62	3.50	2.38	.62	.36	1.50	1.9
90EF-1488B4-1216	3/4"	4	3.93	1.44	2.66	1.38	2.62	3.88	2.75	.62	.42	1.50	3.2
90EF-1488B4-1616	1"	4	3.93	1.44	2.66	1.38	2.62	4.25	3.12	.62	.42	1.50	3.3
90EF-1488B4-1220	3/4"	4	4.27	1.75	2.91	1.62	2.87	3.88	2.75	.62	.42	1.75	3.8
90EF-1488B4-1624	1"	4	4.65	1.94	3.19	2.12	3.06	4.25	3.12	.62	.42	2.00	3.4
90EF-1488B4-2032	1-1/4"	4	5.68	2.44	3.84	2.25	3.74	4.62	3.50	.62	.42	2.50	4.7
90EF-1488B4-2432	1-1/2"	4	5.68	2.44	3.84	2.25	3.74	5.00	3.88	.62	.42	2.50	5.4
90EF-1488B4-3232	2"	4	5.68	2.44	3.84	2.69	3.74	5.00	4.75	.75	.42	2.50	6.2

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	Material
① Elbow Ass'y	1	C19094	C19095	C19096	C19097	Monel/Cuni
② Socket	1	C18989	C18989	C18989	C18703	Monel
③ Flange	1	C18803	C18802	C18801	C18800	Bronze

Description	Req'd per Ass'y	1624	2032	2432	3232	Material
① Elbow Ass'y	1	C19098	C19099	C19100	C19101	Monel/Cuni
② Socket	1	C18990	C18662	C18662	C18662	Monel
③ Flange	1	C18799	C18798	C18797	C18796	Bronze

All Dimensions are in Inches.
 Dimensional information is for reference only.
 Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

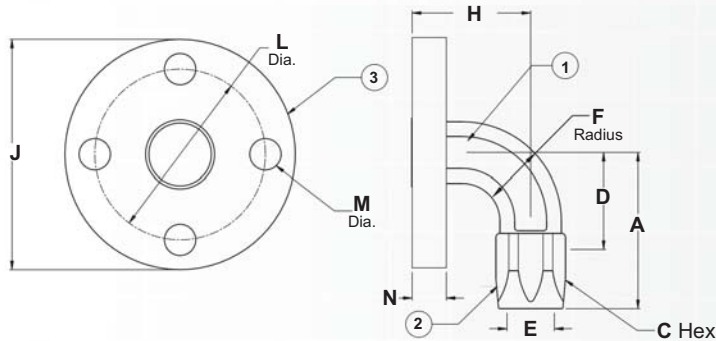


End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N 66-190103

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	F	H	J	L	M	N	Est. Wt. Lbs.
90EF-B1488FL4-0816	1/2"	3	2.80	1.44	1.53	.75	1.25	2.38	3.56	2.44	.56	.38	1.8
90EF-B1488FL4-1216	3/4"	4	2.80	1.44	1.53	.75	1.25	2.38	3.81	2.69	.56	.44	3
90EF-B1488FL4-1616	1"	4	2.80	1.44	1.53	.75	1.25	2.38	4.25	3.13	.56	.44	3.1
90EF-B1488FL4-1220	3/4"	4	2.98	1.75	1.62	1.00	1.62	2.56	3.81	2.69	.56	.44	3.6
90EF-B1488FL4-1624	1"	4	3.24	1.94	1.78	1.16	1.81	2.75	4.25	3.13	.56	.44	3.2
90EF-B1488FL4-2032	1-1/4"	4	3.89	2.44	2.05	1.69	2.44	3.06	4.50	3.38	.56	.44	4.5
90EF-B1488FL4-2432	1-1/2"	6	3.89	2.44	2.05	1.69	2.44	3.06	5.06	3.94	.56	.44	5.2
90EF-B1488FL4-3232	2"	6	3.89	2.44	2.05	1.69	2.44	3.06	5.56	4.44	.56	.44	5.9
90EF-B1488FL4-3240	2"	6	4.39	3.25	2.48	2.12	3.00	3.50	5.56	4.44	.56	.44	8.2
90EF-B1488FL4-4040	2-1/2"	6	4.39	3.25	2.48	2.12	3.00	3.50	6.13	5.00	.56	.50	9.7
90EF-B1488FL4-4048	2-1/2"	6	4.61	3.88	2.70	2.69	3.50	4.00	6.13	5.00	.56	.50	12.5
90EF-B1488FL4-4848	3"	8	4.61	3.88	2.70	2.69	3.50	4.00	6.63	5.50	.56	.50	13.5

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	1624	2032	Material
① Elbow	1	C19035	C19035	C19035	C19037	C19087	C19102	Bronze
② Socket	1	C18667-1	C18667-1	C18667-1	C18703-1	C18990-1	C18811	Brass
③ Flange	1	C18817	C18816	C18815	C18814	C18813	C18812	Bronze

Description	Req'd per Ass'y	2432	3232	3240	4040	4048	4848	Material
① Elbow	1	C19092	C19092	C19103	C19103	C19130	C18114	Bronze
② Socket	1	C18811	C18811	C18822	C18822	C17901	C17901	Brass
③ Flange	1	C18810	C18809	C17925	C17929	C17931	C17933	Bronze

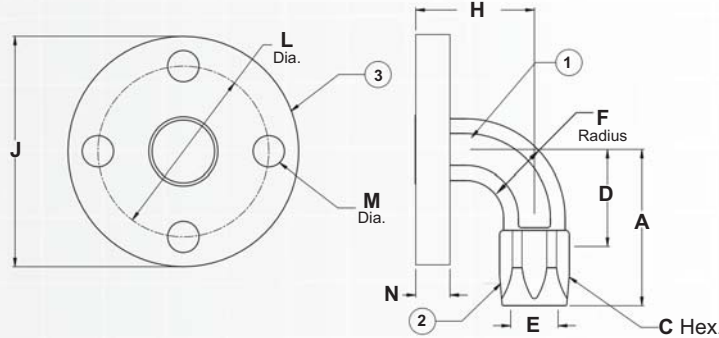
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N 375-190103

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per MIL-PRF-20042



Fittings

Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	F	H	J	L	M	N	Est. Wt. Lbs.
90EF-MB1488FL4-0816	1/2"	3	2.80	1.44	1.53	.75	1.25	2.38	3.56	2.44	.56	.38	1.8
90EF-MB1488FL4-1216	3/4"	4	2.80	1.44	1.53	.75	1.25	2.38	3.81	2.69	.56	.44	3
90EF-MB1488FL4-1616	1"	4	2.80	1.44	1.53	.75	1.25	2.38	4.25	3.13	.56	.44	3.6
90EF-MB1488FL4-1220	3/4"	4	2.98	1.75	1.62	1.00	1.62	2.56	3.81	2.69	.56	.44	3.1
90EF-MB1488FL4-1624	1"	4	3.24	1.94	1.78	1.16	1.81	2.75	4.25	3.13	.56	.44	3.2
90EF-MB1488FL4-2032	1-1/4"	4	3.89	2.44	2.05	1.69	2.44	3.06	4.50	3.38	.56	.44	4.5
90EF-MB1488FL4-2432	1-1/2"	6	3.89	2.44	2.05	1.69	2.44	3.06	5.06	3.94	.56	.44	5.2
90EF-MB1488FL4-3232	2"	6	3.89	2.44	2.05	1.69	2.44	3.06	5.56	4.44	.56	.44	5.9
90EF-MB1488FL4-3240	2"	6	4.39	3.25	2.48	2.12	3.00	3.50	5.56	4.44	.56	.44	8.2
90EF-MB1488FL4-4040	2-1/2"	6	4.39	3.25	2.48	2.12	3.00	3.50	6.13	5.00	.56	.50	9.7
90EF-MB1488FL4-4048	2-1/2"	6	4.61	3.88	2.70	2.69	3.50	4.00	6.13	5.00	.56	.50	12.5
90EF-MB1488FL4-4848	3"	8	4.61	3.88	2.70	2.69	3.50	4.00	6.63	5.50	.56	.50	13.5

Components

Description	Req'd per Ass'y	0816	1216	1616	1220	1624	2032	Material
① Elbow	1	C19035	C19035	C19035	C19037	C19087	C19102	Alum. Bronze
② Socket	1	C18667-2	C18667-2	C18667-2	C18703-2	C18990-2	C18662	Monel
③ Flange	1	C18817	C18816	C18815	C18814	C18813	C18812	Bronze

Description	Req'd per Ass'y	2432	3232	3240	4040	4048	4848	Material
① Elbow	1	C19092	C19092	C19103	C19103	C19130	C18114	Alum. Bronze
② Socket	1	C18662	C18662	C18822	C18822	C17901	C17901	Monel
③ Flange	1	C18810	C18809	C17925	C17929	C17931	C17933	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

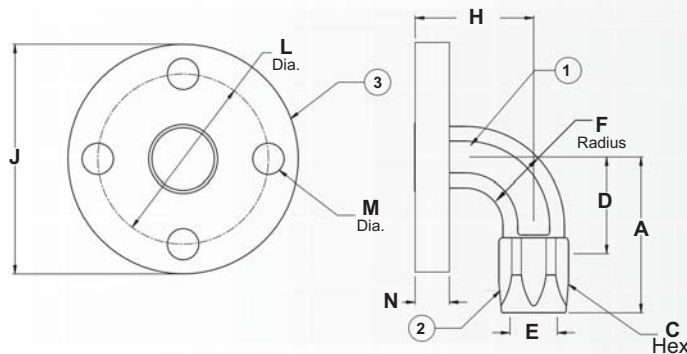


End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N 375-190124

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	F	H	J	L	M	N	Est. Wt. Lbs.
90EF-MB1488FL5-0816	1/2"	4	2.80	1.44	1.53	.75	1.25	2.38	3.50	2.38	.62	.36	1.8
90EF-MB1488FL5-1220	3/4"	4	2.98	1.75	1.62	1.00	1.62	2.56	3.88	2.75	.62	.42	3.6
90EF-MB1488FL5-1624	1"	4	3.24	1.94	1.78	1.11	1.81	2.75	4.25	3.12	.62	.42	3.2
90EF-MB1488FL5-2032	1-1/4"	4	3.89	2.44	2.05	1.69	2.44	3.06	4.62	3.50	.62	.42	4.5
90EF-MB1488FL5-2432	1-1/2"	4	3.89	2.44	2.05	1.69	2.44	3.06	5.00	3.88	.62	.42	5.2
90EF-MB1488FL5-3232	2"	4	3.89	2.44	2.05	1.69	2.44	3.06	6.00	4.75	.75	.42	6

Components

Description	Req'd per Ass'y	0816	1220	1624	2032	Material
① Elbow	1	C19035	C19037	C19087	C19087	Bronze
② Socket	1	C18867-2	C18703-2	C18990-2	C18990-2	Monel
③ Flange	1	C18803	C18800	C18799	C18799	Bronze

Description	Req'd per Ass'y	2032	2432	3232	Material
① Elbow	1	C19102	C19092	C19092	Bronze
② Socket	1	C18662	C18662	C18662	Monel
③ Flange	1	C18798	C18797	C18796	Bronze

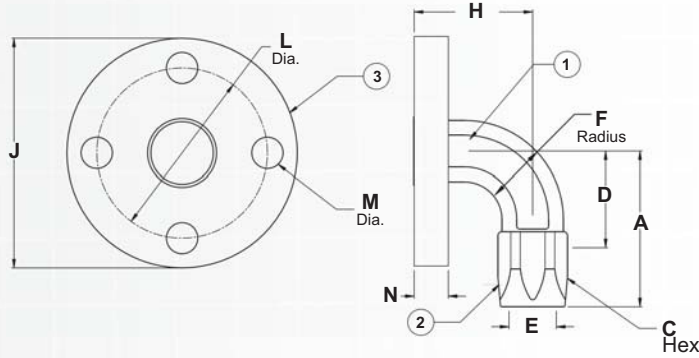
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N 412-190124

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	F	H	J	L	M	N	Est. Wt. Lbs.
90EF-MSS1488FL5-1220	3/4"	4	2.98	1.75	1.62	1.00	1.62	2.56	3.88	2.75	.62	.44	3.6
90EF-MSS1488FL5-2032	1-1/4"	4	3.89	2.44	2.05	1.69	2.44	3.06	4.62	3.50	.62	.44	4.5
90EF-MSS1488FL5-2432	1-1/2"	4	3.89	2.44	2.05	1.69	2.44	3.06	5.00	3.88	.62	.44	5.2
90EF-MSS1488FL5-3232	2"	4	3.89	2.44	2.05	1.69	2.44	3.06	6.00	4.75	.75	.44	6

Components

Description	Req'd per Ass'y	1220	2032	2432	3232	Material
① Elbow	1	C21511	C19246	C19247	C19248	Stainless Steel
② Socket	1	C18703-2	C18662	C18662	C18662	Monel
③ Flange	1	C19241	C19242	C19243	C19244	Stainless Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

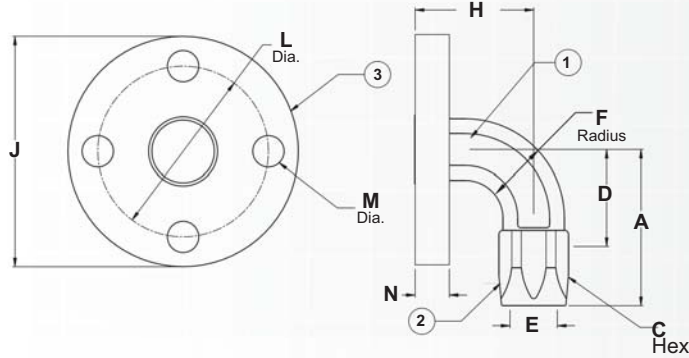


End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N 66-190124

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

150Lb. Flange Per A.N.S.I. B16.5



Part Number	I.P.S. Size	No. of Bolt Holes	A	C	D	E	F	H	J	L	M	N	Est. Wt. Lbs.
90EF-B1488FL5-0816	1/2"	4	2.80	1.44	1.53	.75	1.25	2.38	3.50	2.38	.62	.36	1.8
90EF-B1488FL5-1220	3/4"	4	2.98	1.75	1.62	1.00	1.62	2.56	3.88	2.75	.62	.42	3.6
90EF-B1488FL5-1624	1"	4	3.24	1.94	1.78	1.11	1.81	2.75	4.25	3.12	.62	.42	3.2
90EF-B1488FL5-2032	1-1/4"	4	3.89	2.44	2.05	1.69	2.44	3.06	4.62	3.50	.62	.42	4.4
90EF-B1488FL5-2432	1-1/2"	4	3.89	2.44	2.05	1.69	2.44	3.06	5.00	3.88	.62	.42	5
90EF-B1488FL5-3232	2"	4	3.89	2.44	2.05	1.69	2.44	3.06	6.00	4.75	.75	.42	5.9
90EF-B1488FL5-3240	2"	4	4.39	3.25	2.48	2.12	3.00	3.50	6.00	4.75	.75	.42	8.2
90EF-B1488FL5-4040	2-1/2"	4	4.39	3.25	2.48	2.12	3.00	3.50	7.00	5.50	.75	.48	9.7
90EF-B1488FL5-4048	2-1/2"	4	4.61	3.88	2.70	2.69	3.50	4.00	7.00	5.50	.75	.48	12.5
90EF-B1488FL5-4848	3"	4	4.61	3.88	2.70	2.69	3.50	4.00	7.50	6.00	.75	.48	13.5

Components

Description	Req'd per Ass'y	0816	1220	1624	2032	2432	Material
① Elbow	1	C19035	C19037	C19087	C19102	C19092	Bronze
② Socket	1	C18867-1	C18703-1	C18990-1	C18811	C18811	Brass
③ Flange	1	C18803	C18800	C18799	C18798	C18797	Bronze

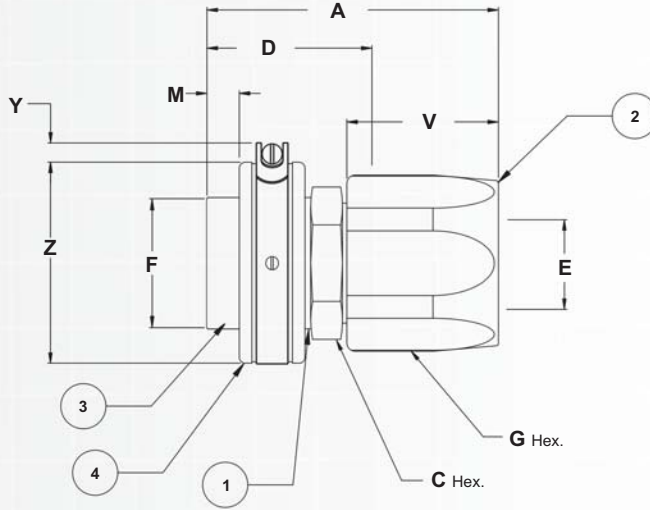
Description	Req'd per Ass'y	3232	3240	4040	4048	4848	Material
① Elbow	1	C19102	C19103	C19103	C19130	C18114	Bronze
② Socket	1	C18811	C18822	C18822	C17901	C17901	Brass
③ Flange	1	C18796	C17966	C17968	C17969	C17970	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Female Sil-Braze Split Clamp to Hose

Equal to Aeroquip P/N FC9424-66

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	A	C	D	E	F	G	M	V	Y	Z
EF-B1488EF-2032	1-1/4"	4.98	2.12	3.13	1.53	1.66	2.44	.50	2.25	.39	3.00
EF-B1488EF-2432	1-1/2"	5.03	2.12	3.19	1.75	1.90	2.44	.62	2.25	.39	3.31
EF-B1488EF-3240	2"	5.44	2.62	3.54	2.21	2.38	3.25	.66	2.50	.39	4.00
EF-B1488EF-4048	2-1/2"	5.76	3.25	3.85	2.73	2.88	3.88	.78	2.50	.39	4.42

Components

Description	Req'd per Ass'y	2032	2432	3240	4048	Material
① Nipple	1	C19188	C19189	C19190	C19191	Bronze
② Socket	1	C18811	C18811	C18822	C17901	Brass
③ Tailpiece Ass'y	1	TP-1.25FSB	TP-1.5FSB	TP-2FSB	TP-2.5FSB	Bronze
④ Clamp Ass'y	1	B-CLMP-1.25S	B-CLMP-1.5S	B-CLMP-2S	B-CLMP-2.5S	Bronze

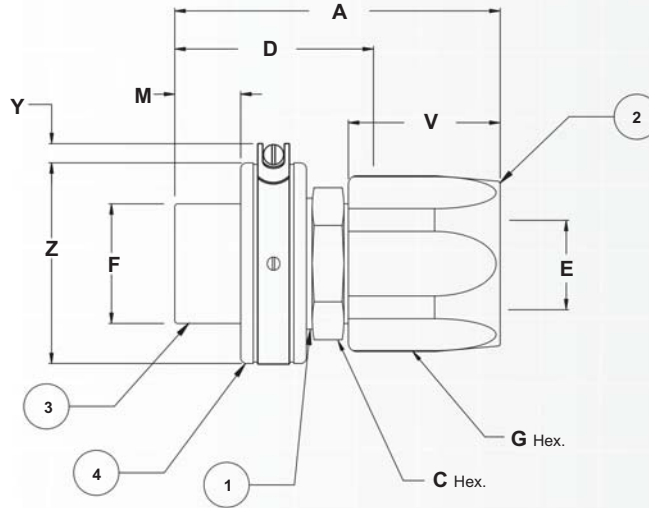
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Male Sil-Braze Split Clamp to Hose

Equal to Aeroquip P/N FC9423-66

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	A	C	D	E	F	G	M	V	Y	Z
EF-B1488EM-2032	1-1/4"	5.44	2.12	3.60	1.53	1.66	2.44	1.12	2.25	.39	3.00
EF-B1488EM-2432	1-1/2"	5.53	2.12	3.69	1.75	1.90	2.44	1.25	2.25	.39	3.31
EF-B1488EM-3232	2"	5.91	2.62	4.07	1.69	2.38	3.25	1.31	2.25	.39	4.00
EF-B1488EM-3240	2"	5.97	2.62	4.07	2.21	2.38	3.25	1.31	2.50	.39	4.00
EF-B1488EM-4048	2-1/2"	5.94	3.25	4.04	2.73	2.88	3.88	1.12	2.50	.39	4.42

Components

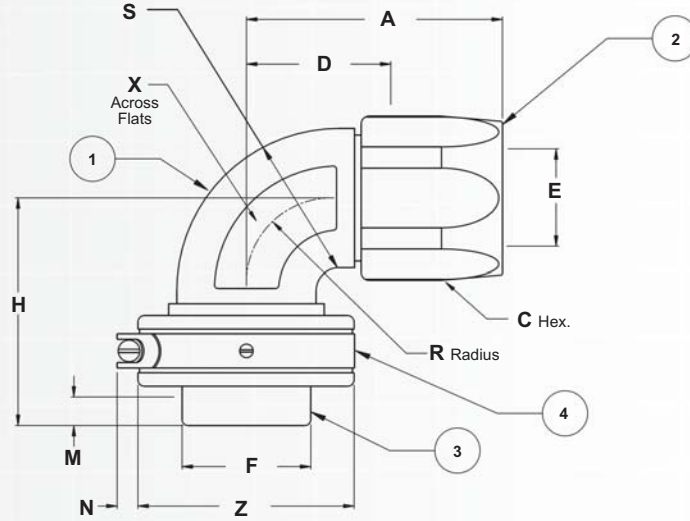
Description	Req'd per Ass'y	2032	2432	3232	3240	4048	Material
① Nipple	1	C19188	C19189	--	C19190	C19191	Bronze
② Socket	1	C18811	C18811	--	C18822	C17901	Brass
③ Tailpiece Ass'y	1	TP-1.25MSB	TP-1.5MSB	--	TP-2MSB	TP-2.5MSB	Bronze
④ Clamp Ass'y	1	B-CLMP-1.25SB	B-CLMP-1.5S	--	B-CLMP-2S	B-CLMP-2.5S	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Female Sil-Braze Split Clamp to Hose

Equal to Aeroquip P/N FC9426-66

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	A	C	D	E	F	H	M	N	R	S	X	Z
90ELB-B1488ELF-2032	1-1/4"	3.89	2.44	2.05	1.69	1.66	3.71	.50	.39	1.62	2.44	2.25	3.00
90ELB-B1488ELF-2432	1-1/2"	3.59	2.44	2.05	1.69	1.90	3.80	.62	.39	1.62	2.44	2.25	3.31
90ELB-B1488ELF-3240	2"	4.39	3.25	2.48	2.12	2.38	4.23	.66	.39	1.88	3.00	2.75	4.00
90ELB-B1488ELF-4048	2-1/2"	4.61	3.88	2.70	2.69	2.88	4.52	.78	.39	2.09	3.50	3.19	4.42

Components

Description	Req'd per Ass'y	2032	2432	3240	4048	Material
① Elbow	1	C19196	C19197	C19198	C19199	Bronze
② Socket	1	C18811	C18811	C18822	C17901	Brass
③ Tailpiece Ass'y	1	TP-1.25FSB	TP-1.5FSB	TP-2FSB	TP-2.5FSB	Bronze
④ Clamp Ass'y	1	B-CLMP-1.25S	B-CLMP-1.5S	B-CLMP-2S	B-CLMP-2.5S	Bronze

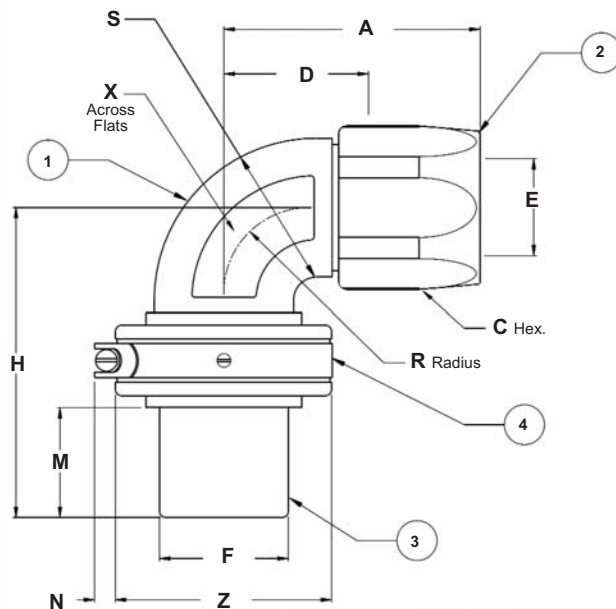
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - 90° - Male Sil-Braze Split Clamp to Hose

Equal to Aeroquip P/N FC9425-66

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	A	C	D	E	F	H	M	N	R	S	X	Z
90ELB-B1488ELM-2032	1-1/4"	3.89	2.44	2.05	1.69	1.66	4.18	1.12	.39	1.62	2.44	2.25	3.00
90ELB-B1488ELM-2432	1-1/2"	3.59	2.44	2.05	1.69	1.90	4.30	1.25	.39	1.62	2.44	2.25	3.31
90ELB-B1488ELM-3240	2"	4.39	3.25	2.48	2.12	2.38	4.76	1.31	.39	1.88	3.00	2.75	4.00
90ELB-B1488ELM-4048	2-1/2"	4.61	3.88	2.70	2.69	2.88	4.71	1.12	.39	2.09	3.50	3.19	4.42

Components

Description	Req'd per Ass'y	2032	2432	3240	4048	Material
① Elbow	1	C19196	C19197	C19198	C19199	Bronze
② Socket	1	C18811	C18811	C18822	C17901	Brass
③ Tailpiece Ass'y	1	TP-1.25MSB	TP-1.5MSB	TP-2MSB	TP-2.5MSB	Bronze
④ Clamp Ass'y	1	B-CLMP-1.25S	B-CLMP-1.5S	B-CLMP-2S	B-CLMP-2.5S	Bronze

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 4-191302

MIL-F-24787/5,
Type D, Group VIII

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

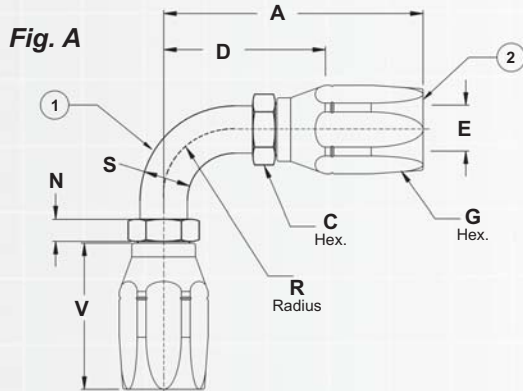


Fig. A Dimensions

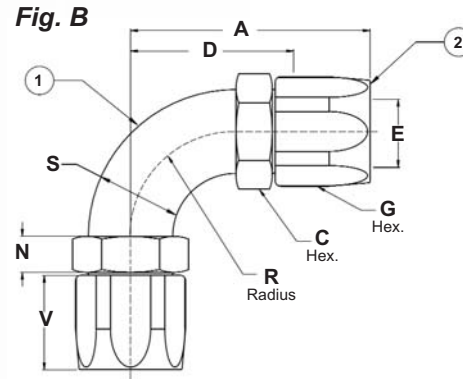


Fig. B Dimensions

Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-1488D-0606	3/8"	2.45	.56	1.55	.24	.81	.58	.50	.38	1.30	.2
90ELB-1488D-0808	1/2"	3.05	.75	1.90	.36	.94	.58	.75	.50	1.65	.4
90ELB-1488D-1010	5/8"	3.57	.81	2.28	.46	1.12	.70	1.00	.62	1.80	.6
90ELB-1488D-1212	3/4"	4.15	1.00	2.58	.55	1.25	.74	1.25	.75	2.10	.9

Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-1488D-1616	1"	3.93	1.38	2.66	.82	1.44	.70	1.50	1.00	1.66	1.3
90ELB-1488D-2020	1-1/4"	4.27	1.62	2.91	1.05	1.75	.70	1.75	1.25	1.75	1.8
90ELB-1488D-2424	1-1/2"	4.65	1.81	3.19	1.28	1.94	.74	2.00	1.50	1.84	2.3
90ELB-1488D-3232	2"	5.68	2.38	3.84	1.75	2.44	.86	2.50	2.00	2.25	3.2

Components Fig. A

Description	Req'd per Ass'y	0606	0808	1010	1212	Material
① Elbow Ass'y	1	C19104	C19105	C19106	C19107	Monel
② Socket	2	C18986-2	C18648-2	C18987-2	C18988-2	Monel

Components Fig. B

Description	Req'd per Ass'y	1616	2020	2424	3232	Material
① Elbow Ass'y	1	C19108	C19109	C19110	C19111	See Below
Nipple	2	C19265	B19266	B19267	B19268	Monel
Elbow	1	B18874-1	B18874-2	B18874-3	B18874-4	Copper Nickel
② Socket	2	C18667-2	C18703-2	C18990-2	C18662	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 93-191302

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

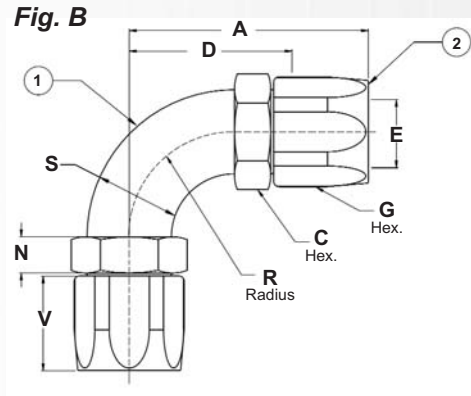
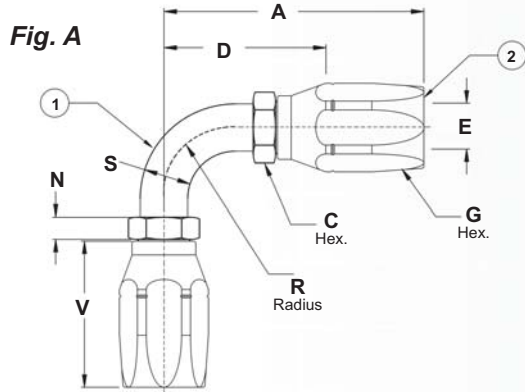


Fig. A Dimensions

Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-BMC1488D-0606	3/8"	2.45	.56	1.55	.24	.81	.58	.50	.38	1.30	.2
90ELB-BMC1488D-0808	1/2"	3.05	.75	1.90	.36	.94	.58	.75	.50	1.65	.4
90ELB-BMC1488D-1010	5/8"	3.57	.81	2.28	.46	1.12	.70	1.00	.62	1.80	.6
90ELB-BMC1488D-1212	3/4"	4.15	1.00	2.58	.55	1.25	.74	1.25	.75	2.10	.9

Fig. B Dimensions

Part Number	IPS Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-BMC1488D-1616	1"	3.93	1.38	2.66	.82	1.44	.70	1.50	1.00	1.66	1.30

Components Fig. A

Description	Req'd per Ass'y	0606	0808	1010	1212	Material
① Elbow Ass'y	1	C19104	C19105	C19106	C19107	Monel
② Socket	2	C18986-1	C18648-1	C18987-1	C18988-1	Brass

Components Fig. B

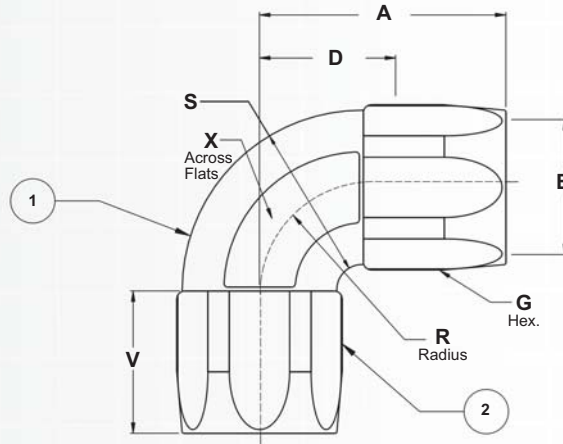
Description	Req'd per Ass'y	1616	Material
① Elbow Ass'y	1	C19108	See Below
Nipple	2	C19265	Monel
Elbow	1	B18874-1	Copper Nickel
② Socket	2	C18667-1	Brass

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Elbow - 90° Dogleg- Hose to Hose

Equal to Aeroquip P/N 375-190093

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	A	D	E	G	R	S	V	X	Est. Wt. Lbs.
90ELB-MB1488D-1616	1"	2.80	1.53	.75	1.44	1.12	1.25	1.66	1.19	1.2
90ELB-MB1488D-2020	1-1/4"	2.98	1.62	1.00	1.75	1.22	1.62	1.75	1.44	1.8
90ELB-MB1488D-2424	1-1/2"	3.24	1.78	1.16	1.94	1.38	1.81	1.84	1.69	2.3
90ELB-MB1488D-3232	2"	3.89	2.05	1.69	2.44	1.62	2.44	2.25	2.25	3.2
90ELB-MB1488D-4040	2-1/2"	4.39	2.48	2.12	3.25	1.88	3.00	2.50	2.75	5.6
90ELB-MB1488D-4848	3"	4.70	2.80	2.69	3.88	2.19	3.50	2.50	3.19	10.4

Components

Description	Req'd per Ass'y	1616	2020	2424	Material
① Elbow	1	C18121	C19007	C19012	Bronze
② Socket	2	C18667-2	C18703-2	C18990-2	Monel

Description	Req'd per Ass'y	3232	4040	4848	Material
① Elbow	1	C18804	C19025	C18117	Bronze
② Socket	2	C18662	C18991	C18992	Monel

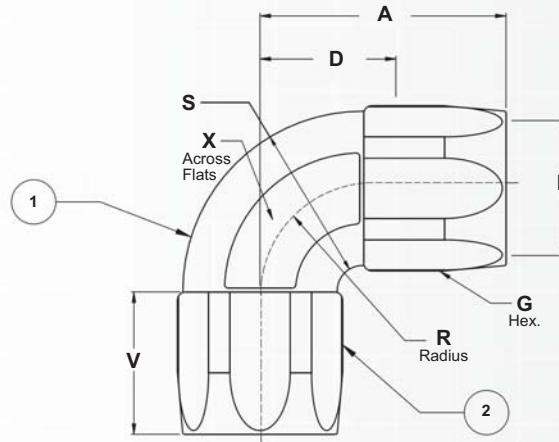
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 66-190093

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580



Part Number	I.P.S. Size	A	D	E	G	R	S	V	X	Est. Wt. Lbs.
90ELB-B1488D-1616	1"	2.80	1.53	.75	1.44	1.12	1.25	1.66	1.19	1.2
90ELB-B1488D-2020	1-1/4"	2.98	1.62	1.00	1.75	1.22	1.62	1.75	1.44	1.8
90ELB-B1488D-2424	1-1/2"	3.24	1.78	1.16	1.94	1.38	1.81	1.84	1.69	2.3
90ELB-B1488D-3232	2"	3.89	2.05	1.69	2.44	1.62	2.44	2.25	2.25	3.2
90ELB-B1488D-4040	2-1/2"	4.39	2.48	2.12	3.25	1.88	3.00	2.50	2.75	5.6
90ELB-B1488D-4848	3"	4.70	2.80	2.69	3.88	2.19	3.50	2.50	3.19	10.4

Components

Description	Req'd per Ass'y	1616	2020	2424	Material
① Elbow	1	C18121	C19007	C19012	Bronze
② Socket	2	C18667-1	C18703-1	C18990-1	Brass

Description	Req'd per Ass'y	3232	4040	4848	Material
① Elbow	1	C18804	C19025	C18117	Bronze
② Socket	2	C18811	C18822	C17901	Brass

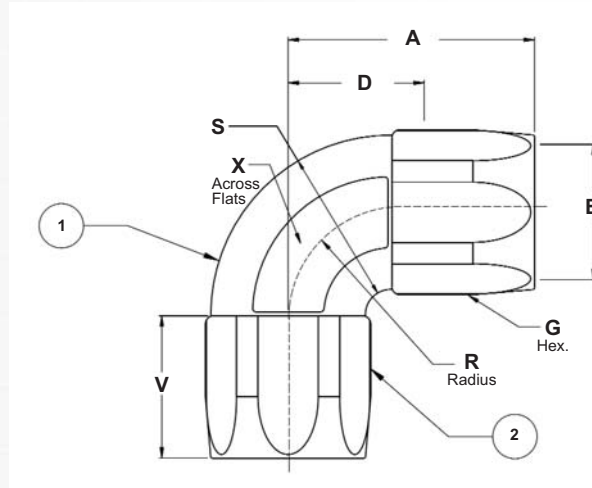
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Elbow - 90° - Hose to Hose

Equal to Aeroquip P/N 412-190093

Use with the following hose: Synthetic yarn and wire reinforced hoses i.a.w. MIL-H-24136/3, MIL-H-24135/10/12, e.g. HS P/N 2580

Fittings



Part Number	I.P.S. Size	A	D	E	G	R	S	V	X	Est. Wt. Lbs.
90ELB-MSS1488D-1616	1"	2.80	1.53	.75	1.44	1.12	1.25	1.66	1.19	1.2
90ELB-MSS1488D-2020	1-1/4"	2.98	1.62	1.00	1.75	1.22	1.62	1.75	1.44	1.8
90ELB-MSS1488D-3232	2"	3.89	2.05	1.69	2.44	1.62	2.44	2.25	2.25	3.3
90ELB-MSS1488D-4040	2-1/2"	4.39	2.48	2.12	3.25	1.88	3.00	2.50	2.75	5.8

106

Components

Description	Req'd per Ass'y	1616	2020	3232	4040	Material
① Elbow	1	C19249	C19250	C19251	C19252	Stainless Steel
② Socket	2	C18667-2	C18703-2	C18662	C18991	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



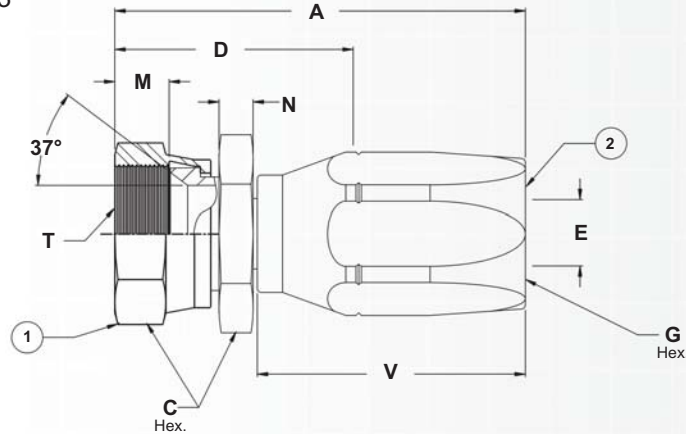
End Fitting - Straight - S.A.E. 37° Female Flare Swivel to Hose

Equal to Aeroquip P/N 4-4721

MIL-F-24787/2,

Type A, Group I

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	Hose I.D.	T Thread CL-2B	A (Max.)	C (Nom.)	D	E	G (Nom.)	M (Ref.)	N	V	Est. Wt. Lbs.
EF-1600A-0404	1/4"	7/16"-20	2.75	.56	1.41	.17	1.00	.37	.22	1.73	.22
EF-1600A-0504	1/4"	1/2"-20	2.75	.63	1.49	.17	1.00	.40	.25	1.73	.26
EF-1600A-0604	1/4"	9/16"-18	3.00	.69	1.56	.17	1.25	.40	.28	1.73	.35
EF-1600A-0606	3/8"	9/16"-18	3.00	.69	1.51	.31	1.25	.40	.28	1.92	.40
EF-1600A-0806	3/8"	3/4"-16	3.21	.88	1.64	.31	1.25	.44	.31	1.92	.47
EF-1600A-0808	1/2"	3/4"-16	3.50	.88	1.68	.39	1.50	.44	.31	2.01	.53
EF-1600A-1008	1/2"	7/8"-14	3.50	1.00	1.80	.39	1.50	.52	.31	2.01	.62
EF-1600A-1208	1/2"	1-1/16"-12	3.50	1.25	1.90	.39	1.50	.57	.38	2.47	.75
EF-1600A-1010	5/8"	7/8"-14	3.50	1.00	1.85	.50	1.50	.52	.31	2.10	.78
EF-1600A-1212	3/4"	1-1/16"-12	4.00	1.25	1.99	.61	1.75	.57	.38	2.47	1.10
EF-1600A-1616	1"	1-5/16"-12	4.50	1.50	2.43	.82	2.25	.60	.38	2.95	1.72
EF-1600A-2020	1-1/4"	1-5/8"-12	5.25	2.00	2.78	1.05	2.75	.74	.38	3.42	3.38
EF-1600A-2424	1-1/2"	1-7/8"-12	5.75	2.25	2.92	1.28	3.00	.74	.38	3.34	4.10
EF-1600A-3232	2"	2-1/2"-12	6.75	2.88	3.46	1.75	3.50	.93	.50	3.70	6.27

Components

Description	Req'd per Ass'y	0404	0504	0604	0606	0806	0808	1008	Material
① Nipple Ass'y	1	C19863	C19902	C19864	C19865	C19903	C19866	C19904	Monel
② Socket	1	C19794-1	C19794-1	C19794-1	C19795-1	C19795-1	C19680-1	C19680-1	Monel

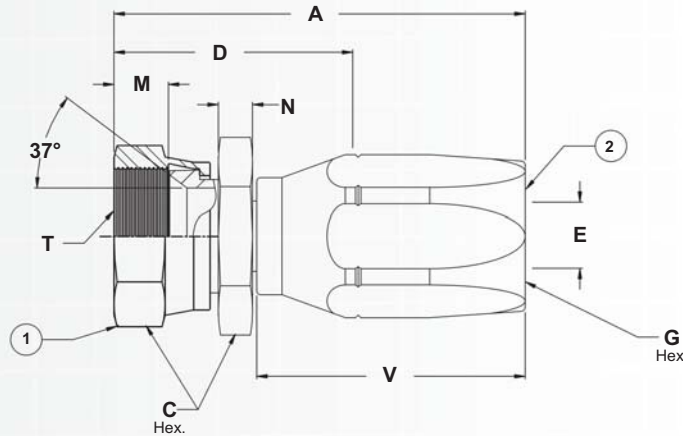
Description	Req'd per Ass'y	1208	1010	1212	1616	2020	2424	3232	Material
① Nipple Ass'y	1	C19905	C19867	C19868	C19847	C19869	C19870	C19871	Monel
② Socket	1	C19680-1	C19796-1	C19797-1	C19700-1	C19798-1	C19799-1	C19694-1	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - S.A.E. 37° Female Flare Swivel to Hose

Equal to Aeroquip P/N 41-4721

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Part Number	Hose I.D.	T Thread CL-2B	A (Max.)	C (Nom.)	D	E	G (Nom.)	M (Ref.)	N	V	Est. Wt. Lbs.
EF-SM1600A-0404	1/4"	7/16"-20	2.75	.56	1.41	.17	1.00	.37	.22	1.73	.22
EF-SM1600A-0504	1/4"	1/2"-20	2.75	.63	1.49	.17	1.00	.40	.25	1.73	.26
EF-SM1600A-0604	1/4"	9/16"-18	3.00	.69	1.56	.17	1.25	.40	.28	1.73	.35
EF-SM1600A-0606	3/8"	9/16"-18	3.00	.69	1.51	.31	1.25	.40	.28	1.92	.40
EF-SM1600A-0806	3/8"	3/4"-16	3.21	.88	1.64	.31	1.25	.44	.31	1.92	.47
EF-SM1600A-0808	1/2"	3/4"-16	3.50	.88	1.68	.39	1.50	.44	.31	2.01	.53
EF-SM1600A-1008	1/2"	7/8"-14	3.50	1.00	1.80	.39	1.50	.52	.31	2.01	.62
EF-SM1600A-1208	1/2"	1-1/16"-12	3.50	1.25	1.90	.39	1.50	.57	.38	2.47	.75
EF-SM1600A-1010	5/8"	7/8"-14	3.50	1.00	1.85	.50	1.50	.52	.31	2.10	.78
EF-SM1600A-1212	3/4"	1-1/16"-12	4.00	1.25	1.99	.61	1.75	.57	.38	2.47	1.10
EF-SM1600A-1616	1"	1-5/16"-12	4.50	1.50	2.43	.82	2.25	.60	.38	2.95	1.72
EF-SM1600A-2020	1-1/4"	1-5/8"-12	5.25	2.00	2.78	1.05	2.75	.74	.38	3.42	3.38
EF-SM1600A-2424	1-1/2"	1-7/8"-12	5.75	2.25	2.92	1.28	3.00	.74	.38	3.34	4.10
EF-SM1600A-3232	2"	2-1/2"-12	6.75	2.88	3.46	1.75	3.50	.93	.50	3.70	6.27

Components

Description	Req'd per Ass'y	0404	0504	0604	0606	0806	0808	1008	1208	Material
① Nipple Ass'y	1	C19863	C19902	C19864	C19865	C19903	C19866	C19904	C19905	Monel
② Socket	1	C19794-2	C19794-2	C19794-2	C19795-2	C19795-2	C19680-2	C19680-2	C19680-2	Stainless Steel

Description	Req'd per Ass'y	1010	1212	1616	2020	2424	3232	Material
① Nipple Ass'y	1	--	--	--	--	--	--	Stainless Steel
② Socket	1	--	--	--	--	--	--	Stainless Steel

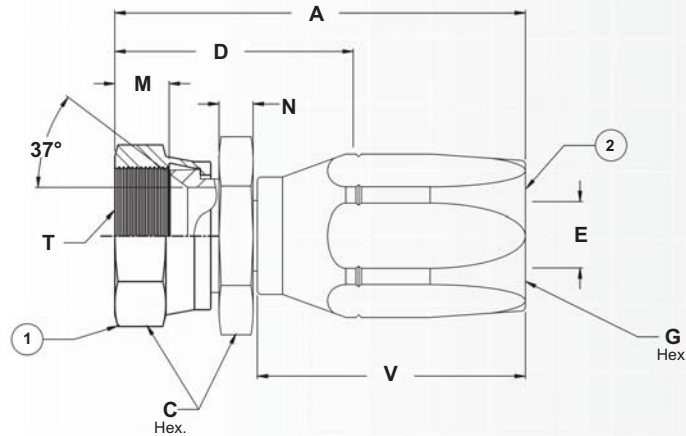
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - S.A.E. 37° Female Flare Swivel to Hose

Equal to Aeroquip P/N 259-4721

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Part Number	Hose I.D.	T Thread CL-2B	A (Max.)	C (Nom.)	D	E	G	M (Ref.)	N	V	Est. Wt. Lbs.
EF-SS1600A-0404	1/4"	7/16"-20	2.75	.56	1.41	.17	1.00	.37	.22	1.73	.22
EF-SS1600A-0504	1/4"	1/2"-20	2.75	.63	1.49	.17	1.00	.40	.25	1.73	.26
EF-SS1600A-0604	1/4"	9/16"-18	3.00	.69	1.56	.17	1.25	.40	.28	1.73	.35
EF-SS1600A-0606	3/8"	9/16"-18	3.00	.69	1.51	.31	1.25	.40	.28	1.92	.40
EF-SS1600A-0806	3/8"	3/4"-16	3.21	.88	1.64	.31	1.25	.44	.31	1.92	.47
EF-SS1600A-0808	1/2"	3/4"-16	3.50	.88	1.68	.39	1.50	.44	.31	2.01	.53
EF-SS1600A-1008	1/2"	7/8"-14	3.50	1.00	1.80	.39	1.50	.52	.31	2.01	.62
EF-SS1600A-1208	1/2"	1-1/16"-12	3.50	1.25	1.90	.39	1.50	.57	.38	2.47	.75
EF-SS1600A-1010	5/8"	7/8"-14	3.50	1.00	1.85	.50	1.50	.52	.31	2.10	.78
EF-SS1600A-1212	3/4"	1-1/16"-12	4.00	1.25	1.99	.61	1.75	.57	.38	2.47	1.10
EF-SS1600A-1616	1"	1-5/16"-12	4.50	1.50	2.43	.82	2.25	.60	.38	2.95	1.72
EF-SS1600A-2020	1-1/4"	1-5/8"-12	5.25	2.00	2.78	1.05	2.75	.74	.38	3.42	3.38
EF-SS1600A-2424	1-1/2"	1-7/8"-12	5.75	2.25	2.92	1.28	3.00	.74	.38	3.34	4.10
EF-SS1600A-3232	2"	2-1/2"-12	6.75	2.88	3.46	1.75	3.50	.93	.50	3.70	6.27

Components

Description	Req'd per Ass'y	0404	0504	0604	0606	0806	0808	1008	Material
① Nipple Ass'y	1	C20433	C20434	C20435	C20436	C20441	C20442	C20443	Stainless Steel
② Socket	1	C19794-3	C19794-3	C19794-3	C19795-3	C19795-3	C19680-3	C19680-3	Stainless Steel

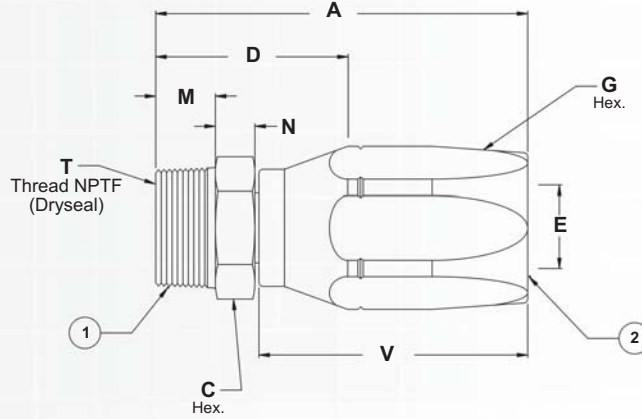
Description	Req'd per Ass'y	1208	1010	1212	1616	2020	2424	3232	Material
① Nipple Ass'y	1	C20444	C20445	C20446	C20450	C20451	C20452	C20453	Stainless Steel
② Socket	1	C19680-3	C19796-3	C19796-3	C19700-3	C1978-3	C19799-3	C19694-3	Stainless Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Male NPTF to Hose

Equal to Aeroquip P/N 4-4722

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Part Number	Hose I.D.	T Thread NPTF	A	C	D	E	G	M	N	V	Est. Wt. Lbs.
EF-1600MP-0404	1/4"	1/4"-18	2.50	.56	1.26	.17	.81	.56	.19	1.73	.26
EF-1600MP-0604	1/4"	3/8"-18	2.56	.56	1.32	.17	.81	.56	.19	1.73	.31
EF-1600MP-0606	3/8"	3/8"-18	2.75	.69	1.28	.31	1.00	.56	.25	1.92	.36
EF-1600MP-0608	1/2"	3/8"-18	2.84	.88	1.32	.39	1.12	.56	.25	2.01	.42
EF-1600MP-0808	1/2"	1/2"-14	3.09	.88	1.58	.39	1.12	.56	.25	2.01	.57
EF-1600MP-0810	5/8"	1/2"-14	3.18	.94	1.63	.50	1.25	.75	.31	2.10	.62
EF-1600MP-1212	3/4"	3/4"-14	3.61	1.06	1.74	.61	1.50	.75	.38	2.47	.75
EF-1600MP-1612	3/4"	1"-11-1/2	3.92	1.06	2.06	.61	1.50	.75	.38	2.47	1.08
EF-1600MP-1616	1"	1"-11-1/2	4.40	1.38	2.36	.82	1.75	.94	.50	2.95	1.79
EF-1600MP-2020	1-1/4"	1-1/4"-11-1/2	4.90	1.75	2.59	1.05	2.25	.97	.50	3.42	2.74
EF-1600MP-2424	1-1/2"	1-1/2"-11-1/2	4.98	2.00	2.74	1.28	2.50	1.00	.62	3.34	3.31
EF-1600MP-3232	2"	2"-11-1/2	5.50	2.50	3.05	1.75	3.00	1.03	.75	3.70	5.21

Components

Description	Req'd per Ass'y	0404	0604	0606	0608	0808	0810	Material
① Nipple	1	C19957-1	C20385-1	C19958-1	C20247-1	C19959-1	C19960-1	Monel
② Socket	1	C19794-1	C19794-1	C19795-1	C19680-1	C19680-1	C19796-1	Monel

Description	Req'd per Ass'y	1212	1612	1616	2020	2424	3232	Material
① Nipple	1	C19961-1	C20386-1	C19962-1	C19963-1	C19964-1	C19965-1	Monel
② Socket	1	C19797-1	C19797-1	C19700-1	C19798-1	C19799-1	C19694-1	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

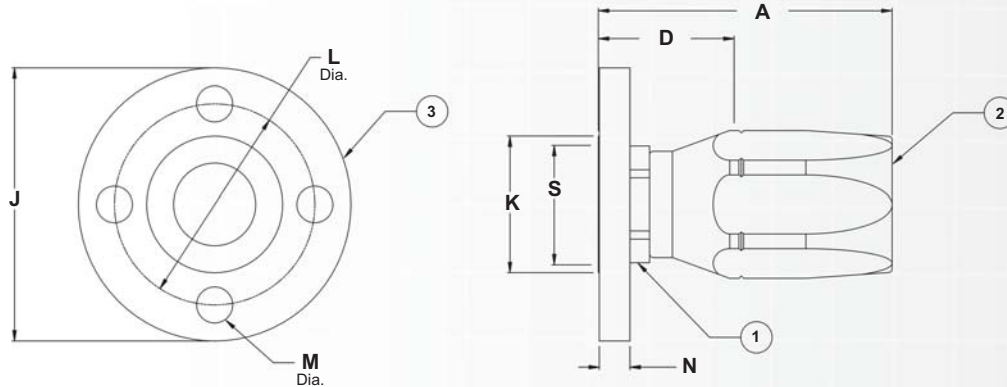


End Fitting - Straight - Flange to Hose

Equal to Aeroquip P/N FC9056-463

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13

150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	D	J	K	L	N	S	Est. Wt. Lbs.
EF-1600A5-0812	1/2"	3	.56	3.92	2.05	3.56	1.50	2.44	.69	.71	3.25
EF-1600A5-0816	1/2"	3	.56	4.34	2.29	3.56	1.50	2.44	.69	.71	3.50
EF-1600A5-1216	3/4"	4	.56	4.34	2.29	3.81	1.84	2.69	.69	.92	4.11
EF-1600A5-1220	3/4"	4	.56	4.81	2.49	3.81	1.84	2.69	.69	.92	4.25
EF-1600A5-1616	1"	4	.56	4.34	2.29	4.25	1.50	3.13	.75	1.18	4.62
EF-1600A5-1620	1"	4	.56	4.81	2.49	4.25	2.12	3.13	.75	1.18	6.05
EF-1600A5-1624	1"	4	.56	4.97	2.73	4.25	2.12	3.13	.75	1.18	6.50
EF-1600A5-2024	1-1/4"	4	.56	4.97	2.73	4.50	2.74	3.38	.81	1.53	7.25
EF-1600A5-2032	1-1/4"	4	.56	5.33	2.89	4.50	2.74	3.38	.81	1.53	8.00
EF-1600A5-2432	1-1/2"	6	.56	5.33	2.89	5.06	2.74	3.94	.81	1.77	9.14
EF-1600A5-3232	2"	6	.56	5.33	2.89	5.06	3.28	4.44	.81	1.77	11.06

Components

Description	Req'd per Ass'y	0812	0816	1216	1220	1616	1620	Material
① Nipple	1	C19839-1	C20022	C19840-1	C20023	C20024	C19841-1	Monel
② Socket	1	C19797-1	C19700-1	C19700-1	C19798-1	C19700-1	C19798-1	Monel
③ Flange	1	C19522	C19522	C19525	C19525	C19526	C19526	Bronze

Description	Req'd per Ass'y	1624	2024	2032	2432	3232	Material
① Nipple	1	C20025	C19842-1	C19843-1	C19843-1	C19844-1	Monel
② Socket	1	C19799-1	C19799-1	C19694-1	C19694-1	C19694-1	Monel
③ Flange	1	C19526	C19527	C19527	C19528	C17765	Bronze

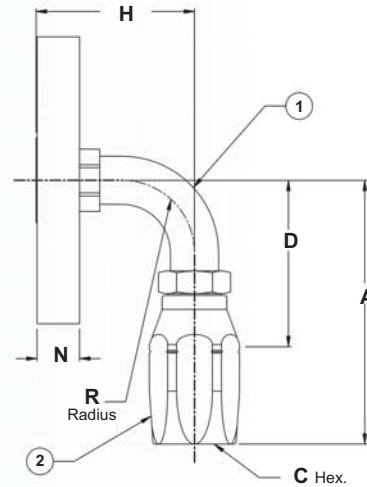
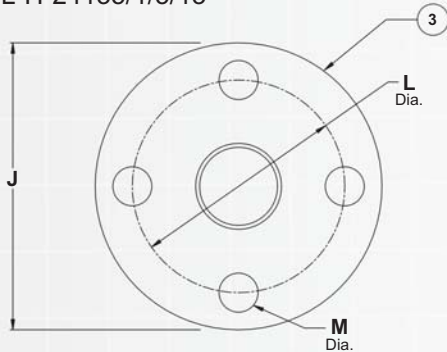
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Flange to Hose

Equal to Aeroquip P/N FC9224-463

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13

150/400Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolt Holes	M	A	C	D	H	J	L	N	R	Est. Wt. Lbs.
90EF-1600B5-0812	1/2"	3	.56	4.52	1.50	2.65	2.19	3.56	2.44	.69	1.25	2.47
90EF-1600B5-0816	1/2"	3	.56	5.25	1.81	3.20	2.19	3.56	2.44	.69	1.25	2.78
90EF-1600B5-1216	3/4"	4	.56	5.25	1.81	3.20	2.49	3.81	2.69	.69	1.50	2.95
90EF-1600B5-1220	3/4"	4	.56	6.10	2.25	3.78	2.49	3.81	2.69	.69	1.50	3.61
90EF-1600B5-1616	1"	4	.56	5.25	1.81	3.20	2.69	4.25	3.13	.75	1.75	5.00
90EF-1600B5-1620	1"	4	.56	6.10	2.25	3.78	2.69	4.25	3.13	.75	1.75	5.75
90EF-1600B5-1624	1"	4	.56	6.31	2.50	4.09	2.69	4.25	3.13	.75	1.75	6.00
90EF-1600B5-2024	1-1/4"	4	.56	6.31	2.50	4.09	3.13	4.50	3.38	.81	2.00	7.00
90EF-1600B5-2032	1-1/4"	4	.56	7.38	3.00	4.94	3.13	4.50	3.38	.81	2.00	8.25
90EF-1600B5-2432	1-1/2"	6	.56	7.38	3.00	4.94	3.00	5.06	3.94	.81	2.50	8.75
90EF-1600B5-3232	2"	6	.56	7.38	3.00	4.94	3.35	5.06	4.44	.81	2.50	10.75

Components

Description	Req'd per Ass'y	0812	0816	1216	1220	1616	1620	Material
① Nipple	1	C19857	C20026	C19858	C20027	C20028	C19859	Monel/Cuni 0812 - Monel Only
② Socket	1	C19797-1	C19700-1	C19700-1	C19798-1	C19700-1	C19798-1	Monel
③ Flange	1	C19522	C19522	C19525	C19525	C19526	C19526	Bronze

Description	Req'd per Ass'y	1624	2024	2032	2432	3232	Material
① Nipple	1	C20029	C19860	C19861	C19861	C19862	Monel/Cuni
② Socket	1	C19799-1	C19799-1	C19694-1	C19694-1	C19694-1	Monel
③ Flange	1	C19526	C19527	C19527	C19528	C17765	Bronze

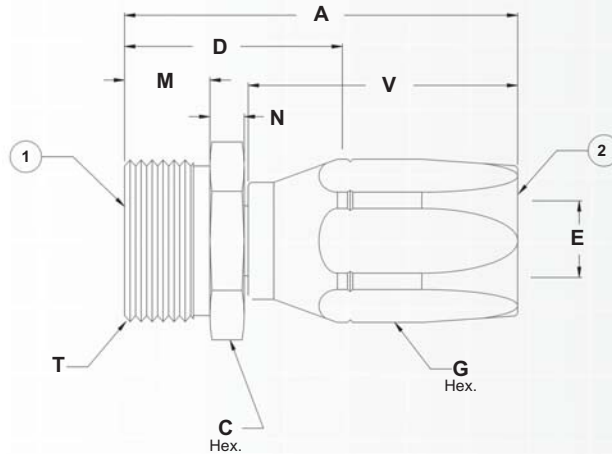
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 41-190909

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Part Number	I.P.S. Size	T Thread CL-3A	A	C (Nom.)	D	E	G	M	N	V	Est. Wt. Lbs.
EF-SM1600C-0204	1/8"	1"-14	2.50	1.06	1.26	.17	.81	.50	.25	1.73	.38
EF-SM1600C-0406	1/4"	1-3/16"-12	2.82	1.25	1.34	.31	1.25	.62	.25	1.92	.54
EF-SM1600C-0606	3/8"	1-3/8"-12	2.96	1.44	1.45	.31	1.25	.62	.31	1.92	.62
EF-SM1600C-0608	3/8"	1-3/8"-12	2.96	1.44	1.45	.39	1.50	.62	.31	2.01	.76
EF-SM1600C-0812	1/2"	1-3/4"-12	3.49	1.81	1.62	.50	1.75	.62	.38	2.47	1.47
EF-SM1600C-1216	3/4"	2"-12	4.09	2.12	2.04	.62	2.25	.62	.50	2.95	2.34
EF-SM1600C-1616	1"	2-5/16"-12	4.34	2.38	2.28	.82	2.25	.75	.62	2.95	2.81
EF-SM1600C-2016	1-1/4"	2-3/4"-12	4.34	2.88	2.28	.82	2.25	.75	.62	2.95	3.56
EF-SM1600C-1620	1"	2-5/16"-12	4.80	2.38	2.48	.81	2.75	.75	.62	3.42	4.03
EF-SM1600C-2020	1-1/4"	2-3/4"-12	4.80	2.88	2.48	.81	2.75	.75	.62	3.42	4.75
EF-SM1600C-2024	1-1/4"	2-3/4"-12	4.72	2.88	2.48	1.21	3.00	.75	.62	3.34	5.50
EF-SM1600C-2432	1-1/2"	3-1/16"-12	5.34	3.12	2.90	1.39	3.50	.88	.75	3.70	7.38
EF-SM1600C-3232	2"	3-3/4"-12	5.34	3.88	2.90	1.75	3.50	.88	.75	3.70	9.64

Components

Description	Req'd per Ass'y	0204	0406	0606	0608	0812	1216	1616	Material
① Nipple	1	C19802-1	C19803-1	C19906-1	C19804-1	C19805-1	C19807-1	C19808-1	Monel
② Socket	1	C19794-2	C19795-2	C19795-2	C19680-2	C19797-2	C19700-2	C19700-2	Steel

Description	Req'd per Ass'y	2016	1620	2020	2024	2432	3232	Material
① Nipple	1	C19908-1	C19809-1	C19909-1	C19810-1	C19811-1	C19812	Monel
② Socket	1	C19700-2	C19798-2	C19798-2	C19799-2	C19694-2	C19694-2	Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

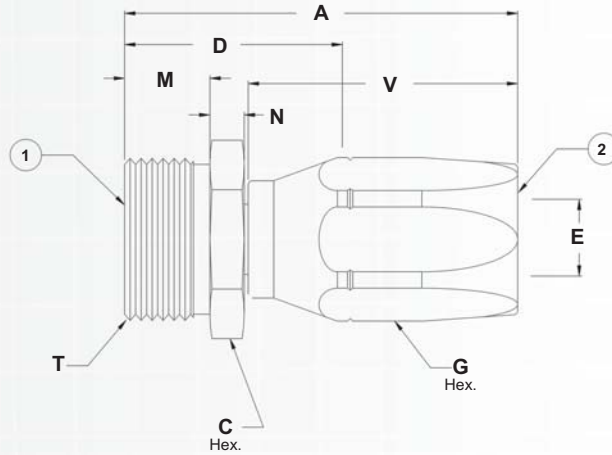
End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 4-190909

MIL-F-24787/3,

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13

Type C, Group I



Part Number	I.P.S. Size	T Thread CL-3A	A	C (Nom.)	D	E	G	M	N	V	Est. Wt. Lbs.
EF-1600C-0204	1/8"	1"-14	2.50	1.06	1.26	.17	.81	.50	.25	1.73	.38
EF-1600C-0406	1/4"	1-3/16"-12	2.82	1.25	1.34	.31	1.25	.62	.25	1.92	.54
EF-1600C-0606	3/8"	1-3/8"-12	2.96	1.44	1.45	.31	1.25	.62	.31	1.92	.62
EF-1600C-0608	3/8"	1-3/8"-12	2.96	1.44	1.45	.39	1.50	.62	.31	2.01	.76
EF-1600C-0812	1/2"	1-3/4"-12	3.49	1.81	1.62	.50	1.75	.62	.38	2.47	1.47
EF-1600C-1216	3/4"	2"-12	4.09	2.12	2.04	.62	2.25	.62	.50	2.95	2.34
EF-1600C-1616	1"	2-5/16"-12	4.34	2.38	2.28	.82	2.25	.82	.62	2.95	2.81
EF-1600C-2016	1-1/4"	2-3/4"-12	4.34	2.88	2.28	.82	2.25	.82	.62	2.95	3.56
EF-1600C-1620	1"	2-5/16"-12	4.80	2.38	2.48	.81	2.75	.81	.62	3.42	4.03
EF-1600C-2020	1-1/4"	2-3/4"-12	4.80	2.88	2.48	.81	2.75	.81	.62	3.42	4.75
EF-1600C-2024	1-1/4"	2-3/4"-12	4.72	2.88	2.48	1.21	3.00	1.21	.62	3.34	5.50
EF-1600C-2432	1-1/2"	3-1/16"-12	5.34	3.12	2.90	1.39	3.50	1.39	.75	3.70	7.38
EF-1600C-3232	2"	3-3/4"-12	5.34	3.88	2.90	1.75	3.50	1.75	.75	3.70	9.64

Components

Description	Req'd per Ass'y	0204	0406	0606	0608	0812	1216	1616	Material
① Nipple	1	C19802-1	C19803-1	C19906-1	C19804-1	C19805-1	C19807-1	C19808-1	Monel
② Socket	1	C19794-1	C19795-1	C19795-1	C19680-1	C19797-1	C19700-1	C19700-1	Monel

Description	Req'd per Ass'y	2016	1620	2020	2024	2432	3232	Material
① Nipple	1	C19908-1	C19809-1	C19909-1	C19810-1	C19811-1	C19812	Monel
② Socket	1	C19700-1	C19798-1	C19798-1	C19799-1	C19694-1	C19694-1	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

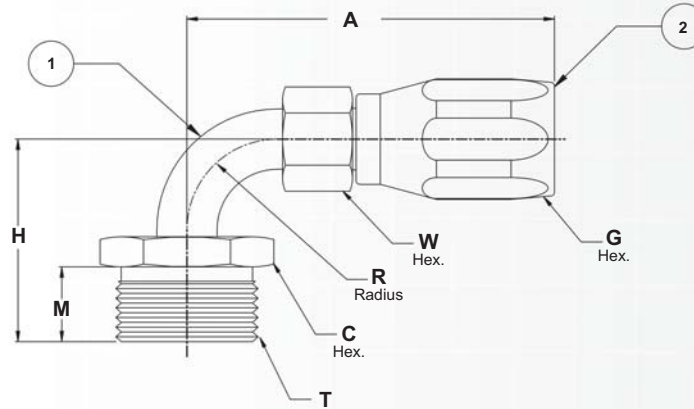


End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 4-191304

MIL-F-24787/3,
Type CL, Group I

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	I.P.S. Size	T Thread CL-3A	A	C	G	H	M	R	W	Est. Wt. Lbs.
90EF-1600CL-0406	1/4"	1-3/16"-12	3.11	1.25	1.00	1.43	.62	.50	.81	.62
90EF-1600CL-0608	3/8"	1-3/8"-12	3.44	1.44	1.12	1.74	.62	.75	.81	.92
90EF-1600CL-0812	1/2"	1-3/4"-12	4.52	1.81	1.50	2.31	.62	1.25	1.20	1.71
90EF-1600CL-1216	3/4"	2"-12	5.25	2.12	1.81	2.68	.62	1.50	1.44	2.87
90EF-1600CL-1616	1"	2-5/16"-12	5.25	2.38	1.81	2.92	.75	1.50	1.44	3.44
90EF-1600CL-1620	1"	2-5/16"-12	6.10	2.38	2.25	3.17	.75	1.75	1.62	5.03
90EF-1600CL-2020	1-1/4"	2-3/4"-12	6.10	2.88	2.25	3.17	.77	1.75	1.62	5.03
90EF-1600CL-2024	1-1/4"	2-3/4"-12	6.32	2.88	2.50	3.42	.75	2.00	1.88	6.02
90EF-1600CL-2432	1-1/2"	3-1/16"-12	7.38	3.12	3.00	4.05	.88	2.50	2.50	8.49
90EF-1600CL-3232	2"	3-3/4"-12	7.38	3.88	3.00	4.05	.88	2.50	2.50	10.64

Components

Description	Req'd per Ass'y	0406	0608	0812	1216	1616	Material
① Elbow Ass'y	1	C19910	C19911	C19912	C19914	C19915	Monel* Monel/Cuni**
② Socket	1	C19795-1	C19680-1	C19797-1	C19700-1	C19700-1	Monel

Description	Req'd per Ass'y	1620	2020	2024	2432	3232	Material
① Elbow Ass'y	1	C19916	C19917	C19918	C19919	C19920	Monel/Cuni
② Socket	1	C19798-1	C19798-1	C19799-1	C19694-1	C19694-1	Monel

* Sizes 1/4" thru 1/2" is Monel.

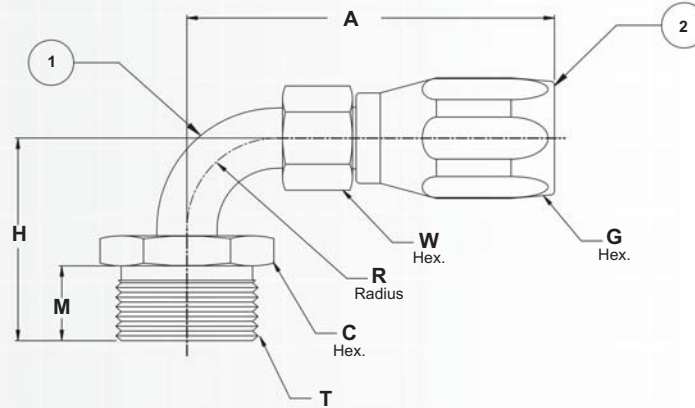
** Sizes 3/4" thru 2" is Monel/Cuni.

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 41-191304

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Part Number	I.P.S. Size	T Thread CL-3A	A	C	G	H	M	R	W	Est. Wt. Lbs.
90EF-SM1600CL-0406	1/4"	1-3/16"-12	3.11	1.25	1.00	1.43	.62	.50	.81	.62
90EF-SM1600CL-0608	3/8"	1-3/8"-12	3.44	1.44	1.12	1.74	.62	.75	.81	.92
90EF-SM1600CL-0812	1/2"	1-3/4"-12	4.52	1.81	1.50	2.31	.62	1.25	1.20	1.71
90EF-SM1600CL-1216	3/4"	2"-12	5.25	2.12	1.81	2.68	.62	1.50	1.44	2.87
90EF-SM1600CL-1616	1"	2-5/16"-12	5.25	2.38	1.81	2.92	.75	1.50	1.44	3.44
90EF-SM1600CL-1620	1"	2-5/16"-12	6.10	2.38	2.25	3.17	.75	1.75	1.62	5.03
90EF-SM1600CL-2020	1-1/4"	2-3/4"-12	6.10	2.88	2.25	3.17	.77	1.75	1.62	5.03
90EF-SM1600CL-2024	1-1/4"	2-3/4"-12	6.32	2.88	2.50	3.42	.75	2.00	1.88	6.02
90EF-SM1600CL-2432	1-1/2"	3-1/16"-12	7.38	3.12	3.00	4.05	.88	2.50	2.50	8.49
90EF-SM1600CL-3232	2"	3-3/4"-12	7.38	3.88	3.00	4.05	.88	2.50	2.50	10.64

Components

Description	Req'd per Ass'y	0406	0608	0812	1216	1616	Material
① Elbow Ass'y	1	C19910	C19911	C19912	C19914	C19915	Monel* Monel/Cuni**
② Socket	1	C19795-2	C19680-2	C19797-2	C19700-2	C19700-2	Steel

Description	Req'd per Ass'y	1620	2020	2024	2432	3232	Material
① Elbow Ass'y	1	C19916	C19917	C19918	C19919	C19920	Monel/Cuni
② Socket	1	C19798-2	C19798-2	C19799-2	C19694-2	C19694-2	Steel

* Sizes 1/4" thru 1/2" is Monel.

** Sizes 3/4" thru 2" is Monel/Cuni.

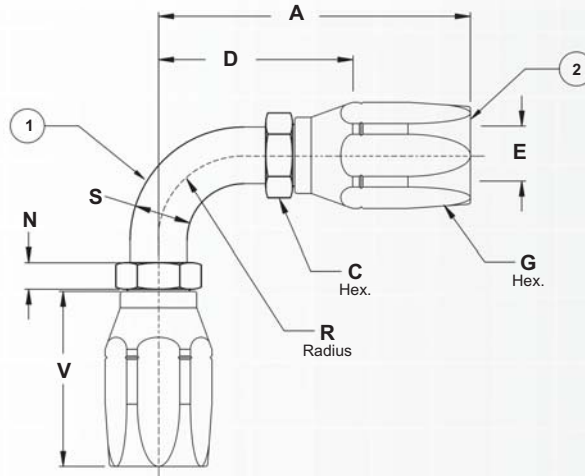
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 41-191305

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-SM1600D-0606	3/8"	3.11	.69	1.63	.31	1.00	.62	.50	.38	1.92	.76
90ELB-SM1600D-0808	1/2"	3.44	.81	1.93	.39	1.12	.62	.75	.50	2.01	1.12
90ELB-SM1600D-1212	3/4"	4.52	1.06	2.65	.61	1.50	.74	1.25	.75	2.47	2.03
90ELB-SM1600D-1616	1"	5.25	1.38	3.20	.82	1.81	.74	1.50	1.00	2.95	3.77
90ELB-SM1600D-2020	1-1/4"	6.09	1.62	3.78	1.05	2.25	.86	1.75	1.25	3.42	6.31
90ELB-SM1600D-2424	1-1/2"	6.32	1.88	4.09	1.28	2.50	.86	2.00	1.50	3.34	7.85
90ELB-SM1600D-3232	2"	7.38	2.50	4.94	1.75	3.00	1.12	2.50	2.00	3.70	11.43

Components

Description	Req'd per Ass'y	0606	0808	1212	Material
① Elbow Ass'y	1	C19851	C19852	C19853	Monel
② Socket	2	C19795-2	C19680-2	C19797-2	Steel

Description	Req'd per Ass'y	1616	2020	2424	3232	Material
① Elbow Ass'y	1	C20244	C19854	C19855	C19856	Monel/Cuni
② Socket	2	C19700-2	C19798-2	C19799-2	C19694-2	Steel

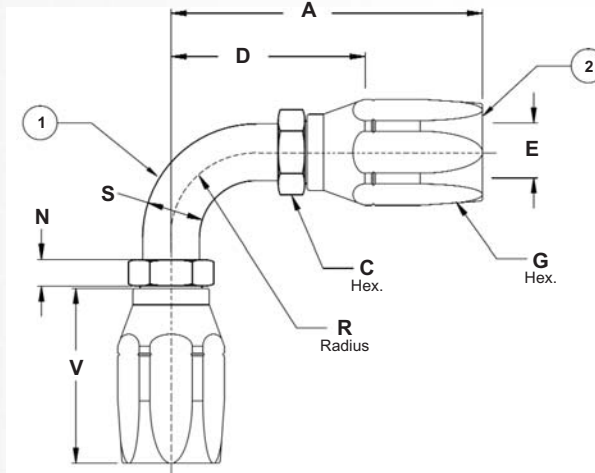
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Elbow - 90° Dogleg- Hose to Hose

Equal to Aeroquip P/N 4-191305

**MIL-F-24787/5,
Type D, Group I**

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-1600D-0606	3/8"	3.11	.69	1.63	.31	1.00	.62	.50	.38	1.92	.76
90ELB-1600D-0808	1/2"	3.44	.81	1.93	.39	1.12	.62	.75	.50	2.01	1.12
90ELB-1600D-1212	3/4"	4.52	1.06	2.65	.61	1.50	.74	1.25	.75	2.47	2.03
90ELB-1600D-1616	1"	5.25	1.38	3.20	.82	1.81	.74	1.50	1.00	2.95	3.77
90ELB-1600D-2020	1-1/4"	6.09	1.62	3.78	1.05	2.25	.86	1.75	1.25	3.42	6.31
90ELB-1600D-2424	1-1/2"	6.32	1.88	4.09	1.28	2.50	.86	2.00	1.50	3.34	7.85
90ELB-1600D-3232	2"	7.38	2.50	4.94	1.75	3.00	1.12	2.50	2.00	3.70	11.43

Components

Description	Req'd per Ass'y	0606	0808	1212	Material
① Elbow Ass'y	1	C19851	C19852	C19853	Monel
② Socket	2	C19795-1	C19680-1	C19797-1	Monel

Description	Req'd per Ass'y	1616	2020	2424	3232	Material
① Elbow Ass'y	1	C20244	C19854	C19855	C19856	Monel/Cuni
② Socket	2	C19700-1	C19798-1	C19799-1	C19694-1	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



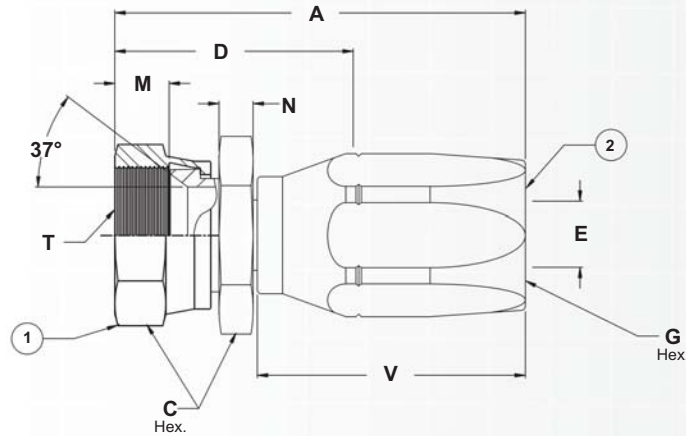
End Fitting - Straight - S.A.E. 37° Female Flare Swivel to Hose

Equal to Aeroquip P/N 4-4730

MIL-F-24787/2,

Type A, Group II

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	Hose I.D.	T Thread CL-2B	A	C	D	E	G	M	N	V	Est. Wt. Lbs.
EF-1602A-0606	3/8"	9/16"-18	2.98	.69	1.51	.31	1.00	.40	.28	1.92	.40
EF-1602A-0808	1/2"	3/4"-16	3.20	.88	1.68	.39	1.12	.44	.31	2.01	.53
EF-1602A-1008	1/2"	7/8"-14	3.31	1.00	1.80	.39	1.12	.52	.31	2.01	.62
EF-1602A-1010	5/8"	7/8"-14	3.50	1.00	1.85	.50	1.50	.52	.31	2.10	.78
EF-1602A-1212	3/4"	1-1/16"-12	4.00	1.25	1.99	.61	1.50	.57	.38	2.47	1.10
EF-1602A-1616	1"	1-5/16"-12	4.49	1.50	2.43	.82	1.81	.60	.38	2.95	1.72

Components

Description	Req'd per Ass'y	0606	0808	1008	Material
① Nipple Ass'y	1	C19865	C19866	C19904	Monel
② Socket	1	C19845-1	C19699-1	C19699-1	Monel

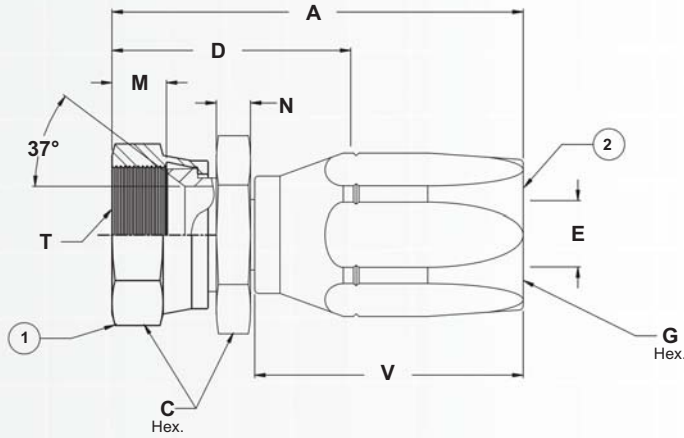
Description	Req'd per Ass'y	1010	1212	1616	Material
① Nipple Ass'y	1	C19867	C19868	C19847	Monel
② Socket	1	C19926-1	C19846-1	C19700-1	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - S.A.E. 37° Female Flare Swivel to Hose

Equal to Aeroquip P/N 41-4730

Use with the following hose: Wire reinforced hoses i.a.w. MIL-H-24135/1/5/13



Fittings

120

Part Number	Hose I.D.	T Thread CL-2B	A	C	D	E	G	M	N	V	Est. Wt. Lbs.
EF-SM1602A-0606	3/8"	9/16"-18	2.98	.69	1.51	.31	1.00	.40	.28	1.92	.40
EF-SM1602A-0808	1/2"	3/4"-16	3.20	.88	1.68	.39	1.12	.44	.31	2.01	.53
EF-SM1602A-1008	1/2"	7/8"-14	3.31	1.00	1.80	.39	1.12	.52	.31	2.01	.62
EF-SM1602A-1010	5/8"	7/8"-14	3.50	1.00	1.85	.50	1.50	.52	.31	2.10	.78
EF-SM1602A-1212	3/4"	1-1/16"-12	4.00	1.25	1.99	.61	1.50	.57	.38	2.47	1.10
EF-SM1602A-1616	1"	1-5/16"-12	4.49	1.50	2.43	.82	1.81	.60	.38	2.95	1.72

Components

Description	Req'd per Ass'y	0606	0808	1008	Material
① Nipple Ass'y	1	C19865	C19866	C19904	Monel
② Socket	1	C19845-2	C19699-2	C19699-2	Steel

Description	Req'd per Ass'y	1010	1212	1616	Material
① Nipple Ass'y	1	C19867	C19868	C19847	Monel
② Socket	1	C19926-2	C19846-2	C19700-2	Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

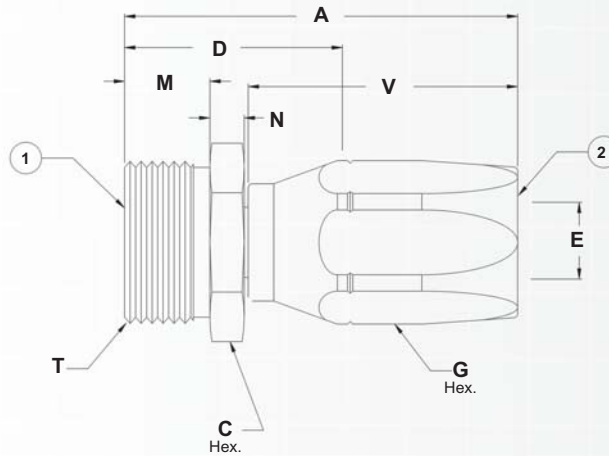


End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 4-190885

MIL-F-24787/3,
Type C, Group II

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	I.P.S. Size	T Thread CL-3A	A	C	D	E	G	M	N	V	Est. Wt. Lbs.
EF-1602C-0406	1/4"	1-3/16"-12	2.82	1.25	1.34	.31	1.00	.62	.25	1.92	.54
EF-1602C-0606	3/8"	1-3/8"-12	2.91	1.44	1.45	.31	1.00	.62	.31	1.92	.62
EF-1602C-0608	3/8"	1-3/8"-12	2.96	1.44	1.45	.39	1.12	.62	.31	2.01	.76
EF-1602C-0812	1/2"	1-3/4"-12	3.49	1.81	1.62	.50	1.50	.62	.38	2.47	1.47
EF-1602C-1212	3/4"	2"-12	3.61	2.12	1.74	.61	1.50	.62	.50	2.47	1.77
EF-1602C-1216	3/4"	2"-12	4.09	2.12	2.04	.62	1.75	.62	.50	2.95	1.57
EF-1602C-1616	1"	2-5/16"-12	4.34	2.38	2.28	.82	1.75	.75	.62	2.95	2.78

Components

Description	Req'd per Ass'y	0406	0606	0608	0812	Material
① Nipple	1	C19803-1	C19906-1	C19804-1	C19805-1	Monel
② Socket	1	C19845-1	C19845-1	C19699-1	C19846-1	Monel

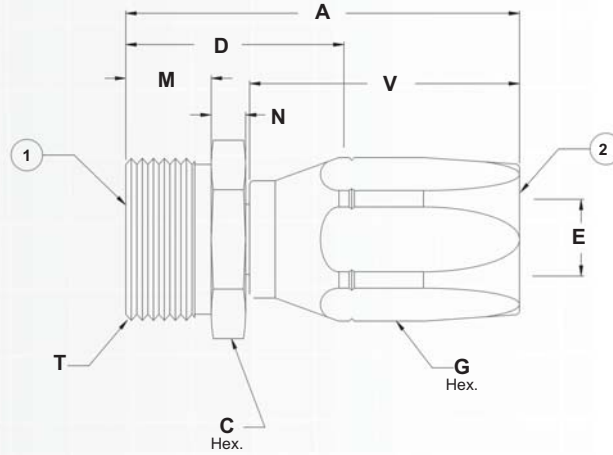
Description	Req'd per Ass'y	1212	1216	1616	Material
① Nipple	1	C19806-1	C19807-1	C19808-1	Monel
② Socket	1	C19846-1	C19700-1	C19700-1	Monel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 41-190885

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	IPS Size	T Thread CL-3A	A	C	D	E	G	M	N	V	Est. Wt. Lbs.
EF-SM1602C-0406	1/4"	1-3/16"-12	2.82	1.25	1.34	.31	1.00	.62	.25	1.92	.54
EF-SM1602C-0606	3/8"	1-3/8"-12	2.91	1.44	1.45	.31	1.00	.62	.31	1.92	.62
EF-SM1602C-0608	3/8"	1-3/8"-12	2.96	1.44	1.45	.39	1.12	.62	.31	2.01	.76
EF-SM1602C-0812	1/2"	1-3/4"-12	3.49	1.81	1.62	.50	1.50	.62	.38	2.47	1.47
EF-SM1602C-1212	3/4"	2"-12	3.61	2.12	1.74	.61	1.50	.62	.50	2.47	1.77
EF-SM1602C-1216	3/4"	2"-12	4.09	2.12	2.04	.62	1.75	.62	.50	2.95	1.57
EF-SM1602C-1616	1"	2-5/16"-12	4.34	2.38	2.28	.82	1.75	.75	.62	2.95	2.78

Components

Description	Req'd per Ass'y	0406	0606	0608	0812	Material
① Nipple	1	C19803-1	C19906-1	C19804-1	C19805-1	Monel
② Socket	1	C19845-2	C19845-2	C19699-2	C19846-2	Steel

Description	Req'd per Ass'y	1212	1216	1616	Material
① Nipple	1	C19806-1	C19807-1	C19808-1	Monel
② Socket	1	C19846-2	C19700-2	C19700-2	Steel

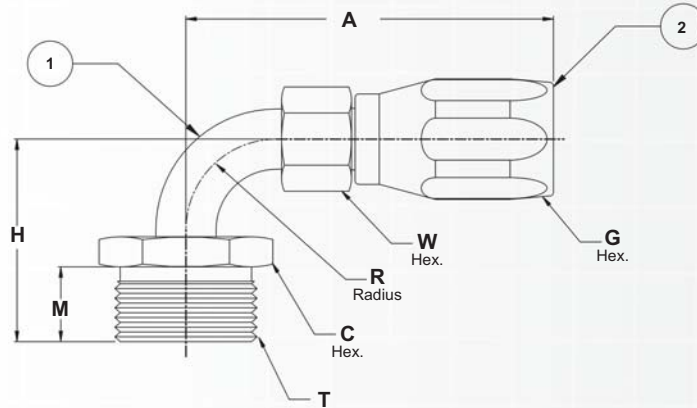
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 4-191307

MIL-F-24787/3,
Type CL, Group II

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13



Part Number	IPS Size	T Thread CL-3A	A	C	G	H	R	W	Est. Wt. Lbs.
90EF-1602CL-0406	1/4"	1-3/16"-12	3.11	1.25	1.00	1.43	.50	.69	.62
90EF-1602CL-0608	3/8"	1-3/8"-12	3.44	1.44	1.12	1.74	.75	.81	.92
90EF-1602CL-0812	1/2"	1-3/4"-12	4.52	1.81	1.50	2.31	1.25	1.06	1.71
90EF-1602CL-1212	3/4"	2"-12	4.52	2.12	1.50	2.43	1.25	1.06	2.13
90EF-1602CL-1216	3/4"	2"-12	5.25	2.12	1.81	2.60	1.50	1.38	2.87
90EF-1602CL-1616	1"	2-5/16"-12	5.25	2.38	1.81	2.92	1.50	1.38	3.44

Components

Description	Req'd per Ass'y	0406	0608	0812	1212	Material
① Elbow Ass'y	1	C19910	C19911	C19912	C19913	Monel
② Socket	1	C19845-1	C19699-1	C19846-1	C19846-1	Monel

Description	Req'd per Ass'y	1216	1616	Material
① Elbow Ass'y	1	C19914	C19915	Monel/Cuni
② Socket	1	C19700-1	C19700-1	Monel

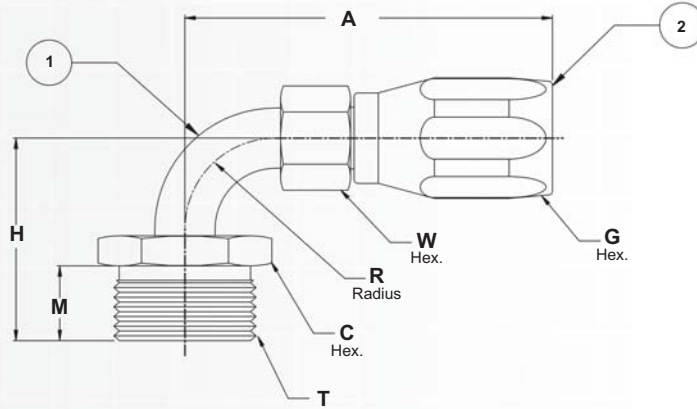
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - 90° - Male "O" Ring Seal to Hose

Equal to Aeroquip P/N 41-191307

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13

Fittings



Part Number	I.P.S. Size	T Thread CL-3A	A	C	G	H	R	W	Est. Wt. Lbs.
90EF-SM1602CL-0406	1/4"	1-3/16"-12	3.11	1.25	1.00	1.43	.50	.69	.62
90EF-SM1602CL-0608	3/8"	1-3/8"-12	3.44	1.44	1.12	1.74	.75	.81	.92
90EF-SM1602CL-0812	1/2"	1-3/4"-12	4.52	1.81	1.50	2.31	1.25	1.06	1.71
90EF-SM1602CL-1212	3/4"	2"-12	4.52	2.12	1.50	2.43	1.25	1.06	2.13
90EF-SM1602CL-1216	3/4"	2"-12	5.25	2.12	1.81	2.60	1.50	1.38	2.87
90EF-SM1602CL-1616	1"	2-5/16"-12	5.25	2.38	1.81	2.92	1.50	1.38	3.44

124

Components

Description	Req'd per Ass'y	0406	0608	0812	1212	Material
① Elbow Ass'y	1	C19910	C19911	C19912	C19913	Monel
② Socket	1	C19845-2	C19699-2	C19846-2	C19846-2	Steel

Description	Req'd per Ass'y	1216	1616	Material
① Elbow Ass'y	1	C19914	C19915	Monel/Cuni
② Socket	1	C19700-2	C19700-2	Steel

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

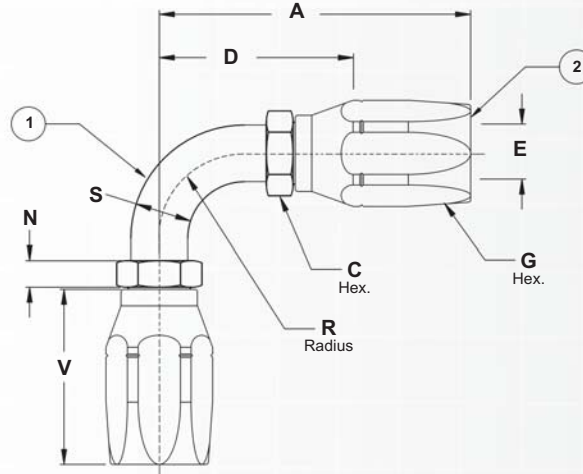


Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 4-191308

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13

MIL-F-24787/5,
Type D, Group II



Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-1602D-0606	3/8"	3.11	.69	1.63	.31	1.00	.62	.50	.38	1.92	.76
90ELB-1602D-0808	1/2"	3.44	.81	1.93	.39	1.12	.62	.75	.50	2.01	1.12
90ELB-1602D-1212	3/4"	4.52	1.06	2.65	.61	1.50	.74	1.25	.75	2.47	2.03
90ELB-1602D-1616	1"	5.25	1.38	3.20	.82	1.81	.74	1.50	1.00	2.95	3.77

Components

Description	Req'd per Ass'y	0606	0808	1212	Material
① Elbow Ass'y	1	C19851	C19852	C19853	Monel
② Socket	2	C19845-1	C19699-1	C19846-1	Monel

Description	Req'd per Ass'y	1616	Material
① Elbow Ass'y	1	C20244	Monel/Cuni
② Socket	2	C19700-1	Monel

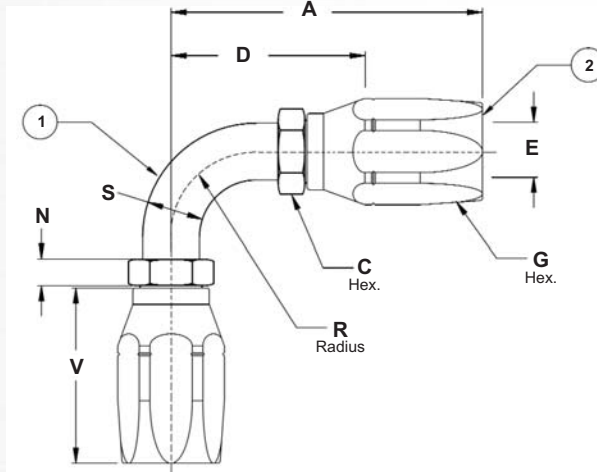
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Elbow - 90° Dogleg - Hose to Hose

Equal to Aeroquip P/N 41-191308

Use with the following hose: Wire reinforced hoses
i.a.w. MIL-H-24135/1/5/13

Fittings



Part Number	I.P.S. Size	A	C	D	E	G	N	R	S	V	Est. Wt. Lbs.
90ELB-SM1602D-0606	3/8"	3.11	.69	1.63	.31	1.00	.62	.50	.38	1.92	.76
90ELB-SM1602D-0808	1/2"	3.44	.81	1.93	.39	1.12	.62	.75	.50	2.01	1.12
90ELB-SM1602D-1212	3/4"	4.52	1.06	2.65	.61	1.50	.74	1.25	.75	2.47	2.03
90ELB-SM1602D-1616	1"	5.25	1.38	3.20	.82	1.81	.74	1.50	1.00	2.95	3.77

Components

Description	Req'd per Ass'y	0606	0808	1212	Material
① Elbow Ass'y	1	C19851	C19852	C19853	Monel
② Socket	2	C19845-2	C19699-2	C19846-2	Steel

Description	Req'd per Ass'y	1616	Material
① Elbow Ass'y	1	C20244	Monel/Cuni
② Socket	2	C19700-2	Steel

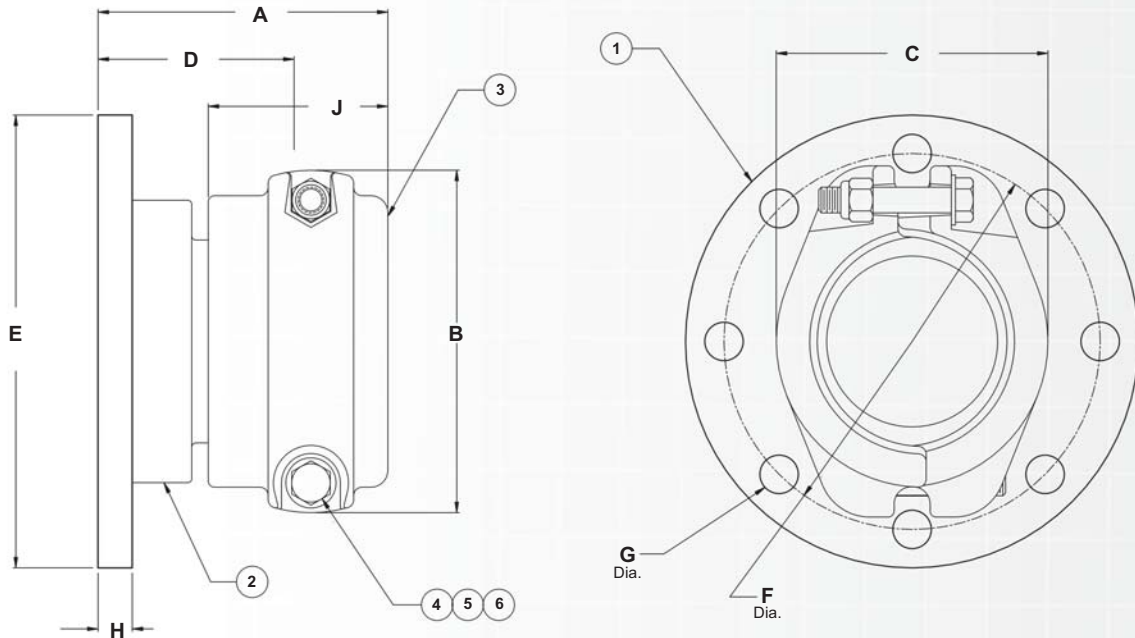
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - Straight - Hose to Hose

Use with the following hose: Polyester reinforced polyurethane hose P/N HSSA

150Lb. Flange Per MIL-PRF-20042



Part Number	I.P.S. Size	No. of Bolts	A	B	C	D	E	F	G	H	J	Est. Wt. Lbs.
EF-LFS-48	3"	8	4.41	5.50	3.81	2.00	6.62	5.50	.56	.50	2.62	13

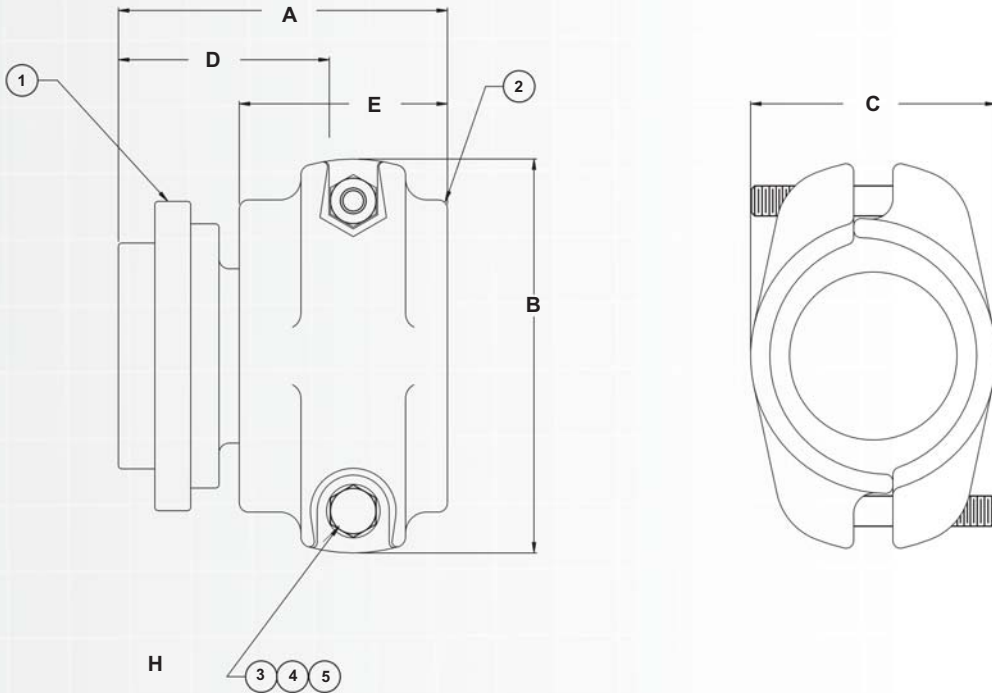
Components

Description	Req'd per Ass'y	3"	Material
① Swivel Flange	1	C17933	Bronze
② Nipple	1	C18298	Bronze
③ Segment	2	D18261	Bronze
④ Bolt	2	B17673-1-MP	Monel
⑤ Nut	2	B18176-MP	Monel
⑥ Washer	2	B18175-MP	Monel
Gasket	1	C18278-4	Buna-N

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

End Fitting - Straight - Male Split Clamp to Hose

Use with the following hose: Polyester reinforced polyurethane hose P/N HSSA



Fittings

128

Part Number	I.P.S. Size	A	B	C	D	E	Est. Wt. Lbs.
EF-LFS-24MS	1-1/2"	3.68	3.50	2.35	1.44	2.62	5

Components

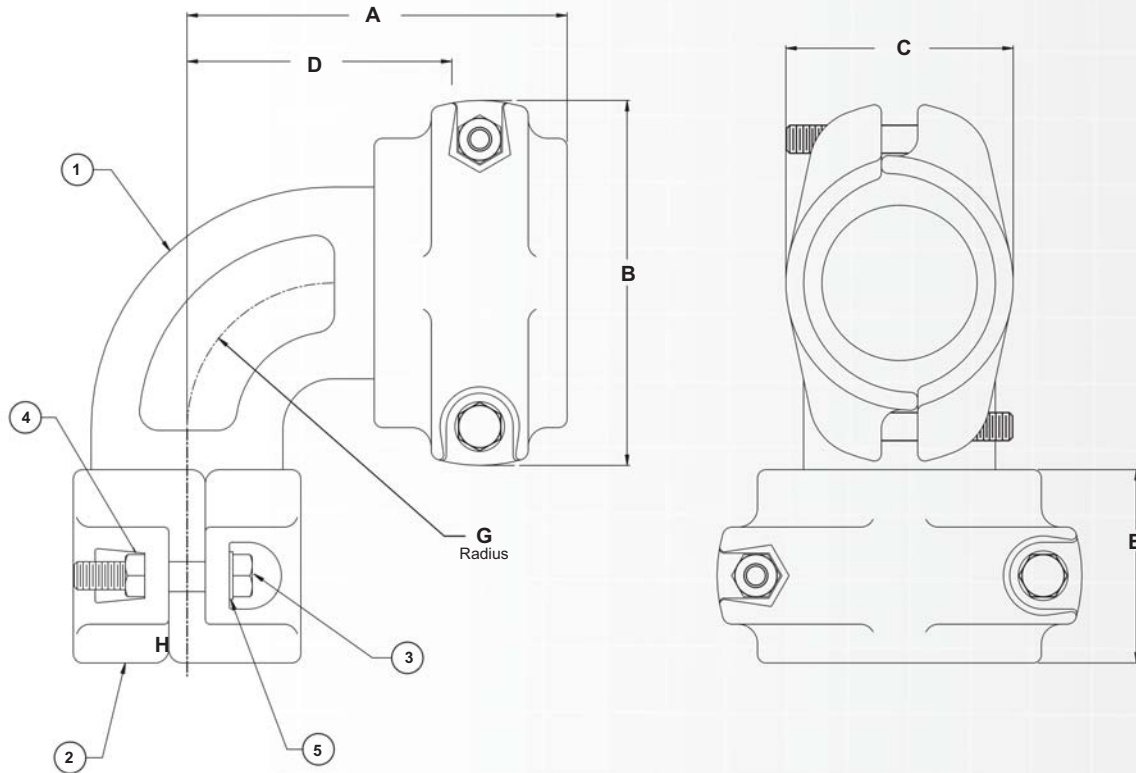
Description	Req'd per Ass'y	1-1/2"	Material
① Nipple	1	C18304	Bronze
② Segment	2	C18259	Bronze
③ Bolt	2	B17673-1-MP	Monel
④ Nut	2	B18176-MP	Monel
⑤ Washer	2	B18175-MP	Monel
Gasket	1	C18280-6	Buna-N

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



End Fitting - 90° - Hose to Hose

Use with the following hose: Polyester reinforced polyurethane hose P/N HSSA



Part Number	I.P.S. Size	A	B	C	D	E	R	Est. Wt. Lbs.
90ELB-LFS-24	1-1/2"	4.68	3.50	2.35	2.44	2.62	2.00	7
90ELB-LFS-48	3"	5.18	5.50	3.81	2.94	2.62	2.09	15

129

Components

Description	Req'd per Ass'y	1-1/2"	3"	Material
① Elbow	1	C18263	C18297	Bronze
② Segment	4	C18259	D18261	Bronze
③ Bolt	4	B17673-1-MP	B17673-1-MP	Monel
④ Nut	4	B18176-MP	B18176-MP	Monel
⑤ Washer	4	B18175-MP	B18175-MP	Monel
Gasket	2	C18280-6	C18278-4	Buna-N

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Notes





Split Clamps, Sil-Braze Tailpieces and Accessories

Section C

Product Designation	Page No.
Split Clamps	132
Tailpieces	133
“O” Rings	137
Back-Up Rings	137
Internal Support Coil	138
Internal Support Sleeve	140

Clamp, Split

Equal to Aeroquip P/N 900758

MIL-F-24787/4

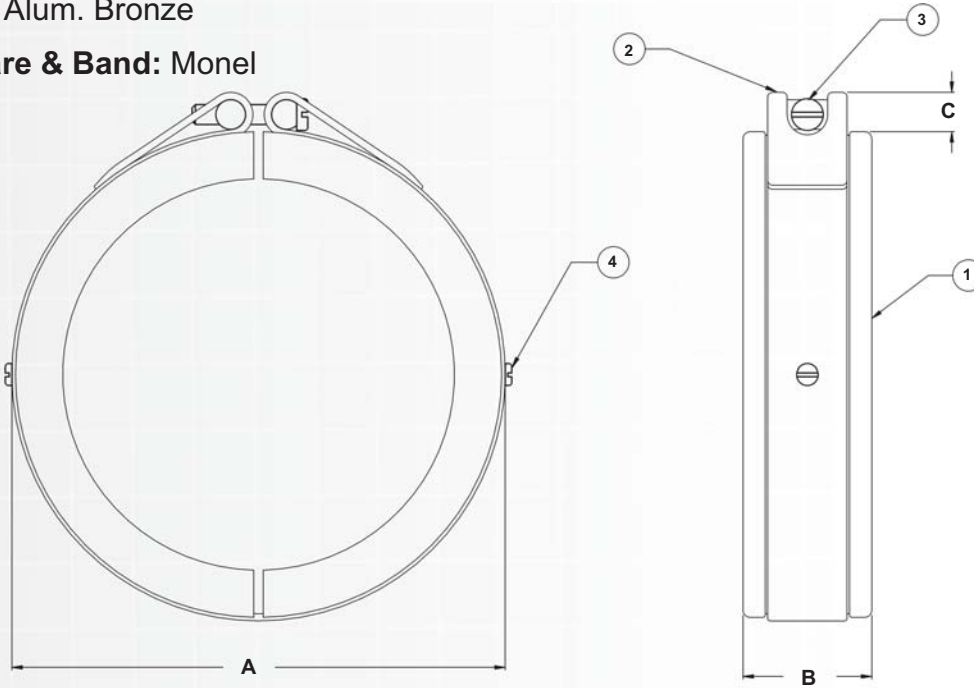
Type SC

For use with male and female split clamp end fittings.

Clamp: Alum. Bronze

Hardware & Band: Monel

Split Clamps



132

Part Number	IPS Size	A	B	C	① Split Clamp	② Band Ass'y	③ Screw	④ Screw	Est. Wt. Lbs.
B-CLMP-1.25S	1-1/4"	3.00	1.31	.39	C18384	C18380	B18289	C18080-3	1.03
B-CLMP-1.5S	1-1/2"	3.31	1.31	.39	C18286	C18293	B18289	C18080-3	1.12
B-CLMP-2S	2"	4.00	1.38	.39	C18300	C18302	B18289	C18080-3	1.82
B-CLMP-2.5S	2-1/2"	4.42	1.44	.39	C18337	C18335	B18289	C18080-3	1.90
B-CLMP-3S	3"	5.19	1.50	.39	C18177	C18290	B18289	C18080-3	2.81
B-CLMP-3.5S	3-1/2"	5.56	1.50	.39	C18385	C18381	B18289	C18080-3	2.44
B-CLMP-4S	4"	6.12	1.62	.39	C18338	C18336	B18289	C18080-3	3.15
B-CLMP-5S	5"	7.31	1.62	.39	C18191	C18364	B18289	C18080-3	3.83
B-CLMP-6S	6"	8.25	1.94	.39	C18386	C18382	B18289	C18080-3	5.08
B-CLMP-8S	8"	10.78	2.38	.39	C18387	C18383	B18388	C18080-3	7.00
B-CLMP-10S	10"	12.88	2.38	.39	C18393	C18391	B18388	C18080-3	9.00
B-CLMP-12S	12"	14.98	2.38	.39	C18394	C18392	B18388	C18080-3	11.00

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

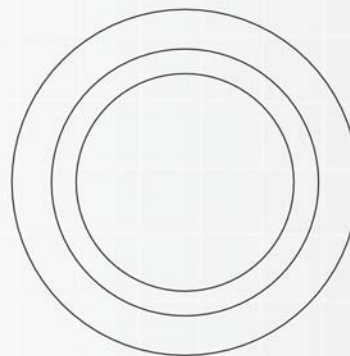
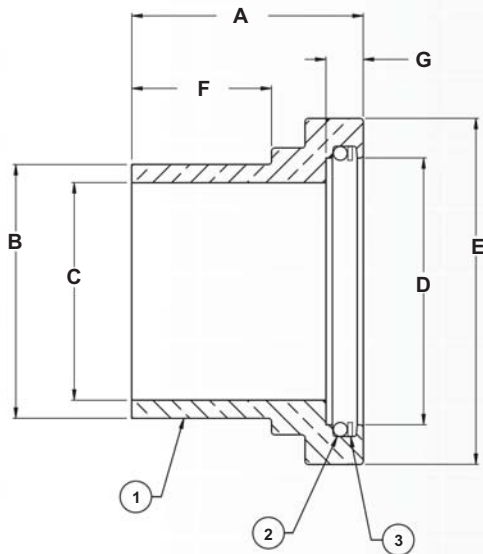
Marine Hose & Fittings



Tailpiece - Sil-Braze, Male

Equal to Aeroquip P/N 188-500189 / FF5002

MIL-F-24787/4,
Type TM, Group IV



Sil-Braze Tailpieces

Part Number	I.P.S. Size	A	B	C	D	E	F	G
TP-2MSB	2"	2.17	2.38	2.04	2.51	3.24	1.31	.35
TP-2.5MSB	2-1/2"	2.04	2.88	2.59	3.01	3.74	1.12	.35
TP-3MSB	3"	3.45	3.50	3.00	3.63	4.37	2.50	.35
TP-3.5MSB	3-1/2"	3.45	4.00	3.50	4.13	4.93	2.50	.35
TP-4MSB	4"	3.67	4.50	3.88	4.63	5.43	2.64	.42

133

Components

Description	Req'd per Ass'y	2"	2-1/2"	3"	3-1/2"	4"	Material
① Tailpiece	1	C18098	C18099	C18144	C18145	C18101	Bronze
② "O"-Ring	1	R-RNG/O-230	R-RNG/O-25-234	R-RNG/O-239	R-RNG/O-243	R-RNGO0-247	Buna-N
③ Back-Up Ring	1	R-RNG/BU-8	R-RNG/BU-12	--	--	--	Buna-N

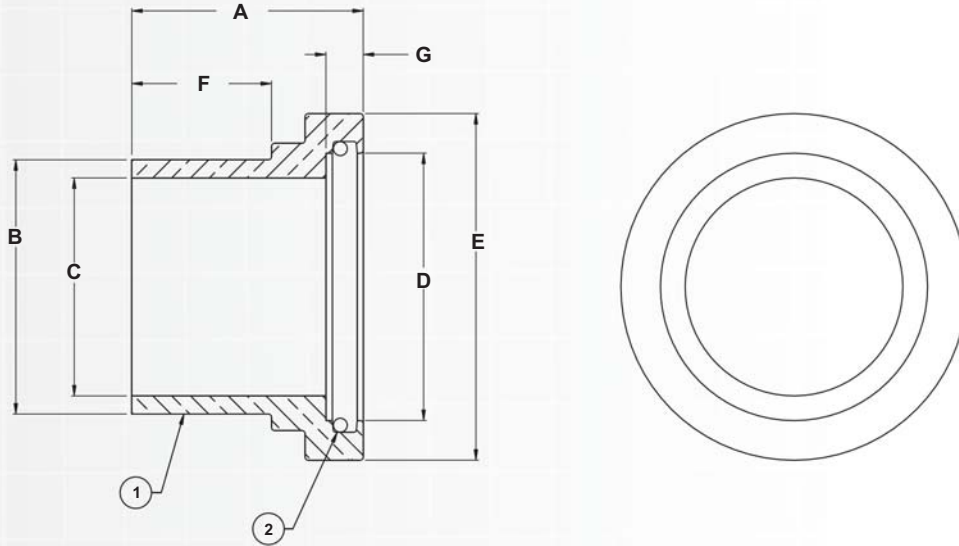
All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Tailpiece - Sil-Braze, Male

Equal to Aeroquip P/N 188-500189 / FF5002

MIL-F-24787/4,
Type TM, Group IX



Part Number	I.P.S. Size	A	B	C	D	E	F	G
TP-5MSB	5"	3.80	5.56	4.94	5.63	6.62	2.77	.42
TP-6MSB	6"	3.87	6.62	5.96	6.76	7.75	2.67	.47
TP-8MSB	8"	4.37	8.62	7.88	9.01	9.97	2.82	.84
TP-10MSB	10"	4.55	10.47	9.52	11.01	12.06	3.00	.88
TP-12MSB	12"	4.75	12.25	11.76	12.01	13.38	3.10	.90

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Tailpiece	1	C16944	C18405	C18406	C18407	C18408	Bronze
② "O"-Ring	1	R-RNG/O-5-255	R-RNG/O-261	R-RNG/O-447	R-RNG/O-451	R-RNG/O-453	Buna-N

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Marine Hose & Fittings

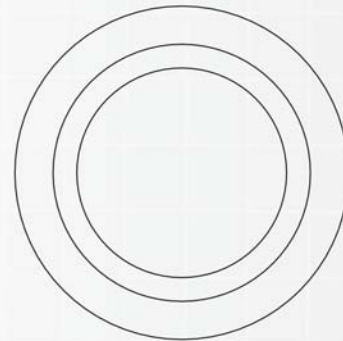
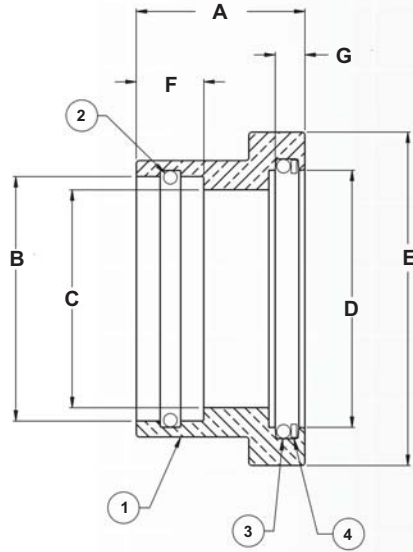


Tailpiece - Sil-Braze, Female

Equal to Aeroquip P/N 188-500063/ FF5001

MIL-F-24787/4,
Type TF, Group IV

Sil-Braze Tailpieces



Part Number	I.P.S. Size	A	B	C	D	E	F	E
TP-2FSB	2"	1.64	2.38	2.12	2.51	3.25	.66	.35
TP-2.5FSB	2-1/2"	1.86	2.88	2.59	3.01	3.75	.78	.35
TP-3FSB	3"	1.55	3.50	3.17	3.64	4.36	.83	.35
TP-3.5FSB	3-1/2"	1.98	4.00	3.63	4.14	4.93	.88	.35
TP-4FSB	4"	1.70	4.50	4.11	4.64	5.43	.91	.42

135

Components

Description	Req'd per Ass'y	2"	2-1/2"	3"	3-1/2"	4"	Material
① Tailpiece	1	C18102	C18140	C18141	C18142	C18143	Bronze
② Braze-Ring	1	B18134-1	B18134-2	B18134-3	B18134-4	B18134-5	Silver Alloy
③ "O"-Ring	1	R-RNG/O-230	R-RNG/O-25-234	R-RNG/O-239	R-RNG/O-243	R-RNG/O-247	Buna-N
④ Back-Up Ring	1	R-RNG/BU-8	R-RNG/BU-12	--	--	--	Buna-N

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



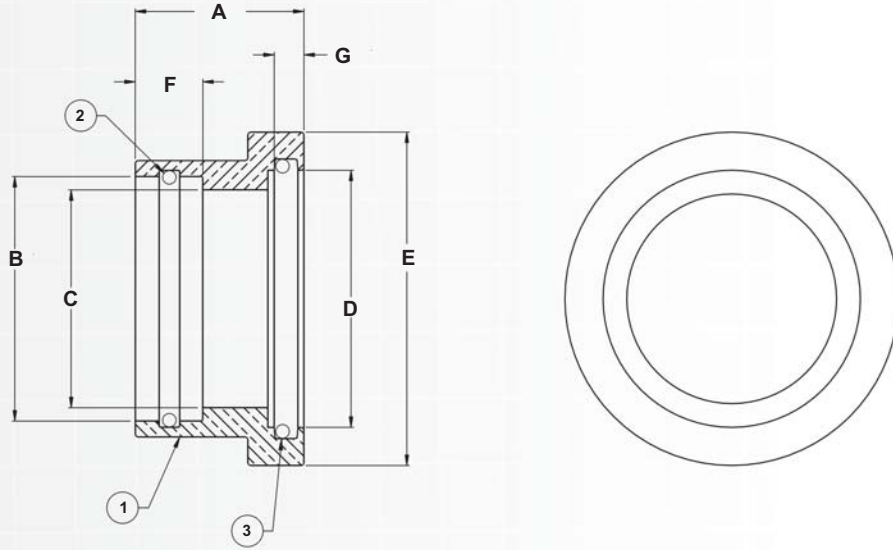
Marine Hose & Fittings

Sil-Braze Tailpieces

Tailpiece - Sil-Braze, Female

Equal to Aeroquip P/N 188-500063

MIL-F-24787/4,
Type TF, Group IX



Part Number	I.P.S. Size	A	B	C	D	E	F	G
TP-5FSB	5"	1.80	5.57	5.30	5.64	6.63	1.00	.42
TP-6FSB	6"	1.95	6.63	6.38	6.76	7.57	1.11	.47
TP-8FSB	8"	2.50	8.81	8.40	9.01	9.97	1.31	.84
TP-10FSB	10"	2.75	10.75	10.53	11.01	12.06	1.49	.88
TP-12FSB	12"	3.00	12.75	12.58	12.01	13.38	3.10	.90

136

Components

Description	Req'd per Ass'y	5"	6"	8"	10"	12"	Material
① Tailpiece	1	C17848	C18401	C18402	C18403	C18404	Bronze
② Braze Ring	1	C16947-2	B18134-8	B18134-9	B18134-10	B18134-11	Silver Alloy
③ "O"-Ring	1	R-RNG/O-5-255	R-RNG/O-261	R-RNG/O-447	R-RNG/O-451	R-RNG/O-453	Buna-N

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



410.643.8900

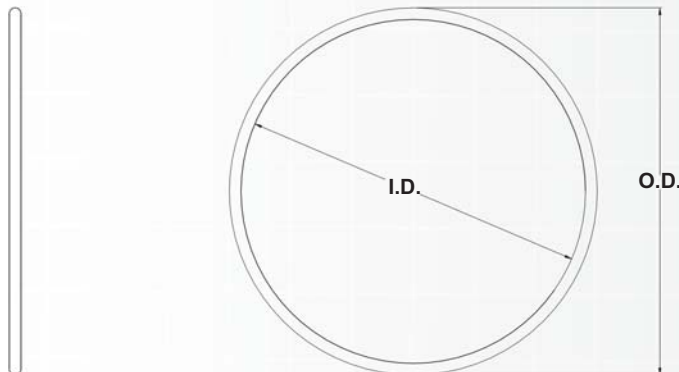
www.HYDRASEARCH.com

Cat.109

“O”-Rings

Equal to Aeroquip P/N 22020

“O”-Ring: Viton



Part Number	Size	I.D.	O.D.
R-RNG/O-224	1-1/4"	1.75	2.00
R-RNG/O-226	1-1/2"	2.00	2.25
R-RNG/O-230	2"	2.50	2.75
R-RNG/O-234	2-1/2"	3.00	3.25
R-RNG/O-239	3"	3.62	3.88
R-RNG/O-243	3-1/2"	4.12	4.38
R-RNG/O-247	4"	4.62	4.88
R-RNG/O-255	5"	5.62	5.88
R-RNG/O-261	6"	6.75	7.00
R-RNG/O-447	8"	9.00	9.50
R-RNG/O-451	10"	11.00	11.50

Back-Up Rings

Equal to Aeroquip P/N 22006

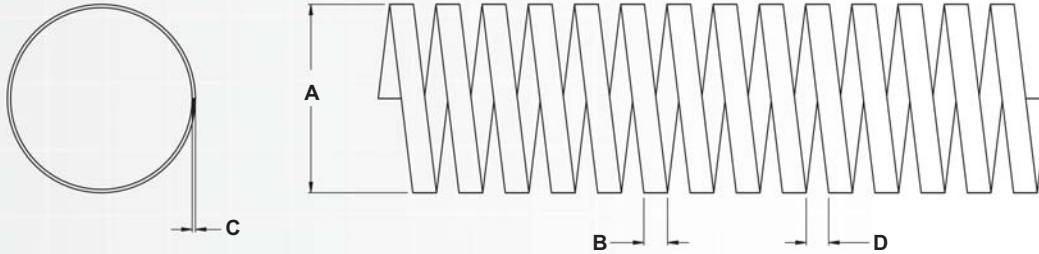
Back-UpRing: Buna-N

Part Number	Size	I.D.	O.D.
R-RNG/BU-2	1-1/4"	1.75	2.00
R-RNG/BU-4	1-1/2"	2.00	2.25
R-RNG/BU-8	2"	2.50	2.75
R-RNG/BU-12	2-1/2"	3.00	3.25

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Coil - Internal Support

Internal Support Coil is approved for use per
NAVSEA LTR. OPR. 3Y231 Serial No. 03Y23/252 DTD 02 AUG.93.



Beryllium Copper

Part Number	Equal to A/Q P/N	A	B	C	D
ISC-12C	FC137-12	.82	.125	.025	.180
ISC-16C	FC137-16	1.09	.125	.025	.180
ISC-20C	FC137-20	1.38	.250	.025	.280
ISC-21C	12-222022-20	1.25	.250	.025	.280
ISC-24C	FC137-24	1.62	.250	.025	.280
ISC-32C	FC137-32	2.16	.375	.048	.250
ISC-40C	12-222022-40	2.67	.500	.048	.250
ISC-48C	12-222022-48	3.27	.500	.048	.375
ISC-64C	12-222022-64	4.28	.500	.060	.437

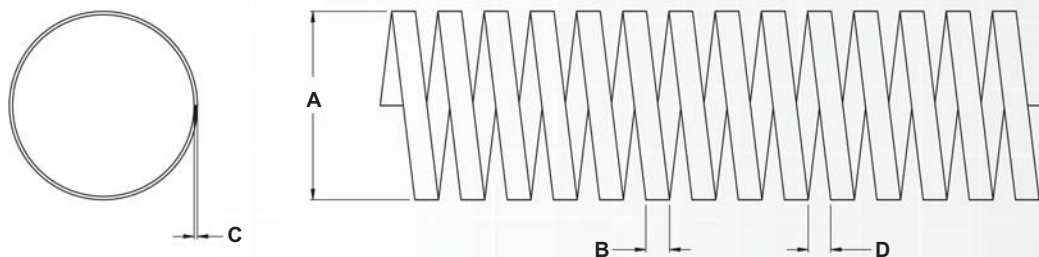
Monel

Part Number	Equal to A/Q P/N	A	B	C	D
ISC-15M	N/A	1.19	.250	.025	.280
ISC-21M	N/A	1.25	.250	.025	.280
ISC-40M	FF090505-2671-501	2.67	.500	.048	.250
ISC-48M	FF090505-3266-501	3.27	.500	.048	.375
ISC-16MR	FF090505-0969-501	1.00	.125	.025	.180
ISC-32MR	FF090505-1969-501	2.00	.250	.025	.280

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Coil - Internal Support

Internal Support Coil is approved for use per
NAVSEA LTR. OPR. 3Y231 Serial No. 03Y23/252 DTD 02 AUG.93.



Stainless Steel

Part Number	Equal to A/Q P/N	A	B	C	D
ISC-10SS	222005-10C	.42	.125	.025	.180
ISC-11SS	222005-11C	.60	.125	.025	.180
ISC-13SS	222005-13C	.73	.125	.025	.180
ISC-14SS	222005-14C	.94	.125	.025	.180
ISC-15SS	222005-15C	1.19	.250	.025	.280
ISC-17SS	222005-17C	1.44	.250	.025	.280
ISC-18SS	222005-18C	1.88	.250	.025	.280
ISC-19SS	222005-19C	2.44	.500	.048	.250
ISC-21SS	222005-21C	.51	.125	.025	.180
ISC-22SS	222005-22C	1.97	.250	.025	.280
ISC-23SS	222005-23C	.34	.125	.025	.180
ISC-32SS	222005-32C	2.16	.375	.048	.250
ISC-40SS	222022-40C	2.67	.500	.048	.250
ISC-48SS	222022-48C	3.27	.500	.048	.375
ISC-64SS	222022-64C	4.28	.500	.060	.437

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Sleeve - Internal Support

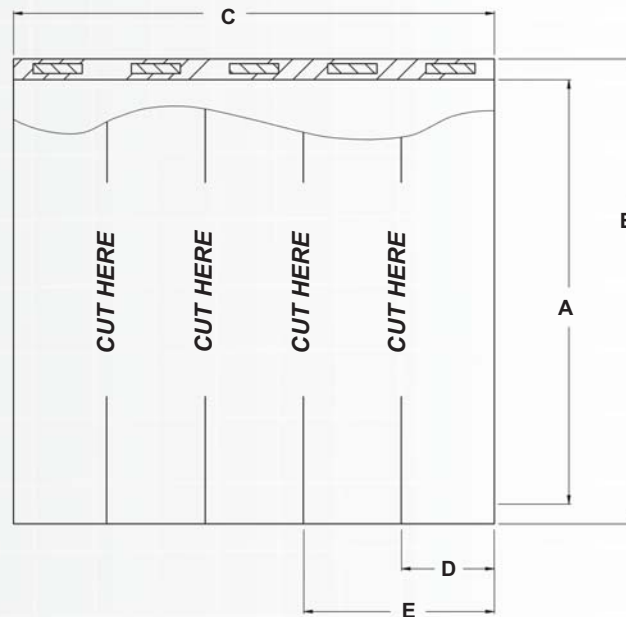
Equal to Aeroquip P/N FF9700

Material: Nickel-Aluminum Bronze - Rings
Buna-N - Bonding

The Internal Support Sleeve provides support for large diameter hose subjected to vacuum service. The Support Sleeve is stacked in the hose assembly after one fitting is attached and provides vacuum protection while maintaining flexibility.

Hydrasearch Internal Support Sleeves are approved for use by various NAVSEA letters.

Internal Support Sleeves are to be used in hoses 4" (-64) and larger per NAVSEA technical directive S6430-AE-TED-010.



Part Number	Hose Size	No. of Rings	A	B	C	D	E
ISS-64	4"	4	3.50	3.91	4.00	1.00	2.00
ISS-80	5"	4	4.40	4.93	4.88	1.17	2.44
ISS-96	6"	5	5.40	5.93	6.12	1.19	2.44
ISS-128	8"	6	7.40	7.93	7.50	1.15	2.45
ISS-160	10"	6	9.40	9.93	7.50	1.15	2.45
ISS-192	12"	6	11.40	11.93	7.50	1.15	2.45

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.



Adapters

Section D

Product Designation	Construction	Sizes	Page No.
8652	Solder Port x 37° Flare	1/2" to 1-5/8"	142
8651	Sil-Braze Tube x 37° Male Flare	1/4" to 2"	143
8640	Sil-Braze Tube x 37° Str. Thd.	1/4" to 2"	144
4307	Sil-Braze Pipe x 37° Male Flare	1/8" to 2"	145
4238	37° Flare x Socketweld Pipe	1/4" to 1-1/2"	146
8635	Female Sil-Braze Pipe x 37° Male Flare	1/8" to 2"	147
6728	S.A.E. "O"-Ring Tube to 37° Flare	1/4" to 1"	148
8641	S.A.E. 37° Flare Union	1/4" to 1-1/4"	149
8636	Internal Pipe x 37° Flare	3/16" to 2-1/2"	150
8650	Internal Pipe x 45° Flare	1/4" to 3/4"	151
8638	External Pipe x 37° Flare	1/4" to 1"	152
8637	37° Flare Internal x 37° Flare	5/16" to 1-1/4"	153
8639	37° Female Swivel x 37° Male Flare	1/4" to 1"	154
8643	37° Flare Swivel x 37° Flare	1/4" to 1"	155
8647	37° Flare Plug	1/8" to 1"	156
8644	Male External Plug NPTF x Plug	1/4" to 1/2"	156
8646	Reducer-Ext. Pipe x Internal Pipe	1/4" to 1/2"	157
8645	External Pipe x Plug	1/8" to 3/4"	157

Marine Hose & Fittings

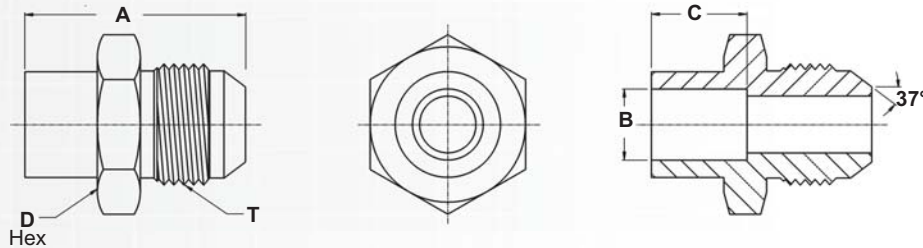
Solder Port x 37° Male Flare

8652

Equal to Aeroquip P/N 202123

Material:Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	T	A	B	C	D
8652-8-10-SS	1/2"	7/8"-14	1.59	.51	.69	1.12
8652-10-10-SS	5/8"	7/8"-14	1.59	.63	.69	1.12
8652-10-12-SS	5/8"	1-1/16"-12	1.91	.63	.81	1.25
8652-12-10-SS	3/4"	7/8"-14	1.59	.76	.69	1.12
8652-12-12-SS	3/4"	1-1/6"-12	1.91	.76	.81	1.25
8652-14-10-SS	7/8"	7/8"-14	1.59	.88	.69	1.12
8652-14-12-SS	7/8"	1-1/16"-12	1.91	.88	.81	1.25
8652-14-16-SS	7/8"	1-5/16"-12	2.03	.88	.88	1.38
8652-16-16-SS	1"	1-5/16"-12	2.03	1.01	.88	1.38
8652-18-16-SS	1-1/8"	1-5/16"-12	2.03	1.13	.88	1.38
8652-18-20-SS	1-1/8"	1-5/8"-12	2.20	1.13	1.00	1.75
8652-20-24-SS	1-1/4"	1-7/8"-12	2.33	1.26	1.00	2.00
8652-22-20-SS	1-3/8"	1-5/8"-12	2.20	1.38	1.00	1.75
8652-22-24-SS	1-3/8"	1-7/8"-12	2.33	1.38	1.00	2.00
8652-26-24-SS	1-5/8"	1-7/8"-12	2.33	1.63	1.00	2.00
8652-26-32-SS	1-5/8"	2-1/2"-12	2.70	1.63	1.12	2.25

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

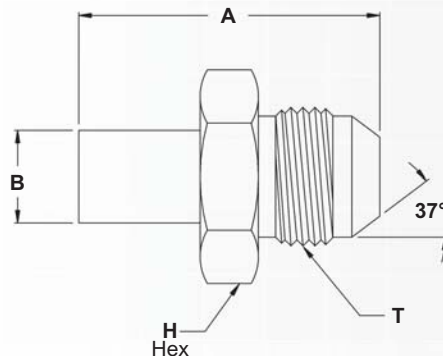
Male Sil-Braze Tube x 37° Male Flare

8651

Equal to Aeroquip P/N 202140

Material:Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	A	B	H	T
8651-4-4-SS	1/4"	1.36	.25	.50	7/16"-20
8651-6-6-SS	3/8"	1.43	.38	.62	9/16"-18
8651-8-8-SS	1/2"	1.63	.50	.81	3/4"-16
8651-12-12-SS	3/4"	2.06	.75	1.12	1-1/16"-12
8651-16-16-SS	1"	2.35	1.00	1.38	1-5/16"-12
8651-20-20-SS	1-1/4"	2.59	1.25	1.69	1-5/8"-12
8651-24-24-SS	1-1/2"	3.02	1.50	2.00	1-7/8"-12
8651-32-32-SS	2"	3.58	2.00	2.62	2-1/2"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Marine Hose & Fittings

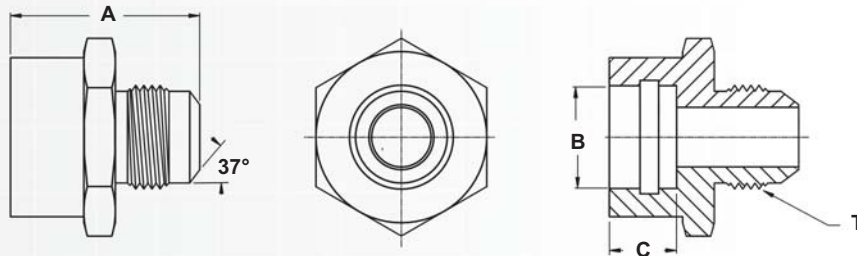
Female Sil-Braze Tube x 37° Male Flare

8640

Equal to Aeroquip P/N 202240

Material: Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	A	B	C	T
8640-4-4-SS	1/4"	1.05	.25	.25	7/16"-20
8640-6-6-SS	3/8"	1.24	.39	.31	9/16"-18
8640-8-8-SS	1/2"	1.41	.50	.47	3/4"-16
8640-12-12-SS	3/4"	2.04	.75	.56	1-1/16"-12
8640-16-16-SS	1"	2.21	1.00	.69	1-5/16"-12
8640-20-20-SS	1-1/4"	2.44	1.25	.81	1-5/8"-12
8640-24-24-SS	1-1/2"	2.88	1.50	.94	1-7/8"-12
8640-32-32-SS	2"	3.33	2.00	1.06	2-1/2"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Marine Hose & Fittings

D

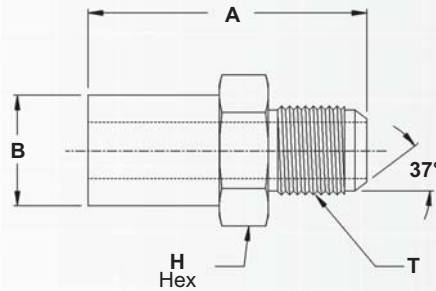
Male Sil-Braze Pipe x 37° Male Flare 4307

Equal to Aeroquip P/N 202142

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Pipe Size	A	B	H	T
4307-0-4-SS	1/8"	1.36	.40	.50	7/16"-20
4307-1-6-SS	1/4"	1.43	.54	.62	9/16"-18
4307-1-8-SS	1/4"	1.53	.54	.81	3/4"-16
4307-2-6-SS	3/8"	1.52	.67	.69	9/16"-18
4307-2-8-SS	3/8"	1.63	.67	.81	3/4"-16
4307-2-10-SS	3/8"	1.79	.67	.94	7/8"-14
4307-3-6-SS	1/2"	1.67	.84	.94	9/16"-18
4307-3-8-SS	1/2"	1.78	.84	.94	3/4"-16
4307-3-10-SS	1/2"	1.88	.84	.94	7/8"-14
4307-3-12-SS	1/2"	2.06	.84	1.12	1-1/16"-12
4307-3-16-SS	1/2"	2.10	.84	1.38	1-5/16"-12
4307-4-12-SS	3/4"	2.30	1.05	1.38	1-1/16"-12
4307-4-16-SS	3/4"	2.35	1.05	1.38	1-5/16"-12
4307-4-20-SS	3/4"	2.46	1.05	1.69	1-5/8"-12
4307-5-20-SS	1"	2.59	1.31	1.69	1-5/8"-12
4307-5-24-SS	1"	2.77	1.31	1.94	1-7/8"-12
4307-6-24-SS	1-1/4"	3.02	1.66	1.94	1-7/8"-12
4307-7-24-SS	1-1/2"	3.14	1.90	2.00	1-7/8"-12
4307-7-32-SS	1-1/2"	3.58	1.90	2.56	2-1/2"-12
4307-8-32-SS	2"	3.77	2.38	2.56	2-1/2"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Adapters

145

Marine Hose & Fittings

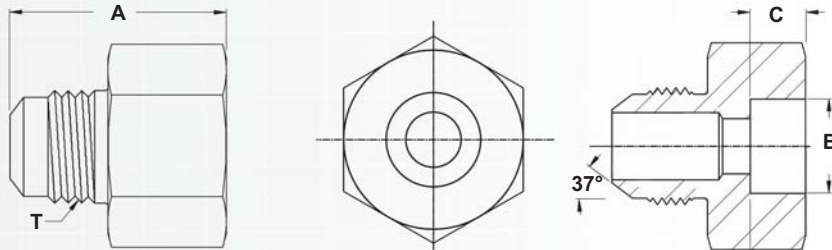
Female Socketweld Pipe x 37° Male Flare

4238

Equal to Aeroquip P/N 202232

Material: Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Pipe Size	A	B	C	T
4238-4-1-SS	1/4"	1.09	.56	.38	7/16"-20
4238-6-1-SS	1/4"	1.10	.56	.38	9/16"-18
4238-8-1-SS	1/4"	1.20	.56	.38	3/4"-16
4238-6-2-SS	3/8"	1.50	.69	.38	9/16"-18
4238-6-3-SS	1/2"	1.20	.86	.50	9/16"-18
4238-8-3-SS	1/2"	1.31	.86	.50	1-5/16"-12
4238-10-3-SS	1/2"	1.43	.86	.50	7/8"-14
4238-12-3-SS	1/2"	1.54	.86	.50	1-1/16"-12
4238-16-3-SS	1/2"	1.58	.86	.50	1-5/16"-12
4238-12-4-SS	3/4"	2.38	1.07	.56	1-1/16"-12
4238-16-4-SS	3/4"	2.42	1.07	.56	1-5/16"-12
4238-16-5-SS	1"	2.63	1.33	.63	1-5/16"-12
4238-20-5-SS	1"	1.81	1.34	.63	1-5/8"-12
4238-24-5-SS	1"	1.93	1.34	.63	1-7/8"-12
4238-24-6-SS	1-1/4"	2.12	1.68	.69	1-7/8"-12
4238-24-7-SS	1-1/2"	3.00	1.92	.75	1-7/8"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Female Sil-Braze Pipe x 37° Male Flare

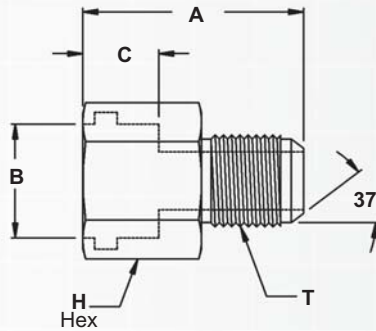
8635

Equal to Aeroquip P/N 202242

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Pipe Size	A	B	C	H	T
8635-0-4-SS	1/8"	1.05	.41	.38	.69	7/16"-20
8635-1-6-SS	1/4"	1.24	.54	.38	.88	9/16"-18
8635-1-8-SS	1/4"	1.34	.54	.38	.88	3/4"-16
8635-2-6-SS	3/8"	1.31	.68	.47	1.00	9/16"-18
8635-2-8-SS	3/8"	1.41	.68	.47	1.00	3/4"-16
8635-2-10-SS	3/8"	1.51	.68	.47	1.00	7/8"-14
8635-3-8-SS	1/2"	1.80	.84	.56	1.44	3/4"-16
8635-3-10-SS	1/2"	1.93	.84	.56	1.44	7/8"-14
8635-3-12-SS	1/2"	2.04	.84	.56	1.44	1-1/16"-12
8635-3-16-SS	1/2"	2.08	.84	.56	1.44	1-5/16"-12
8635-4-12-SS	3/4"	2.16	1.05	.69	1.69	1-1/16"-12
8635-4-16-SS	3/4"	2.21	1.05	.69	1.69	1-5/16"-12
8635-4-20-SS	3/4"	2.26	1.05	.69	1.69	1-5/8"-12
8635-5-16-SS	1"	2.40	1.32	.81	2.00	1-5/16"-12
8635-5-20-SS	1"	2.44	1.32	.81	2.00	1-5/8"-12
8635-5-24-SS	1"	2.57	1.32	.81	2.00	1-7/8"-12
8635-6-24-SS	1-1/4"	2.90	1.66	.88	2.00	1-7/8"-12
8635-7-24-SS	1-1/2"	3.02	1.90	1.00	2.12	1-7/8"-12
8635-7-32-SS	1-1/2"	3.38	1.90	1.00	2.62	2-1/2"-12
8635-8-32-SS	2"	3.64	2.38	1.25	2.62	2-1/2"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

S.A.E. Male "O"-Ring Tube to 37° Male Flare

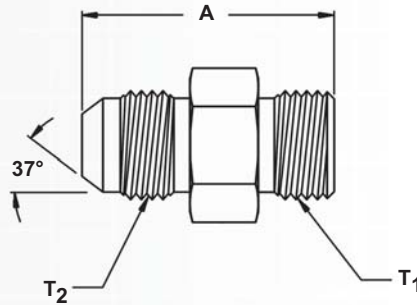
6728

Equal to Aeroquip P/N 202702

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	A	T ₁	T ₂
6728-4-4-SS	1/4"	1.23	7/16"-20	7/16"-20
6728-4-6-SS	3/8"	1.24	7/16"-20	9/16"-18
6728-4-8-SS	1/2"	1.39	7/16"-20	3/4"-16
6728-5-5-SS	5/16"	1.23	1/2"-20	1/2"-20
6728-5-6-SS	3/8"	1.24	1/2"-20	9/16"-18
6728-6-4-SS	1/4"	1.29	9/16"-18	7/16"-20
6728-6-6-SS	3/8"	1.30	9/16"-18	9/16"-18
6728-6-8-SS	1/2"	1.42	9/16"-18	3/4"-16
6728-6-10-SS	5/8"	1.56	9/16"-18	7/8"-14
6728-8-4-SS	1/4"	1.37	3/4"-16	7/16"-20
6728-8-5-SS	5/16"	1.37	3/4"-16	1/2"-20
6728-8-6-SS	3/8"	1.37	3/4"-16	9/16"-18
6728-8-8-SS	1/2"	1.48	3/4"-16	3/4"-16
6728-8-10-SS	5/8"	1.61	3/4"-16	7/8"-14
6728-8-12-SS	3/4"	1.78	3/4"-16	1-1/16"-12
6728-10-4-SS	1/4"	1.49	7/8"-14	7/16"-20
6728-10-6-SS	3/8"	1.50	7/8"-14	9/16"-18
6728-10-8-SS	1/2"	1.60	7/8"-14	3/4"-16
6728-10-10-SS	5/8"	1.70	7/8"-14	7/8"-14
6728-10-12-SS	3/4"	1.84	7/8"-14	1-1/16"-12
6728-10-16-SS	1"	1.92	7/8"-14	1-5/16"-12
6728-12-6-SS	3/8"	1.66	1-1/16"-12	9/16"-18
6728-12-8-SS	1/2"	1.76	1-1/16"-12	3/4"-16
6728-12-12-SS	3/4"	1.97	1-1/16"-12	1-1/16"-12
6728-16-12-SS	3/4"	1.99	1-5/16"-12	1-1/16"-12
6728-16-16-SS	1"	2.04	1-5/16"-12	1-5/16"-12
6728-20-20-SS	1-1/4"	2.17	1-5/8"-12	1-5/8"-12
6728-20-24-SS	1-1/2"	2.37	1-5/8"-12	1-7/8"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

S.A.E. 37° Male Flare Union

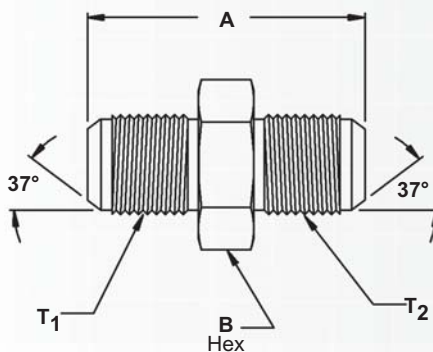
8641

Equal to Aeroquip P/N 2027

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	A	B	T ₁	T ₂
8641-4-4-SS	1/4"	1.37	.50	7/16"-20	7/16"-20
8641-6-6-SS	3/8"	1.41	.62	9/16"-18	9/16"-18
8641-8-8-SS	1/2"	1.62	.81	3/4"-16	3/4"-16
8641-10-10-SS	5/8"	1.88	.94	7/8"-14	7/8"-14
8641-12-12-SS	3/4"	2.16	1.12	1-1/16"-12	1-1/16"-12
8641-16-12-SS	3/4"	2.20	1.38	1-5/16"-12	1-1/16"-12
8641-16-16-SS	1"	2.25	1.38	1-5/16"-12	1-5/16"-12
8641-20-20-SS	1-1/4"	2.43	1.68	1-5/8"-12	1-5/8"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Female NPTF x 37° Male Flare

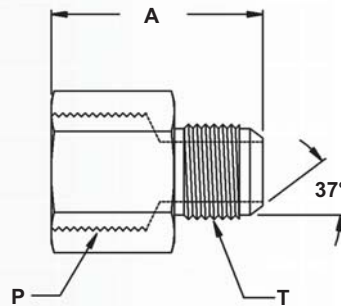
8636

Equal to Aeroquip P/N 2022

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix
and add NICU. To order Copper
Nickel, drop "SS" suffix and add
CUNI.)



Part Number	Tube O.D.	A	P (N.P.T.F.)	T
8636-2-3-SS	3/16"	1.13	1/8"-27	3/8"-24
8636-2-4-SS	1/4"	1.19	1/8"-27	7/16"-20
8636-2-5-SS	5/16"	1.17	1/8"-27	1/2"-20
8636-4-3-SS	3/16"	1.32	1/4"-18	3/8"-24
8636-4-4-SS	1/4"	1.39	1/4"-18	7/16"-20
8636-4-5-SS	5/16"	1.39	1/4"-18	1/2"-20
8636-4-6-SS	3/8"	1.40	1/4"-18	9/16"-18
8636-4-8-SS	1/2"	1.55	1/4"-18	3/4"-16
8636-6-6-SS	3/8"	1.46	3/8"-18	9/16"-18
8636-6-8-SS	1/2"	1.56	3/8"-18	3/4"-16
8636-8-6-SS	3/8"	1.69	1/2"-14	9/16"-18
8636-8-8-SS	1/2"	1.79	1/2"-14	3/4"-16
8636-8-10-SS	5/8"	1.89	1/2"-14	7/8"-14
8636-8-12-SS	3/4"	2.05	1/2"-14	1-1/16"-12
8636-12-8-SS	1/2"	1.85	3/4"-14	3/4"-16
8636-12-10-SS	5/8"	1.95	3/4"-14	7/8"-14
8636-12-12-SS	3/4"	2.06	3/4"-14	1-1/16"-12
8636-16-16-SS	1"	2.35	1"-11-1/2	1-5/16"-12
8636-20-16-SS	1"	2.44	1-1/4"-11-1/2	1-5/16"-12
8636-20-20-SS	1-1/4"	2.49	1-1/4"-11-1/2	1-5/8"-12
8636-24-24-SS	1-1/2"	2.62	1-1/2"-11-1/2	1-7/8"-12
8636-32-32-SS	2"	2.97	2"-11-1/2	2-1/2"-12
8636-40-40-SS	2-1/2"	3.25	2-1/2"-8	3"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Female NPTF x 45° Male Flare

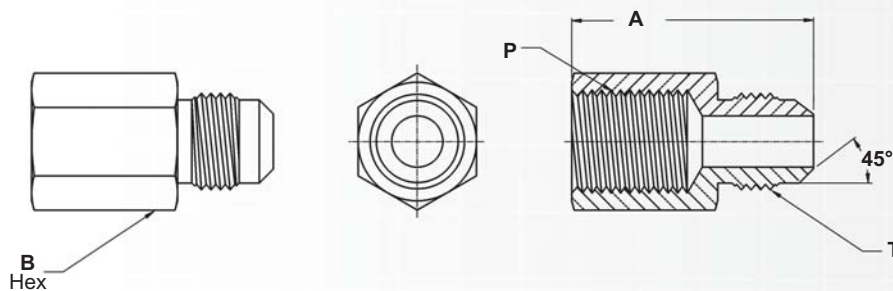
8650

Equal to Aeroquip P/N 2001

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	P (N.P.T.F.)	T	A	B
8650-2-4-SS	1/4"	1/8"-27	7/16"-20	1.06	.56
8650-2-5-SS	5/16"	1/8"-27	1/2"-20	1.16	.56
8650-4-4-SS	1/4"	1/4"-18	7/16"-20	1.19	.69
8650-4-5-SS	5/16"	1/4"-18	1/2"-20	1.25	.69
8650-4-6-SS	3/8"	1/4"-18	5/8"-18	1.31	.69
8650-6-6-SS	3/8"	3/8"-18	5/8"-18	1.31	.81
8650-6-8-SS	1/2"	3/8"-18	3/4"-16	1.56	.81
8650-8-8-SS	1/2"	1/2"-14	3/4"-16	1.62	1.00
8650-8-10-SS	5/8"	1/2"-14	7/8"-14	1.81	1.00
8650-8-12-SS	3/4"	1/2"-14	1-1/16"-14	2.00	1.06
8650-12-10-SS	5/8"	3/4"-14	7/8"-14	1.81	1.25
8650-12-12-SS	3/4"	3/4"-14	1-1/16"-14	1.94	1.25

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Male NPTF x 37° Male Flare

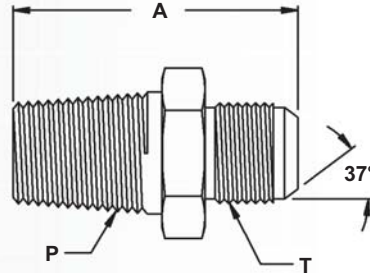
8638

Equal to Aeroquip P/N 2021

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	A	P (N.P.T.F.)	T
8638-2-4-SS	1/4"	1.22	1/8"-27	7/16"-20
8638-4-4-SS	1/4"	1.42	1/4"-18	7/16"-20
8638-4-6-SS	3/8"	1.43	1/4"-18	9/16"-18
8638-4-8-SS	1/2"	1.53	1/4"-18	3/4"-16
8638-6-6-SS	3/8"	1.43	3/8"-18	9/16"-18
8638-6-8-SS	1/2"	1.53	3/8"-18	3/4"-16
8638-6-10-SS	5/8"	1.70	3/8"-18	7/8"-14
8638-6-12-SS	3/4"	1.86	3/8"-18	1-1/16"-12
8638-8-4-SS	1/4"	1.68	1/2"-14	7/16"-20
8638-8-6-SS	3/8"	1.69	1/2"-14	9/16"-18
8638-8-8-SS	1/2"	1.79	1/2"-14	3/4"-16
8638-8-10-SS	5/8"	1.89	1/2"-14	7/8"-14
8638-8-12-SS	3/4"	2.06	1/2"-14	1-1/16"-12
8638-12-8-SS	1/2"	1.85	3/4"-14	3/4"-16
8638-12-12-SS	3/4"	2.06	3/4"-14	1-1/16"-14
8638-16-16-SS	1"	2.30	1"-11-1/2	1-5/16"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

37° Female Flare Internal x 37° Male Flare

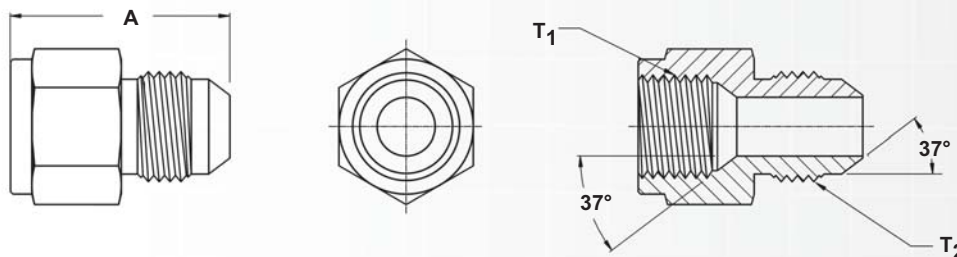
8637

Equal to Aeroquip P/N 2215

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	A	T ₁	T ₂
8637-5-8-SS	1/2"	1.31	1/2"-20	3/4"-16
8637-6-5-SS	5/16"	1.18	9/16"-18	1/2"-20
8637-8-10-SS	5/8"	1.53	3/4"-16	7/8"-14
8637-8-12-SS	3/4"	1.64	3/4"-16	1-1/16"-12
8637-10-8-SS	1/2"	1.53	7/8"-14	3/4"-16
8637-10-12-SS	3/4"	1.74	7/8"-14	1-1/16"-12
8637-12-10-SS	5/8"	1.73	1-1/16"-12	7/8"-14
8637-12-16-SS	1"	2.00	1-1/16"-12	1-5/16"-12
8637-16-20-SS	1-1/4"	2.30	1-5/16"-12	1-5/8"-12
8637-24-20-SS	1-1/4"	2.30	1-7/8"-12	1-5/8"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

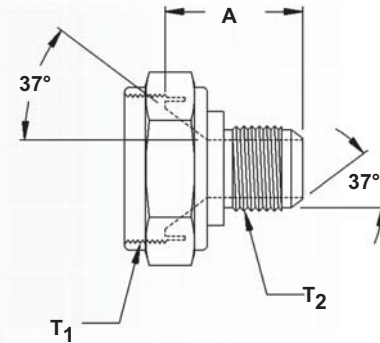
37° Female Swivel x 37° Male Flare

8639

Equal to Aeroquip P/N 221501

Material:

Stainless Steel
(To order Monel, Drop "SS" suffix
and add NICU. To order Copper
Nickel, drop "SS" suffix and add
CUNI.)



Part Number	Tube O.D.	A	T ₁	T ₂
8639-6-4-SS	1/4"	.97	9/16"-18	7/16"-20
8639-8-4-SS	1/4"	1.00	3/4"-16	7/16"-20
8639-8-6-SS	3/8"	1.00	3/4"-16	9/16"-18
8639-10-6-SS	3/8"	1.03	7/8"-14	9/16"-18
8639-12-6-SS	3/8"	1.09	1-1/16"-12	9/16"-18
8639-12-8-SS	1/2"	1.19	1-1/16"-12	3/4"-16
8639-16-6-SS	3/8"	1.16	1-5/16"-12	9/16"-18
8639-16-8-SS	1/2"	1.26	1-5/16"-12	3/4"-16
8639-16-10-SS	5/8"	1.36	1-5/16"-12	7/8"-14
8639-16-12-SS	3/4"	1.47	1-5/16"-12	1-1/16"-12
8639-20-16-SS	1"	1.52	1-5/8"-12	1-5/16"-12

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

37° Female Flare Swivel x 37° Male Flare

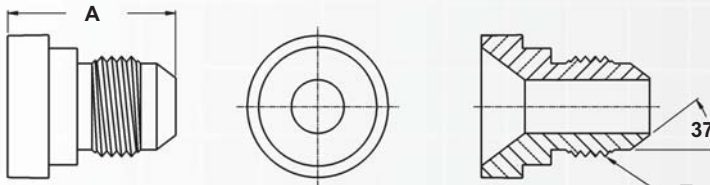
8643

Equal to Aeroquip P/N FF1066

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	T	A
8643-6-4-SS	1/4"	7/16"-20	.97
8643-8-4-SS	1/4"	7/16"-20	1.00
8643-8-6-SS	3/8"	9/16"-18	1.00
8643-10-6-SS	3/8"	9/16"-18	1.03
8643-12-6-SS	3/8"	9/16"-18	1.09
8643-12-8-SS	1/2"	3/4"-16	1.19
8643-16-6-SS	3/8"	9/16"-18	1.16
8643-16-8-SS	1/2"	3/4"-16	1.26
8643-16-10-SS	5/8"	7/8"-14	1.36
8643-16-12-SS	3/4"	1-1/16"-12	1.47
8643-20-16-SS	1"	1-5/16"-12	1.52

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

37° Male Flare Plug

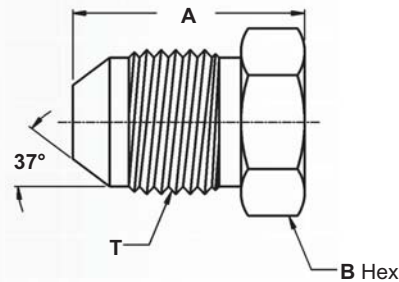
8647

Equal to Aeroquip P/N 900599

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Tube O.D.	T	A	B
8647-2-SS	1/8"	5/16"-24	.70	.44
8647-4-SS	1/4"	7/16"-20	.80	.50
8647-6-SS	3/8"	9/16"-18	.84	.62
8647-8-SS	1/2"	3/4"-16	.94	.81
8647-10-SS	5/8"	7/8"-14	1.10	.94
8647-12-SS	3/4"	1-1/16"-12	1.28	1.12
8647-16-SS	1"	1-5/16"-12	1.33	1.38

37° Male External N.P.T.F. x Plug

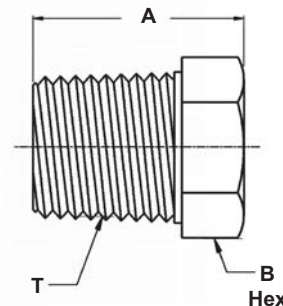
8644

Equal to Aeroquip P/N 2082

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Pipe O.D.	A	B	T
8644-2-SS	1/8"	.56	.44	1/8"-27
8644-4-SS	1/4"	.75	.56	1/4"-18
8644-6-SS	3/8"	.78	.69	3/8"-18
8644-8-SS	1/2"	.97	.88	1/2"-14

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Male External NPTF x Female Internal NPTF

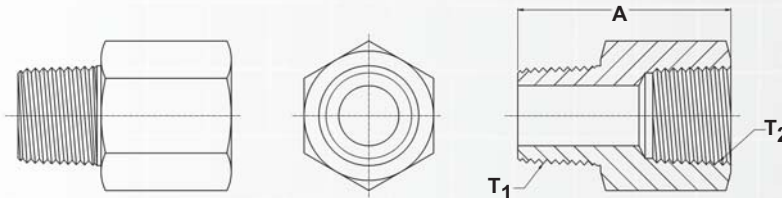
8646

Equal to Aeroquip P/N 2041

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Pipe Size	T ₁	T ₂	A
8646-4-4-SS	1/4"	7/16"-20	7/16"-20	2.07
8646-6-6-SS	3/8"	9/16"-18	9/16"-18	2.18
8646-8-8-SS	1/2"	3/4"-16	3/4"-16	2.44

Reducer-Male External NPTF x Female Internal NPTF

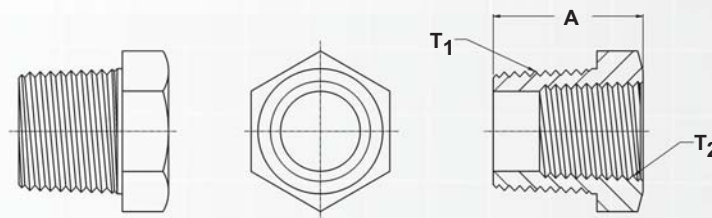
8645

Equal to Aeroquip P/N 2081

Material:

Stainless Steel

(To order Monel, Drop "SS" suffix and add NICU. To order Copper Nickel, drop "SS" suffix and add CUNI.)



Part Number	Pipe Size	T ₁	T ₂	A
8645-4-2-SS	1/8"	1/4"-18	1/8"-27	.85
8645-6-4-SS	1/4"	3/8"-18	1/4"-18	.85
8645-8-4-SS	1/4"	1/2"-14	1/4"-18	1.10
8645-8-6-SS	3/8"	1/2"-14	3/8"-18	1.10
8645-12-8-SS	1/2"	3/4"-14	1/2"-14	1.17
8645-16-8-SS	1/2"	1"-11-1/2	1/2"-14	1.36
8645-16-12-SS	3/4"	1"-11-1/2	3/4"-14	1.36

All Dimensions are in Inches.
Dimensional information is for reference only.
Variations from these dimensions, on actual parts, may occur as the result of engineering revisions.

Notes



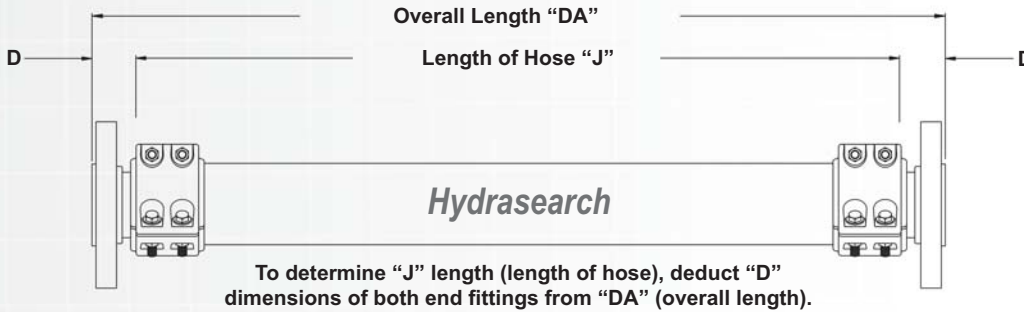
Assembly Instructions

Section E

Product Designation	Page No.
HS449 Fittings	160
HS1546 Fittings	161
ER512 Fittings	162
HS1489 Fittings	163
HS1488 Fittings	164
HS1600 Fittings	165
HS1602 Fittings	165
LFS Fittngs	166
Internal Support Sleeves	167

Hydrasearch HS449 End Fittings

Hydrasearch HS449 End Fittings are manufactured to military specifications MIL-F-24787/1,4,5 and 6. These fittings are reusable and can be installed by using a socket and a box end wrench. Please follow these instructions to ensure proper installation of the end fittings, shown on pages 10 thru 30 to the HS4265 and HS4224 hose.



Step 1:

Cut hose squarely to desired length using a high-speed abrasive wheel or steel cut off wheel. Hose may also be cut with a fine toothed hacksaw. Hose should be bent so that the outside of the bend contacts the wheel to prevent binding. Do not feed the hose to the cutting edge too fast as it may tend to loosen the wire reinforcement or cause unraveling. After the cutting operation is complete, thoroughly clean all residue from inside and outside of the hose. If cutting the end to neck down slightly, it can be flared with a smooth tool to allow proper insertion of the nipple.

Step 2:

Apply a thin coat of end sealing compound to the hose ends and to the outer cover which will be covered by the segments, and allow to dry for about a 1/2 hour. Immediately before installing the nipple, apply a second thin coat of end sealing compound over the first thin coat. Do not allow end sealant to enter hose bore. The end sealing compound is available from Hydrasearch as part number ESC 32.

Step 3:

Place segments around the hose so that the lip on the segment captures the shoulder on the nipple (see figure 1). Be sure the bolts are facing the same direction in the bolt holes to ensure even gripping on the hose.

Step 4:

Tighten bolts at random starting with back bolts closest to the hose, taking care to maintain an even spacing between the segments. Never tighten one set of bolts completely without tightening the other bolts, this will cause an uneven gripping of the hose.

Step 5:

Continue tightening the bolts alternately to maintain even spacing between segments until the torque specified in the table below is achieved. Assembly speeds should not exceed 100RPM. Preferred speeds are 40 to 50 RPM. Bolts should be retorqued after 24 hours to compensate for natural cold flow of rubber.

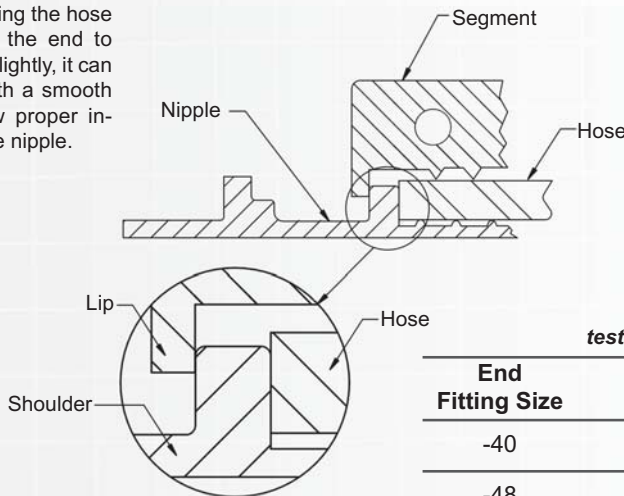


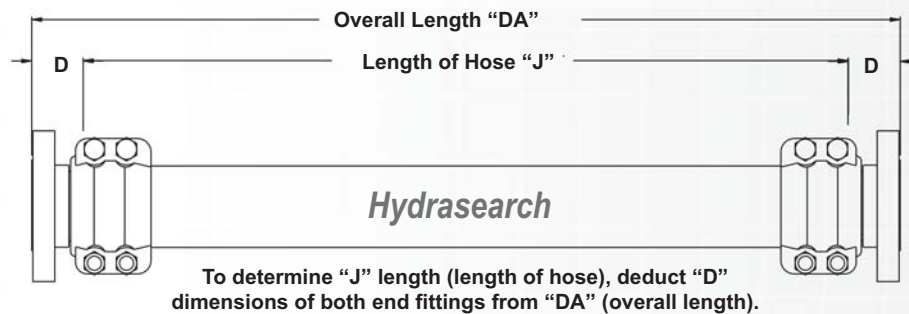
Figure 1

All hose assemblies should be hydrostatically tested to proof pressure before being put into service.

End Fitting Size	Bolt Size	Wrench Size	Torque Requirements
-40	3/8"	9/16"	35 ft. lbs.
-48	3/8"	9/16"	35 ft. lbs.
-64	7/16"	5/8"	35 ft. lbs.

Hydrasearch HS1546 End Fittings

Hydrasearch HS1546 End Fittings are manufactured to military specifications MIL-F-24787/1,4,5 and 6. These fittings are reusable and can be installed by using a socket and/or box end wrench. Please follow these instructions to ensure proper installation of the end fittings, shown on pages 31 thru 43 to HS4182 shown on page 2.



Step 1:

Cut hose squarely to desired length using a sharp knife or cut off saw. Hose should be bent slightly away from the cutting edge to prevent binding. A water soluble oil may be used to cool the blade. Clean hose bore.

Step 2:

Insert the nipple into the hose bottoms squarely against the nipple shoulder. Apply a light coat of hose lubricant P/N DCL10 or DCL80 to the exterior of the hose, covering the last 5 inches of each end.

Step 3:

Place segments around the hose so that the lip on the segment captures the shoulder on the nipple (see figure 1). Be sure the bolts are facing the same direction in the bolt holes to ensure even gripping on the hose.

Step 4:

Insert the 4 bolts through the matching segment holes. Start the nuts, and holding the segment parallel, tighten the bolts alternately keeping gaps between segments equal, until the segment stops meet, or torque values listed below are reached, whichever occurs first. Assembly speeds should not exceed 100 RPM. Preferred speeds are 40 to 50 RPM. Bolts should be re-torqued after 24 hours to compensate for natural cold flow of rubber.

All hose assemblies should be hydrostatically tested to proof pressure before being put into service.

End Fitting Size	Bolt Size	Wrench Size	Torque Requirements
-40	1/2"	3/4"	80-90 ft. lbs.
-48	9/16"	13/16"	120-130 ft. lbs.
-64	5/8"	15/16"	170-180 ft. lbs.

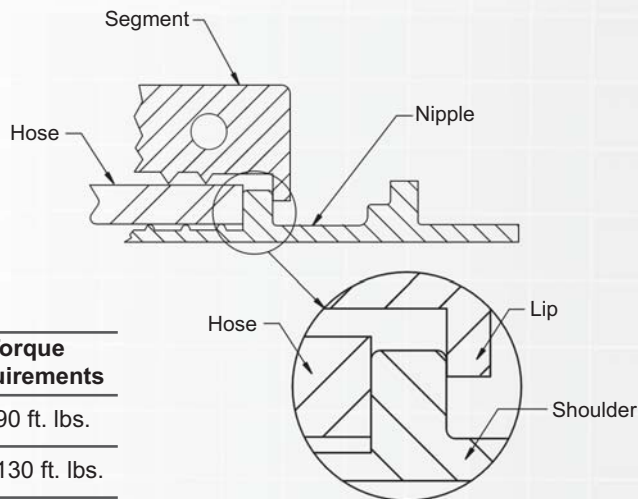
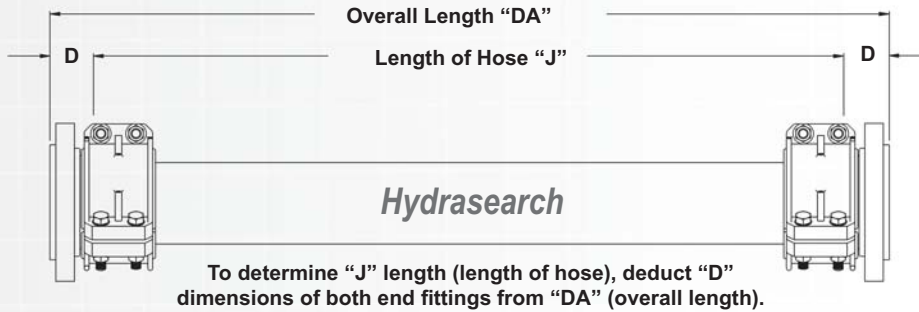


Figure 1

Hydrasearch ER512 End Fittings

Hydrasearch ER512 End Fittings are manufactured to military specifications MIL-F-24787/1,4,5 and 6. These fittings are reusable and can be installed by using a socket and/or box end wrench. Please follow these instructions to ensure proper installation of the end fittings, shown on pages 44 thru 59 to ER512 hose shown on page 3.



Step 1:

Cut hose squarely to desired length using a sharp knife.

Step 2:

Insert the nipple into the hose until the hose meets the shoulder on the nipple.

Step 3:

Place segments around the hose so that the lip on the segment captures the shoulder on the nipple (see figure 1). Be sure the bolts are facing the same direction in the bolt holes to ensure even gripping on the hose.

Step 4:

Tighten bolts at random starting with back bolts closest to the hose, taking care to maintain an even spacing between the segments. Never tighten one set of bolts completely without tightening the other bolts, this will cause an uneven gripping of the hose.

Step 5:

Continue tightening the bolts alternately to maintain even spacing between segments until the torque specified in the table below is achieved. Assembly speeds should not exceed 100RPM. Preferred speeds are 40 to 50 RPM. Bolts should be retorqued after 24 hours to compensate for natural cold flow of rubber.

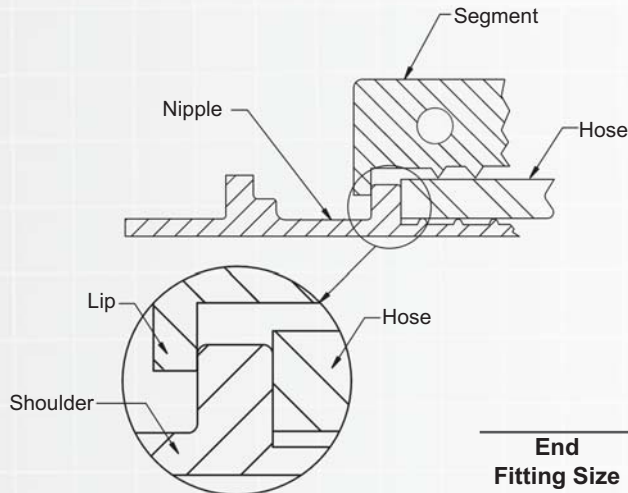


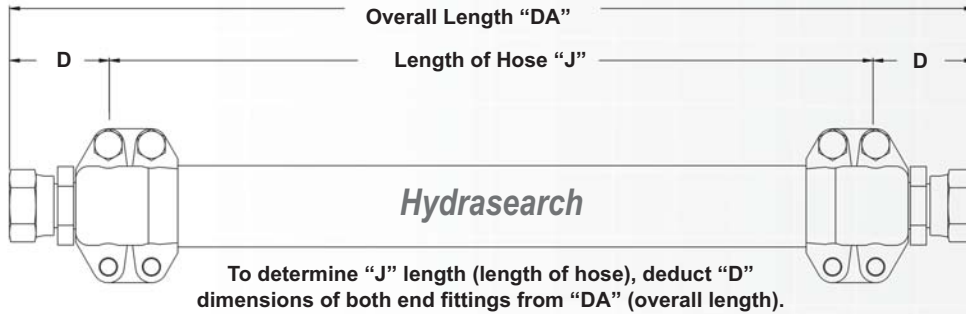
Figure 1

All hose assemblies should be hydrostatically tested to proof pressure before being put into service.

End Fitting Size	Bolt Size	Wrench Size	Torque Requirements
5" & 6"	1/2"	3/4"	75-80 ft. lbs.
8" & 10"	5/8"	15/16"	130-140 ft. lbs.
12"	3/4"	1-1/8"	185-200 ft. lbs.

Hydrasearch HS1489 End Fittings

Hydrasearch HS1489 End Fittings are manufactured to military specifications MIL-F-24787/1,4,5 and 6. These fittings are reusable and can be installed by using a socket and/or box end wrench. Please follow these instructions to ensure proper installation of the end fittings, shown on pages 60 thru 67, to HS133 hose shown on page 4.



Step 1:

Cut hose squarely to desired length using a high-speed abrasive wheel or steel cut off wheel. After cutting, clean all residue from the inside and outside of the hose. Lubricate inside and outside of hose and nipple nose and grooves liberally. Use heavy oil.

Step 2:

Insert the nipple into the hose until the hose bottoms squarely against the nipple shoulder. (See Figure 1)

Step 3:

Place the shoulder of each segment into the nipple groove (See Figure 1). Insert a bolt through the under-threaded hole of one segment and thread it finger tight into the threaded hole of the other segment. Insert the following bolt in a similar manner.

Step 4:

Torque the bolts alternately, a little each time, until the segments meet.

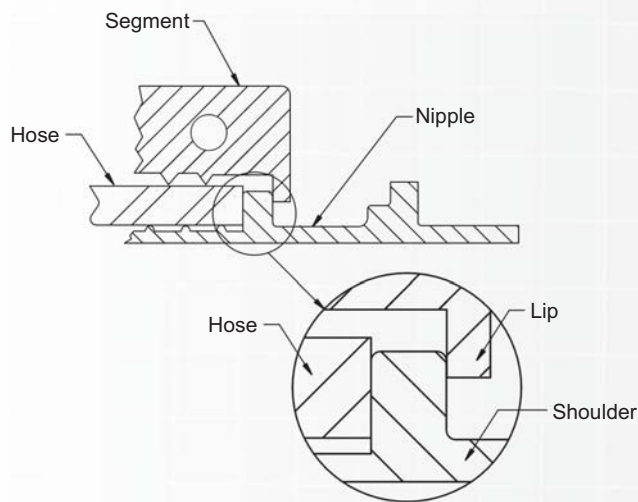
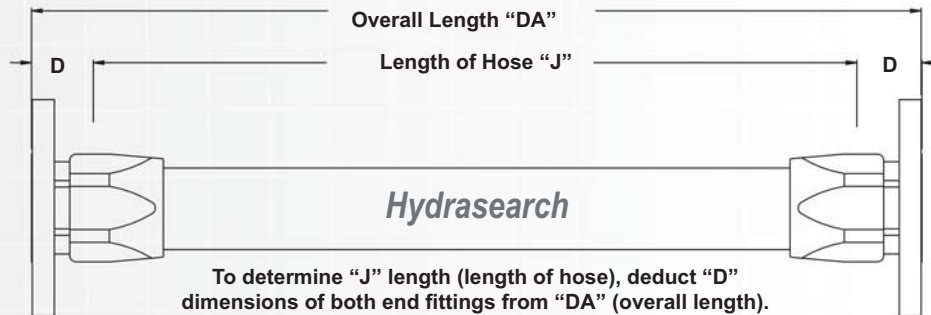


Figure 1

Hydrasearch **HS1488** End Fittings

Hydrasearch HS1488 Solid Socket End Fittings are reusable and can be installed by using an open end or adjustable wrench. Please follow these instructions to ensure proper installation of the end fittings shown on pages 68 thru 106.


Step 1:

Cut hose squarely to desired length using a high speed abrasive wheel or steel cut off wheel. Hose may also be cut with a fine tooth hacksaw. Hose should be bent so that the outside of the bend contacts the wheel to prevent unraveling. After the cutting operation is complete, thoroughly clean all residue from the inside and outside of the hose. If cutting the hose has caused the end to neck down slightly, it can be flared with a smooth tool to allow proper insertion of the nipple.

Step 2:

Apply a thin coat of end sealing compound to the ends and to the cover which will be covered by the fitting socket, allow to dry for about 1/2 hour. Do not allow end sealant to enter hose bore. Immediately before installing socket, apply second thin coat of end sealing compound over the first thin coat. The end sealing compound is available from Hydrasearch as part number ESC32.

Step 3:

Put fitting socket in vise and screw hose counter-clockwise into socket until hose bottoms, then back off 1/4 turn.

Step 4:

Oil nipple threads and inside of hose liberally with a petroleum based oil.

Step 5:

a. For male end fittings insert nipple into socket, screw nipple counter-clockwise into socket using wrench on male end hex. Tighten nipple to within 1/32" to 1/16" of the socket. Do not tighten against socket.

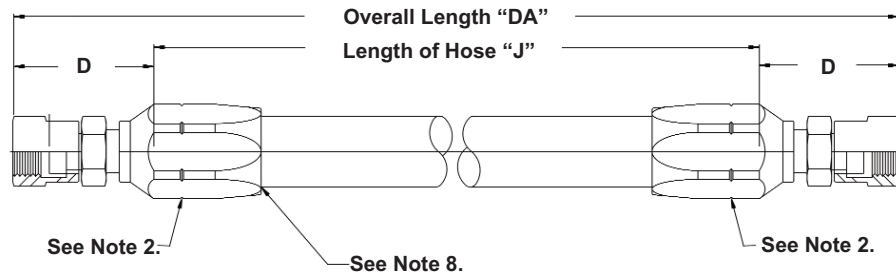
b. For female swivel end fittings insert male plug into swivel and tighten onto plug. Insert nipple into socket and screw clockwise using wrench on swivel hex. Leave 1/32" to 1/16" clearance between nut and socket so that nut can swivel freely. Do not tighten against socket.

Step 6:

Remove assembly plug and add a fillet of sealing compound to hose end of socket. Clean, inspect, and proof test.

Hydrasearch HS1600 & 1602 End Fittings

Hydrasearch HS1600 and HS1602 End Fittings are reusable and can be installed by using an open end or adjustable wrench. Please follow these instructions to ensure proper installation of the end fittings, shown on pages 107 thru 126.



To determine "J" length (length of hose), deduct "D" dimensions of both end fittings from "DA" (overall length).

Step 1:

Cut hose squarely to desired length using a high-speed abrasive wheel or steel cut off wheel. Do not feed the hose to the cutting edge too fast as it may tend to loosen the wire reinforcement or cause unraveling. After the cutting operation is complete, clean all residue from the inside and outside of the hose.

Step 2:

Use notch on socket to determine length of cover to be stripped.

Step 3:

Strip off cover. Cut around hose through cover to wire braid. Slit cover lengthwise. Be sure cut is down to wire braid.

Step 4:

Use the correct size skiving tool. Insert mandrel into the hose and rotate clockwise until the proper length is skived.

Step 5:

Apply coating of sealing compound, Hydrasearch part number ESC-800, to ends of hose and to skived portion to cover all exposed wire surfaces and wire ends, allow to dry for about 1/2 hour. Do not allow end sealant to enter hose bore. Immediately before installing socket, apply a second coat of sealing compound over the first coat.

Step 6:

Place fitting socket in a vice and screw hose counter-clockwise into the end of the socket until it bottoms. After starting the socket onto the hose it may be tapped on with a rawhide or lead hammer to avoid damage to the threads.

Step 7:

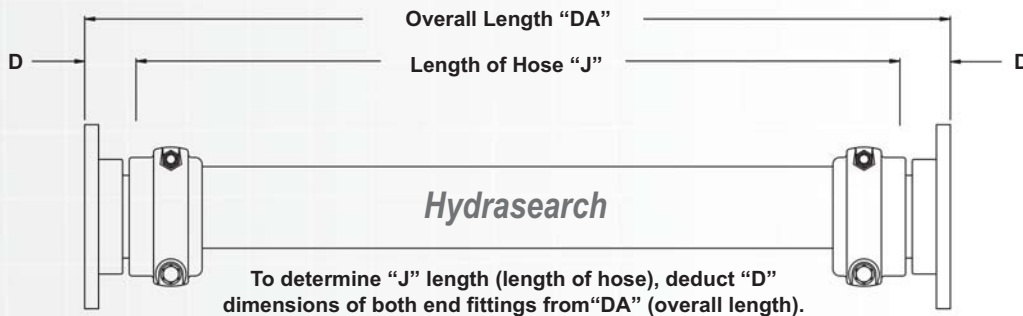
Oil nipple threads and inside of hose liberally with a petroleum based oil. Use Tylube Anti-Gall compound for monel fittings.

Step 8:

Screw nipple clockwise into socket and hose. Leave a 1/32" to 1/16" clearance between the nipple hex and the socket. Place a fillet of sealing compound around the hose end of the socket and hose.

Hydrasearch LFS End Fittings

Hydrasearch LFS End Fittings are manufactured to be used with layflat hose. These fittings are reusable and can be installed by using a socket wrench. Please follow these instructions to ensure proper installation of the end fittings, shown on pages 127 thru 129, to the HSSA layflat hose on page 6.



Step 1:

Cut hose squarely to desired length using a sharp knife

Step 2:

Make sure the rubber gasket is installed on the hose nipple. (See Figure 2)

Step 3:

Insert the nipple into the hose until the hose bottoms squarely against the nipple shoulder.

Step 4:

Place the segments around the hose so that the lip on the segments capture the shoulder on the nipple. (See Figure 1)

Step 5:

Insert bolts into round pocket and hex nuts into other adjacent pockets.

Step 6:

Tighten bolts at random taking care to maintain an even spacing between the segments. Never tighten one set of bolts completely without tightening the other bolts. This will cause uneven gripping of the hose.

Step 7:

Continue tightening bolts alternatively to maintain even spacing between segments until the torque specified in the table below is achieved.

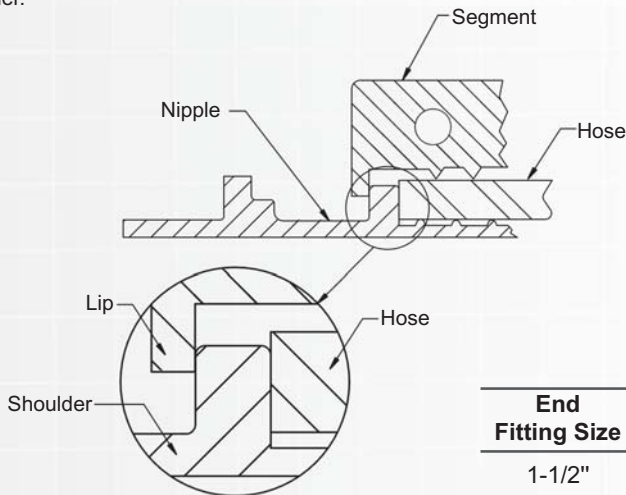


Figure 1

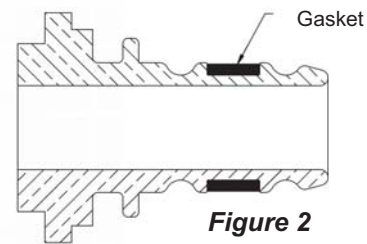


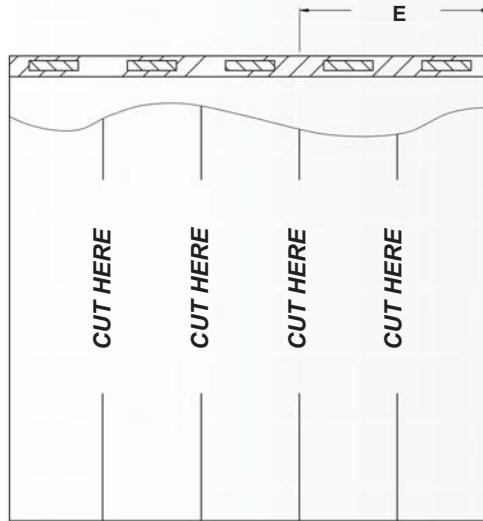
Figure 2

All hose assemblies should be hydrostatically tested to proof pressure before being put into service.

End Fitting Size	Bolt Size	Wrench Size	Torque Requirements
1-1/2"	3/8"	9/16"	35 ft. lbs.
3"	3/8"	9/16"	35 ft. lbs.



Internal Support Sleeves

**Step 1:**

Cut hose to required length and assemble one end fitting.

Step 2:

On the remaining fitting, measure the distance from the end of the nipple to the nipple shoulder, add 1/4" to this dimension and mark this distance on the inside of the hose.

Step 3:

Install internal support sleeves up to, but not past the mark and no more than 3/4" below the mark.

Step 4:

Measure the distance from the end of the last sleeve selection to the mark. If this dimension is greater than 3/4", one or possibly two sleeves must be cut to obtain the optimum supported length within the hose.

Step 5:*One Sleeve Cut*

a. Cut sections of sleeve must contain at least two bronze rings. If the sleeve section needed is greater than "E" in the dimension chart, make a clean, straight cut in the area between the rib indicators where stenciling is present (with hacksaw or band saw).

b. Make sure the cut section is free of foreign particles and rubber dust.

c. Make sure a full sleeve is at each end of the hose assembly by placing the cut section below the last full section installed in the hose.

Step 6:*Two Sleeve Cut*

a. If the cut section needed is less than dimension "E" add the measured distance in step 4 to the length of one sleeve, and make cuts in two sleeves so their total length will equal this distance. Remember, neither cut section can be less than dimension E because no cut section should contain less than two bronze rings. Cuts must be made between the rib indicators where stenciling is present.

b. Complete the installation following *b* and *c* in step 5.

Step 7:

Assemble the other end fitting on the hose.

Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
10-411-4	EF-SS1488A-0404	72
10-411-5	EF-SS1488A-0505	72
10-411-6-4	EF-SS1488A-0604	72
10-411-6	EF-SS1488A-0606	72
10-411-8	EF-SS1488A-0808	72
10-411-10-8	EF-SS1488A-1008	72
10-411-10	EF-SS1488A-1010	72
10-411-12-10	EF-SS1488A-1210	72
10-411-12	EF-SS1488A-1212	72
10-411-16-12	EF-SS1488A-1612	72
10-411-16	EF-SS1488A-1616	72
10-411-20	EF-SS1488A-2020	72
10-411-24	EF-SS1488A-2424	72
10-411-32	EF-SS1488A-3232	72
115-504091-7	B-CPL/ROB-ME	See Cat. 407
115-72076-4-7	B-ADP-7FS-4MHT	See Cat. 407
115-72076-4-96	B-ADP-6FS-4MHT	See Cat. 407
115-72458-6	B-ADP-6FS-9MHT	See Cat. 407
115-72458-7	B-ADP-7FS-9MHT	See Cat. 407
115-72465-2 1/2-40	B-ADP-25FS-25MHT	See Cat. 407
115-72465-2 1/2-64	B-ADP-4FS-25MHT	See Cat. 407
115-7465-4-64	B-ADP-4FS-4MHT	See Cat. 407
12-222022-20	ISC-21C	138
12-222022-40	ISC-40C	138
12-222022-48	ISC-48C	138
12-222022-64	ISC-64C	138
150901-40	HS4265-40	Call for Details
150901-48	HS4265-48	Call for Details
150901-64	HS4265-64	Call for Details
1607	ST-TL/AY-7-FC91	See Cat. 407
179-190717-40	90ELB-449E-40-304SS	Call for Details
188-500063-3	TP-3FSB	135
188-500063-3-1/2	TP-3.5FSB	135
188-500063-4	TP-4FSB	135
188-500063-5	TP-5FSB	136
188-500063-6	TP-6FSB	136
188-500063-8	TP-8FSB	136
188-500063-10	TP-10FSB	136
188-500189-3	TP-3MSB	133
188-500189-3-1/2	TP-3.5MSB	133
188-500189-4	TP-4MSB	133
188-500189-5	TP-5MSB	134
188-500189-6	TP-6MSB	134
188-500189-8	TP-8MSB	134
188-500189-10	TP-10MSB	134
190016-1/2-16	EF-B1488F4-0816	83
190016-3/4-20	EF-B1488F4-1220	83

Aeroquip Part No.	Hydrasearch Part No.	Page No.
190016-1-24	EF-B1488F4-1624	83
190016-1 1/4-32	EF-B1488F4-2032	83
190016-1 1/2-32	EF-B1488F4-2432	83
190016-2-32	EF-B1488F4-3232	83
190016-2-40	EF-B1488F4-3240	83
199016-2 1/2-40	EF-B1488F4-4040	83
190016-2 1/2-48	EF-B1488F4-4048	83
190016-3-48	EF-B1488F4-4848	83
190093-16	90ELB-B1488D-1616	105
190093-20	90ELB-B1488D-2020	105
190093-24	90ELB-B1488D-2424	105
190093-32	90ELB-B1488D-3232	105
190093-40	90ELB-B1488D-4040	105
490093-48	90ELB-B1488D-4848	105
190103-1/2-16	90EF-B1488FL4-0816	93
190103-3/4-16	90EF-B1488FL4-1216	93
190103-3/4-20	90EF-B1488FL4-1220	93
190103-1-16	90EF-B1488FL4-1616	93
190103-1-24	90EF-B1488FL4-1624	93
190103-1 1/4-32	90EF-B1488FL4-2032	93
190103-1 1/2-32	90EF-B1488FL4-2432	93
190103-2-32	90EF-B1488FL4-3232	93
190103-2-40	90EF-B1488FL4-3240	93
190103-2 1/2-40	90EF-B1488FL4-4040	93
190103-2 1/2-48	90EF-B1488FL4-4048	93
190103-3-48	90EF-B1488FL4-4848	93
190109-1/2-16	EF-B1488F5-0816	87
190109-3/4-20	EF-B1488F5-1220	87
190109-1-24	EF-B1488F5-1624	87
190109-1 1/4-32	EF-B1488F5-2032	87
190109-1 1/2-32	EF-B1488F5-2432	87
190109-2-32	EF-B1488F5-3232	87
190109-2-40	EF-B1488F5-3240	87
190109-2 1/2-40	EF-B1488F5-4040	87
190109-2 1/2-48	EF-B1488F5-4048	87
190124-1/2-16	90EF-B1488FL5-0816	97
190124-3/4-20	90EF-B1488FL5-1220	97
190124-1-24	90EF-B1488FL5-1624	97
190124-1 1/4-32	90EF-B1488FL5-2032	97
190124-1 1/2-32	90EF-B1488FL5-2432	97
190124-2-32	90EF-B1488FL5-3232	97
190124-2-40	90EF-B1488FL5-3240	97
190124-2 1/2-40	90EF-B1488FL5-4040	97
190124-2 1/2-48	90EF-B1488FL5-4048	97
190124-3-48	90EF-B1488FL5-4848	97
190418-2 1/2-40	A-CPL/HOS-25MS-S81	See Cat. 407
190418-4-64	A-CPL/HOS-4MS-S81	See Cat. 407

168



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
190418-6-96	A-CPL/HOS-6MS-S81	See Cat. 407
190418-7-7	A-CPL/HOS-7MS-S81	See Cat. 407
190419-2 1/2-40	A-CPL/HOS-25FS-S81	See Cat. 407
190419-4-64	A-CPL/HOS-4FS-S81	See Cat. 407
190419-6-96	A-CPL/HOS-6FS-S81	See Cat. 407
190419-7-7	A-CPL/HOS-7FS-S81	See Cat. 407
190464-8S	EF-S1600MB-0808	Call for Details
190464-10-8S	EF-S1600MB-1008	Call for Details
190464-12-8S	EF-S1600MB-1208	Call for Details
190464-12S	EF-S1600MB-1212	Call for Details
190464-16S	EF-S1600MB-1616	Call for Details
190464-20S	EF-S1600MB-2020	Call for Details
190911-3/4-16	EF-B1488C-1216	74
190911-1-20	EF-B1488C-1620	74
190911-1 1/4-24	EF-B1488C-2024	74
190911-1 1/2-32	EF-B1488C-2432	74
191000-4S	EF-S1600L-0404	Call for Details
191000-6S	EF-S1600L-0606	Call for Details
191000-8-6S	EF-S1600L-0806	Call for Details
191000-8S	EF-S1600L-0808	Call for Details
191000-10-8S	EF-S1600L-1008	Call for Details
191000-10S	EF-S1600L-1010	Call for Details
191000-12S	EF-S1600L-1212	Call for Details
191000-16-12S	EF-S1600L-1612	Call for Details
191000-16S	EF-S1600L-1616	Call for Details
191000-16-20S	EF-S1600L-1620	Call for Details
191000-18-16S	EF-S1600L-1816	Call for Details
191000-20-16S	EF-S1600L-2016	Call for Details
191000-20S	EF-S1600L-2020	Call for Details
191000-20-24S	EF-S1600L-2024	Call for Details
191000-24-16S	EF-S1600L-2416	Call for Details
191000-24-20S	EF-S1600L-2420	Call for Details
191000-24S	EF-S1600L-2424	Call for Details
191000-32S	EF-S1600L-3232	Call for Details
202232-1/4-4C	4238-4-1-SS	146
202232-1/2-12C	4238-12-3-SS	146
22006-2	R-RNG/BU-2	137
22006-4	R-RNG/BU-4	137
2206-8	R-RNG/BU-8	137
2206-12	R-RNG/BU-12	137
22019-234	R-RNG/O-25-234	See Cat. 407
22019-346	R-RNG/O-4-346	See Cat. 407
22019-438	R-RNG/O-6-438	See Cat. 407
22019-442	R-RNG/O-7-442	See Cat. 407
22020-224	R-RNG/O-224	137
22020-226	R-RNG/O-226	137
22020-230	R-RNG/O-230	137

Aeroquip Part No.	Hydrasearch Part No.	Page No.
22020-234	R-RNG/O-234	137
22020-239	R-RNG/O-239	137
22020-243	R-RNG/O-243	137
22020-247	R-RNG/O-247	137
22020-255	R-RNG/O-255	137
22020-261	R-RNG/O-261	137
22020-447	R-RNG/O-447	137
22020-451	R-RNG/O-451	137
221-190767-4-64	EF-449A4-4-64-CS	Call for Details
221-190769-4-64	90EF-449B4-4-64-CS	Call for Details
222005-10C	ISC-10SS	139
222005-11C	ISC-11SS	139
222005-13C	ISC-13SS	139
222005-14C	ISC-14SS	139
222005-15C	ISC-15SS	139
222005-17C	ISC-17SS	139
222005-18C	ISC-18SS	139
222005-19C	ISC-19SS	139
222005-21C	ISC-21SS	139
222005-23C	ISC-23SS	139
222022-22C	ISC-22SS	139
222022-32C	ISC-32SS	139
222022-40C	ISC-40SS	139
222022-48C	ISC-48SS	139
222022-64C	ISC-64SS	139
222025-40D	A-PLG-25MS	See Cat. 407
222025-64D	A-PLG-4MS	See Cat. 407
222025-7D	A-PLG-7MS	See Cat. 407
222025-96D	A-PLG-6MS	See Cat. 407
222026-40D	A-CAP-25FS	See Cat. 407
222026-64D	A-CAP-4FS	See Cat. 407
222026-7D	A-CAP-7FS	See Cat. 407
222026-96D	A-CAP-6FS	See Cat. 407
23-411-4	EF-MB1488A-0404	Call for Details
23-411-5	EF-MB1488A-0505	Call for Details
23-411-6	EF-MB1488A-0606	Call for Details
23-411-8	EF-MB1488A-0808	Call for Details
23-411-10	EF-MB1488A-1010	Call for Details
23-411-12	EF-MB1488A-1212	Call for Details
23-411-16	EF-MB1488A-1616	71
23-411-20	EF-MB1488A-2020	71
23-411-24	EF-MB1488A-2424	71
23-411-32	EF-MB1488A-3232	71
2560-40	HOS-22240-25C	5
2560-64	HOS-22240-4A	5
2560-70	HOS-22240-7A	5
2560-96	HOS-22240-6A	5



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
256007-2 1/2	H/A1FF22240-25C-XXXL	See Cat. 407
2580-80	HOS-ER512-5	3
2580-96	HOS-ER512-6	3
2580-128	HOS-ER512-8	3
2580-160	HOS-ER512-10	3
2580-192	HOS-ER512-12	3
259-2001-2-4	8650-2-4-SS	151
259-2001-2-5	8650-2-5-SS	151
259-2001-4-4	8650-4-4-SS	151
259-2001-4-5	8650-4-5-SS	151
259-2001-4-6	8650-4-6-SS	151
259-2001-6-6	8650-6-6-SS	151
259-2001-6-8	8650-6-8-SS	151
259-2001-8-8	8650-8-8-SS	151
259-2001-8-10	8650-8-10-SS	151
259-2001-8-12	8650-8-12-SS	151
259-2001-12-10	8650-12-10-SS	151
259-2001-12-12	8650-12-12-SS	151
259-2021-2-4	8638-2-4-SS	152
259-2001-4-4	8638-4-4-SS	152
259-2021-4-6	8638-4-6-SS	152
259-2021-4-8	8638-4-8-SS	152
259-2021-6-6	8638-6-6-SS	152
259-2021-6-8	8638-6-8-SS	152
259-2021-6-10	8638-6-10-SS	152
259-2021-6-12	8638-6-12-SS	152
259-2021-8-4	8638-8-4-SS	152
259-2021-8-6	8638-8-6-SS	152
259-2021-8-8	8638-8-8-SS	152
259-2021-8-10	8638-8-10-SS	152
259-2021-8-12	8638-8-12-SS	152
259-2021-12-8	8638-12-8-SS	152
259-2021-12-12	8638-12-12-SS	152
259-2021-16-16	8638-16-16-SS	152
259-202123-8-10	8652-8-10-SS	142
259-202123-10-10	8652-10-10-SS	142
259-202123-10-12	8652-10-12-SS	142
259-202123-12-10	8652-12-10-SS	142
259-202123-12-12	8652-12-12-SS	142
259-202123-14-10	8652-14-10-SS	142
259-202123-14-12	8652-14-12-SS	142
259-202123-14-16	8652-14-16-SS	142
259-202123-16-16	8652-16-16-SS	142
259-202123-18-16	8652-18-16-SS	142
259-202123-18-20	8652-18-20-SS	142
259-202123-20-24	8652-20-24-SS	142
259-202123-22-20	8652-22-20-SS	142

Aeroquip Part No.	Hydrasearch Part No.	Page No.
259-202123-22-24	8652-22-24-SS	142
259-202123-26-24	8652-26-24-SS	142
259-202123-26-32	8652-26-32-SS	142
259-202140-4-4	8651-4-4-SS	143
259-202140-6-6	8651-6-6-SS	143
259-202140-8-8	8651-8-8-SS	143
259-202140-12-12	8651-12-12-SS	143
259-202140-16-16	8651-16-16-SS	143
259-202140-20-20	8651-20-20-SS	143
259-202140-24-24	8651-24-24-SS	143
259-202140-32-32	8651-32-32-SS	143
259-202142-1/8-4	4307-0-4-SS	145
259-202142-1/4-6	4307-1-6-SS	145
259-202142-1/4-8	4307-1-8-SS	145
259-202142-3/8-6	4307-2-6-SS	145
259-202142-3/8-8	4307-2-8-SS	145
259-202142-3/8-10	4307-2-10-SS	145
259-202142-1/2-6	4307-3-6-SS	145
259-202142-1/2-8	4307-3-8-SS	145
259-202142-1/2-10	4307-3-10-SS	145
259-202142-1/2-12	4307-3-12-SS	145
259-202142-1/2-16	4307-3-16-SS	145
259-202142-3/4-12	4307-4-12-SS	145
259-202142-3/4-16	4307-4-16-SS	145
259-202142-3/4-20	4307-4-20-SS	145
259-202142-1-20	4307-5-20-SS	145
259-202142-1-24	4307-5-24-SS	145
259-202142-1 1/4-24	4307-6-24-SS	145
259-202142-1 1/2-24	4307-7-24-SS	145
259-202142-1 1/2-32	4307-7-32-SS	145
259-202142-2-32	4307-8-32-SS	145
259-2022-2-3	8636-2-3-SS	150
259-2022-2-4	8636-2-4-SS	150
259-2022-2-5	8636-2-5-SS	150
259-2022-4-3	8636-4-3-SS	150
259-2022-4-4	8636-4-4-SS	150
259-2022-4-5	8636-4-5-SS	150
259-2022-4-6	8636-4-6-SS	150
259-2022-4-8	8636-4-8-SS	150
259-2022-6-6	8636-6-6-SS	150
259-2022-6-8	8636-6-8-SS	150
259-2022-8-6	8636-8-6-SS	150
259-2022-8-8	8636-8-8-SS	150
259-2022-8-10	8636-8-10-SS	150
259-2022-8-12	8636-8-12-SS	150
259-2022-12-8	8636-12-8-SS	150
259-2022-12-10	8636-12-10-SS	150

170



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
259-2022-12-12	8636-12-12-SS	150
259-2022-16-16	8636-16-16-SS	150
259-2022-20-16	8636-20-16-SS	150
259-2022-20-20	8636-20-20-SS	150
259-2022-24-24	8636-24-24-SS	150
259-2022-32-32	8636-32-32-SS	150
259-2022-40-40	8636-40-40-SS	150
259-202232-1/4-4	4238-4-1-SS	146
259-202232-1/4-6	4238-6-1-SS	146
259-202232-1/4-8	4238-8-1-SS	146
259-202232-3/8-6	4238-6-2-SS	146
259-202232-1/2-6	4238-6-3-SS	146
259-202232-1/2-8	4238-8-3-SS	146
259-202232-1/2-10	4238-10-3-SS	146
259-202232-1/2-12	4238-12-3-SS	146
259-202232-1/2-16	4238-16-3-SS	146
259-202232-3/4-12	4238-12-4-SS	146
259-202232-3/4-16	4238-16-4-SS	146
259-202232-1-16	4238-16-5-SS	146
259-202232-1-20	4238-20-5-SS	146
259-202232-1-24	4238-24-5-SS	146
259-202232-1 1/4-24	4238-24-6-SS	146
259-202232-1 1/2-24	4238-24-7-SS	146
259-202240-4-4	8640-4-4-SS	144
259-202240-6-6	8640-6-6-SS	144
259-202240-8-8	8640-8-8-SS	144
259-202240-12-12	8640-12-12-SS	144
259-202240-16-16	8640-16-16-SS	144
259-202240-20-20	8640-20-20-SS	144
259-202240-24-24	8640-24-24-SS	144
259-202240-32-32	8640-32-32-SS	144
259-202242-1/8-4	8635-0-4-SS	147
259-202242-1/4-6	8635-1-6-SS	147
259-202242-1/4-8	8635-1-8-SS	147
259-202242-3/8-6	8635-2-6-SS	147
259-202242-3/8-8	8635-2-8-SS	147
259-202242-3/8-10	8635-2-10-SS	147
259-202242-1/2-8	8635-3-8-SS	147
259-202242-1/2-10	8635-3-10-SS	147
259-202242-1/2-12	8635-3-12-SS	147
259-202242-1/2-16	8635-3-16-SS	147
259-202242-3/4-12	8635-4-12-SS	147
259-202242-3/4-16	8635-4-16-SS	147
259-202242-3/4-20	8635-4-20-SS	147
259-202242-1-16	8635-5-16-SS	147
259-202242-1-20	8635-5-20-SS	147
259-202242-1-24	8635-5-24-SS	147

Aeroquip Part No.	Hydrasearch Part No.	Page No.
259-202242-1 1/4-24	8635-6-24-SS	147
259-202242-1 1/2-24	8635-7-24-SS	147
259-202242-1 1/2-32	8635-7-32-SS	147
259-202242-2-32	8635-8-32-SS	147
259-2027-4-4	8641-4-4-SS	149
259-2027-6-6	8641-6-6-SS	149
259-2027-8-8	8641-8-8-SS	149
259-2027-10-10	8641-10-10-SS	149
259-2027-12-12	8641-12-12-SS	149
259-2027-16-12	8641-16-12-SS	149
259-2027-16-16	8641-16-16-SS	149
259-2027-20-20	8641-20-20-SS	149
259-202702-4-4	6728-4-4-SS	148
259-202702-4-6	6728-4-6-SS	148
259-202702-4-8	6728-4-8-SS	148
259-202702-5-5	6728-5-5-SS	148
259-202702-5-6	6728-5-6-SS	148
259-202702-6-4	6728-6-4-SS	148
259-202702-6-6	6728-6-6-SS	148
259-202702-6-8	6728-6-8-SS	148
259-202702-6-10	6728-6-10-SS	148
259-202702-8-4	6728-8-4-SS	148
259-202702-8-5	6728-8-5-SS	148
259-202702-8-6	6728-8-6-SS	148
259-202702-8-8	6728-8-8-SS	148
259-202702-8-10	6728-8-10-SS	148
259-202702-8-12	6728-8-12-SS	148
259-202702-10-4	6728-10-4-SS	148
259-202702-10-6	6728-10-6-SS	148
259-202702-10-8	6728-10-8-SS	148
259-202702-10-10	6728-10-10-SS	148
259-202702-10-12	6728-10-12-SS	148
259-202702-10-16	6728-10-16-SS	148
259-202702-12-6	6728-12-6-SS	148
259-202702-12-8	6728-12-8-SS	148
259-202702-12-10	6728-12-10-SS	Call for Details
259-202702-12-12	6728-12-12-SS	148
259-202702-12-14	6728-12-14-SS	Call for Details
259-202702-12-16	6728-12-16-SS	Call for Details
259-202702-12-20	6728-12-20-SS	Call for Details
259-202702-14-10	6728-14-10-SS	Call for Details
259-202702-14-12	6728-14-12-SS	Call for Details
259-202702-14-16	6728-14-16-SS	Call for Details
259-202702-16-8	6728-16-8-SS	Call for Details
259-202702-16-10	6728-16-10-SS	Call for Details
259-202702-16-12	6728-16-12-SS	148
259-202702-16-16	6728-16-16-SS	148



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
259-202702-16-20	6728-16-20-SS	Call for Details
259-202702-20-12	6728-20-12-SS	Call for Details
259-202702-20-16	6728-20-16-SS	Call for Details
259-202702-20-20	6728-20-20-SS	148
259-202702-20-24	6728-20-24-SS	148
259-202702-24-16	6728-24-16-SS	Call for Details
259-202702-24-20	6728-24-20-SS	Call for Details
259-202702-24-24	6728-24-24-SS	Call for Details
259-202702-32-32	6728-32-32-SS	Call for Details
259-2041-4-4	8646-4-4-SS	157
259-2041-6-6	8646-6-6-SS	157
259-2041-8-8	8646-8-8-SS	157
259-2081-4-2	8645-4-2-SS	157
259-2081-6-4	8645-6-4-SS	157
259-2081-8-4	8645-8-4-SS	157
259-2081-8-6	8645-8-6-SS	157
259-2081-12-8	8645-12-8-SS	157
259-2081-16-8	8645-16-8-SS	157
259-2081-16-12	8645-16-12-SS	157
259-2082-2	8644-2-SS	157
259-2082-4	8644-4-SS	157
259-2082-6	8644-6-SS	157
259-2082-8	8644-8-SS	157
259-2083-2-2	8649-2-2-SS	Call for Details
259-2083-4-2	8649-4-2-SS	Call for Details
259-2083-4-4	8649-4-4-SS	Call for Details
259-2083-6-4	8649-6-4-SS	Call for Details
259-2083-6-6	8649-6-6-SS	Call for Details
259-2083-8-4	8649-8-4-SS	Call for Details
259-2083-8-6	8649-8-6-SS	Call for Details
259-2083-8-8	8649-8-8-SS	Call for Details
259-2083-12-12	8649-12-12-SS	Call for Details
259-2083-16-16	8649-16-16-SS	Call for Details
259-2215-5-8	8637-5-8-SS	153
259-2215-6-5	8637-6-5-SS	153
259-2215-8-10	8637-8-10-SS	153
259-2215-8-12	8637-8-12-SS	153
259-2215-10-8	8637-10-8-SS	153
259-2215-10-12	8637-10-12-SS	153
259-2215-12-10	8637-12-10-SS	153
259-2215-12-16	8637-12-16-SS	153
259-2215-16-20	8637-16-20-SS	153
259-2215-24-20	8637-24-20-SS	153
259-221501-6-4	8639-6-4-SS	154
259-221501-8-4	8639-8-4-SS	154
259-221501-8-6	8639-8-6-SS	154
259-221501-10-6	8639-10-6-SS	154

Aeroquip Part No.	Hydrasearch Part No.	Page No.
259221501-12-6	8639-12-6-SS	154
259-221501-12-8	8639-12-8-SS	154
259-221501-16-6	8639-16-6-SS	154
259-221501-16-8	8639-16-8-SS	154
259-221501-16-10	8639-16-10-SS	154
259-221-501-16-12	8639-16-12-SS	154
259-221501-20-16	8639-20-16-SS	154
259-411-4	EF-SS1488A-0404	72
259-411-5	EF-SS1488A-0505	72
259-411-6-4	EF-SS1488A-0604	72
259-411-6	EF-SS1488A-0606	72
259-411-8	EF-SS1488A-08008	72
259-411-10-8	EF-SS1488A-1008	72
259-411-10	EF-SS1488A-1010	72
259-411-12-10	EF-SS1488A-1210	72
259-411-12	EF-SS1488A-1212	72
259-411-16-12	EF-SS1488A-1612	72
259-411-16	EF-SS1488A-1616	72
259-411-20	EF-SS1488A-2020	72
259-411-24	EF-SS1488A-2424	72
259-411-32	EF-SS1488A-3232	72
259-4411-4	EF-SS1488ACR-0404	Call for Details
259-4411-4-5	EF-SS1488ACR-0405	Call for Details
259-4411-5	EF-SS1488ACR-0505	Call for Details
259-4411-6	EF-SS1488ACR-0606	Call for Details
259-4411-6-8	EF-SS1488ACR-0608	Call for Details
259-4411-8-6	EF-SS1488ACR-0806	Call for Details
259-4411-8	EF-SS1488ACR-0808	Call for Details
259-4411-8-10	EF-SS1488ACR-0810	Call for Details
259-4411-10-8	EF-SS1488ACR-1008	Call for Details
259-4411-10	EF-SS1488ACR-1010	Call for Details
259-4411-10-12	EF-SS1488ACR-1012	Call for Details
259-4411-12-10	EF-SS1488ACR-1210	Call for Details
259-4411-12	EF-SS1488ACR-1212	Call for Details
259-4411-14-12	EF-SS1488ACR-1412	Call for Details
259-4411-16	EF-SS1488ACR-1616	Call for Details
259-4411-20	EF-SS1488ACR-2020	Call for Details
259-4411-20-24	EF-SS1488ACR-2024	Call for Details
259-4411-24	EF-SS1488ACR-2424	Call for Details
259-4411-32	EF-SS1488ACR-3232	Call for Details
259-4721-4-4	EF-SS1600A-0404	109
259-4721-5-4	EF-SS1600A-0504	109
259-4721-6-4	EF-SS1600A-0604	109
259-4721-6-6	EF-SS1600A-0606	109
259-4721-8-6	EF-SS1600A-0806	109
259-4721-8-8	EF-SS1600A-0808	109
259-4721-10-8	EF-SS1600A-1008	109

172



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
259-4721-10	EF-SS1600A-1010	109
259-4721-12-8	EF-SS1600A-1208	109
259-4721-12-10	EF-SS1600A-1210	Call for Details
259-4721-12	EF-SS1600A-1212	109
259-4721-14-12	EF-SS1600A-1412	Call for Details
259-4721-16-12	EF-SS1600A-1612	Call for Details
259-4721-16	EF-SS1600A-1616	109
259-4721-20	EF-SS1600A-2020	109
259-4721-24	EF-SS1600A-2424	109
259-4721-32	EF-SS1600A-3232	109
259-900599-2	8647-2-SS	156
259-900599-4	8647-4-SS	156
259-900599-6	8647-6-SS	156
259-900599-8	8647-8-SS	156
259-900599-10	8647-10-SS	156
259-900599-12	8647-12-SS	156
259-900599-16	8647-16-SS	156
259-FF1066-6-4	8643-6-4-SS	155
259-FF1066-8-4	8643-8-4-SS	155
259-FF1066-8-6	8643-8-6-SS	155
259-FF1066-10-6	8643-10-6-SS	155
259-FF1066-12-6	8643-12-6-SS	155
259-FF1066-12-8	8643-12-8-SS	155
259-FF1066-16-6	8643-16-6-SS	155
259-FF1066-16-8	8643-16-8-SS	155
259-FF1066-16-10	8643-16-10-SS	155
259-FF1066-16-12	8643-16-12-SS	155
259-FF1066-20-16	8643-20-16-SS	155
265-190655-2-40	EF-449A3-2-40	14
265-190655-2-1/2-40	EF-449A3-2.5-40	14
265-190655-2-1/2-48	EF-449A3-2.5-48	14
265-190655-3-48	EF-449A3-3-48	14
265-190655-3-1/2-64	EF-449A3-3.5-64	14
265-190655-4-64	EF-449A3-4-64	14
265-190656-2-40	90EF-449B3-2-40	21
265-190656-2-1/2-40	90EF-449B3-2.5-40	21
265-190656-2-1/2-48	90EF-449B3-2.5-48	21
265-190656-3-48	90EF-449B3-3-48	21
265-190656-3-1/2-64	90EF-449B3-3.5-64	21
265-190656-4-64	90EF-449B3-4-64	21
265-190717-40	90ELB-449E-40	28
265-190717-48	90ELB-449E-48	28
265-190717-64	90ELB-449E-64	28
265-190751-2-40	EF-449A5-2-40	12
265-190751-2-1/2-40	EF-449A5-2.5-40	12
265-190751-2-1/2-48	EF-449A5-2.5-48	12
265-190751-3-48	EF-449A5-3-48	12

Aeroquip Part No.	Hydrasearch Part No.	Page No.
265-190751-3-1/2-64	EF-449A5-3.5-64	12
265-190751-4-64	EF-449A5-4-64	12
265-190752-2-40	EF-449A1-2-40	10
265-190752-2-1/2-48	EF-449A1-2.5-48	10
265-190752-3-48	EF-449A1-3-48	10
265-190752-3-1/2-64	EF-449A1-3.5-64	10
265-190752-4-64	EF-449A1-4-64	10
265-190754-4-64	45EF-449B5-4-64	Call for Details
265-190757-2-40	90EF-449B5-2-40	19
265-190757-2-1/2-40	90EF-449B5-2.5-40	19
265-190757-2-1/2-48	90EF-449B5-2.5-48	19
265-1907-3-48	90EF-449B5-3-48	19
265-190757-3-1/2-64	90EF-449B5-3.5-64	19
265-190757-4-64	90EF-449B5-4-64	19
265-190758-2-40	90EF-449B1-2-40	18
265-190758-2-1/2-48	90EF-449B1-2.5-48	18
265-190758-3-48	90EF-449B1-3-48	18
265-190758-3-1/2-64	90EF-449B1-3.5-64	18
265-190758-4-64	90EF-449B1-4-64	18
265-190767-2-40	EF-449A4-2-40	15
265-190767-2-1/2-40	EF-449A4-2.5-40	15
265-1907-2-1/2-48	EF-449A4-2.5-48	15
265-190767-3-48	EF-449A4-3-48	15
265-190767-3-1/2-64	EF-449A4-3.5-64	15
265-190767-4-64	EF-449A4-4-64	15
265-190769-2-40	90EF-449B4-2-40	22
265-190769-2-1/2-40	90EF-449B4-2.5-40	22
265-190769-2-1/2-48	90EF-449B4-2.50-48	22
265-190769-3-48	90EF-449B4-3-48	22
265-190769-3-1/2-64	90EF-449B4-3.5-64	22
265-190769-4-64	90EF-449B4-4-64	22
265-190780-3-48	EF-449CA-3-48	25
265-190780-3-1/2-64	EF-449CA-3.5-64	25
265-190780-4-64	EF-449CA-4-64	25
265-190781-3-48	EF-449C-3-48	24
265-190781-3-1/2-64	EF-449C-3.5-64	24
265-190781-4-64	EF-449C-4-64	24
265-190784-3-48	90EF-449DA-3-48	27
265-190784-3-1/2-64	90EF-449DA-3.5-64	27
265-190784-4-64	90EF-449DA-4-64	27
265-190785-3-48	90EF-449D-3-48	26
265-190785-3-1/2-64	90EF-449D-3.5-64	26
265-190785-4-64	90EF-449D-4-64	26
265-190786-2-40	180ELB-449F-2-40	26
265-190786-2-1/2-48	180ELB-449F-2.5-48	26
265-190786-3-48	180ELB-449F-3-48	26
265-190786-3-1/2-64	180ELB-449F-3.5-64	26



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
265-190786-4-64	180ELB-449F-4-64	26
282002-4-120	H/A-17505-4-120DL	See Cat. 407
282002-4-360	H/A-17505-4-360L	See Cat. 407
3-74021-3/4-20	C18800	Call for Details
3-74021-1-24	C18799	Call for Details
3-74021-1 1/4-32	C18798	Call for Details
3-74021-1 1/2-32	C18797	Call for Details
3-74021-2-32	C18796	Call for Details
3-74021-2-40	C17966	Call for Details
3-74021-2 1/2-40	C17968	Call for Details
3-74021-2 1/2-48	C17969	Call for Details
3-74021-3-48	C17970	Call for Details
3-74021-3 1/2-64	C17971	Call for Details
3-74021-4-64	C17972	Call for Details
3-74021-5-80	C16914-1	Call for Details
3-74021-6-96	C16914-2	Call for Details
3-74021-8-8	C16914-3	Call for Details
3-74045-1-24	C19526	Call for Details
3-74045-2-40	C17765	Call for Details
3-74045-2 1/2-40	C17796	Call for Details
3-74045-2 1/2-48	C17795	Call for Details
3-74045-3-48	C17766	Call for Details
3-74045-3 1/2-64	C17794	Call for Details
3-74045-4-64	C17767	Call for Details
3-74045-6-96	C16915-2	Call for Details
3-74045-8-8	C16915-3	Call for Details
3-74048-2-40	C17925	Call for Details
3-74048-3-48	C17933	Call for Details
3-74048-3 1/2-48	C17931	Call for Details
3-74048-3 1/2-64	C17938	Call for Details
3-74048-4-64	C17940	Call for Details
375-190093-16	90ELB-MB1488D-1616	104
375-190093-20	90ELB-MB1488D-2020	104
375-190093-24	90ELB-MB1488D-2424	104
375-190093-32	90ELB-MB1488D-3232	104
375-190093-40	90ELB-MB1488D-4040	104
375-190093-48	90ELB-MB1488D-4848	104
375-190103-1/2-16	90EF-MB1488FL4-0816	94
375-190103-3/4-16	90EF-MB1488FL4-1216	94
375-190103-3/4-20	90EF-MB1488FL4-1220	94
375-190103-1-16	90EF-MB1488FL4-1616	94
375-190103-1-24	90EF-MB1488FL4-1624	94
375-190103-1 1/4-32	90EF-MB1488FL4-2032	94
375-190103-1 1/2-32	90EF-MB1488FL4-2432	94
375-190103-2-32	90EF-MB1488FL4-3232	94
375-190103-2-40	90EF-MB1488FL4-3240	94
375-190103-2 1/2-40	90EF-MB1488FL4-4040	94

Aeroquip Part No.	Hydrasearch Part No.	Page No.
375-190103-2 1/2-48	90EF-MB1488FL4-4048	94
375-190103-3-48	90EF-MB1488FL4-4848	94
375-190109-1/2-16	EF-MB1488F5-0816	85
375-190109-3/4-20	EF-MB1488F5-1220	85
375-190109-1-24	EF-MB1488F5-1624	85
375-190109-1 1/4-32	EF-MB1488F5-2032	85
375-190109-1 1/2-32	EF-MB1488F5-2432	85
375-190109-2-32	EF-MB1488F5-3232	85
375-190109-2-40	EF-MB1488F5-3240	85
375-190109-1/2-16	90EF-MB1488FL5-0816	95
375-190124-3/4-20	90EF-MB1488FL5-1220	95
375-190124-1-24	90EF-MB1488FL5-1624	95
375-190124-1 1/4-32	90EF-MB1488FL5-2032	95
375-190124-1 1/2-32	90EF-MB1488FL5-2432	95
375-190124-2-32	90EF-MB1488FL5-3232	95
375-190655-2-40	EF449A3-2-40	14
375-190655-2-1/2-40	EF449A3-2.5-40	14
375-190655-2-1/2-48	EF449A3-2.5-48	14
375-190655-3-48	EF449A3-3-48	14
375-190655-3-1/2-64	EF449A3-3.5-64	14
375-190655-4-64	EF449A3-4-64	14
375-190656-2-40	90EF-449B3-2-40	21
375-190656-2-1/2-40	90EF-449B3-2.5-40	21
375-190656-2-1/2-48	90EF-449B3-2.5-48	21
375-190656-3-48	90EF-449B3-3-48	21
375-190656-3-1/2-64	90EF-449B3-3.5-64	21
375-190656-4-64	90EF-449B3-4-64	21
375-190717-40	90ELB-449E-40	28
375-190717-48	90ELB-449E-48	28
375-190717-64	90ELB-449E-64	28
375-190751-2-40	EF-449A5-2-40	12
375-190751-2-1/2-40	EF-449A5-2.5-40	12
375-190751-2-1/2-48	EF-449A5-2.5-48	12
375-190751-3-48	EF-449A5-3-48	12
375-190751-3-1/2-64	EF-449A5-3.5-64	12
375-190751-4-64	EF-449A5-4-64	12
375-190752-2-40	EF-449A1-2-40	10
375-190752-2-1/2-48	EF-449A1-2.5-48	10
375-190752-3-48	EF-449A1-3-48	10
375-190752-3-1/2-64	EF-449A1-3.5-64	10
375-190752-4-64	EF-449A1-4-64	10
375-190757-2-40	90EF-449B5-2-40	19
375-190757-2-1/2-40	90EF-449B5-2.5-40	19
375-190757-2-1/2-48	90EF-449B5-2.5-48	19
375-190757-3-48	90EF-449B5-3-48	19
375-190757-3-1/2-64	90EF-449B5-3.5-64	19
375-190757-4-64	90EF-449B5-4-64	19

174



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
375-190758-2-40	90EF-449B1-2-40	18
375-190758-2-1/2-48	90EF-449B1-2.5-48	18
375-190758-3-48	90EF-449B1-3-48	18
375-190758-3-1/2-64	90EF-449B1-3.5-64	18
375-190758-4-64	90EF-449B1-4-64	18
375-190767-2-40	EF-449A4-2-40	15
375-190767-2-1/2-40	EF-449A4-2.5-40	15
375-190767-2-1/2-48	EF-449A4-2.5-48	15
375-190767-3-48	EF-449A4-3-48	15
375-190767-3-1/2-64	EF-449A4-3.5-64	15
375-190767-4-64	EF-449A4-4-64	15
375-190769-2-40	90EF-449B4-2-40	22
375-190769-2-1/2-40	90EF-449B4-2.5-40	22
375-190769-2-1/2-48	90EF-449B4-2.5-48	22
375-190769-3-48	90EF-449B4-3-48	22
375-190769-3-1/2-64	90EF-449B4-3.5-64	22
375-190769-4-64	90EF-449B4-4-64	22
375-190780-3-48	EF-449CA-3-48	25
375-190780-3-1/2-64	EF-449CA-3.5-64	25
375-190780-4-64	EF-449CA-4-64	25
375-190781-3-48	EF-449C-3-48	24
375-190781-3-1/2-64	EF-449C-3.5-64	24
375-190781-4-64	EF-449C-4-64	24
375-190784-3-48	90EF-449DA-3-48	27
375-190784-3-1/2-64	90EF-449DA-3.5-64	27
375-190784-4-64	90EF-449DA-4-64	27
375-190785-3-48	90EF-449D-3-48	26
375-190785-3-1/2-64	90EF-449D-3.5-64	26
375-190785-4-64	90EF-449D-4-64	26
375-190786-2-40	180ELB-449F-2-40	30
375-190786-2-1/2-48	180ELB-449F-2.5-48	30
375-190786-3-48	180ELB-449F-3-48	30
375-190786-3-1/2-64	180ELB-449F-3.5-64	30
375-190786-4-64	180ELB-449F-4-64	30
375-190911-3/4-16	EF-MB1488C-1216	73
375-190911-1-20	EF-MB1488C-1620	73
375-190911-1 1/4-24	EF-MB1488C-2024	73
375-190911-1 1/2-32	EF-MB1488C-2432	73
4-190885-1/8-4	EF-1602C-0204	Call for Details
4-190885-1/4-6	EF-1602C-0406	121
4-190885-3/8-6	EF-1602C-0606	121
4-190885-3/8-8	EF-1602C-0608	121
4-190885-1/2-12	EF-1602C-0812	121
4-190885-3/4-12	EF-1602C-1212	121
4-190885-3/4-16	EF-1602C-1216	121
4-190885-1-16	EF-1602C-1616	121
4-190885-1 1/4-16	EF-1602C-2016	Call for Details

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-190909-1/8-4	EF-1600C-0204	114
4-190909-1/4-6	EF-1600C-0406	114
4-190909-3/8-6	EF-1600C-0606	114
4-190909-3/8-8	EF-1600C-0608	114
4-190909-1/2-12	EF-1600C-0812	114
4-190909-3/4-16	EF-1600C-1216	114
4-190909-1-16	EF-1600C-1616	114
4-190909-1-20	EF-1600C-1620	114
4-190909-1 1/4-16	EF-1600C-2016	114
4-190909-1 1/4-20	EF-1600C-2020	114
4-190909-1 1/4-24	EF-1600C-2024	114
4-190909-1 1/2-32	EF-1600C-2432	114
4-190909-2-32	EF-1600C-3232	114
4-190911-1/8-6	EF-1488C-0206	73
4-190911-1/4-8	EF-1488C-0408	73
4-190911-3/8-10	EF-1488C-0610	73
4-190911-1/2-12	EF-1488C-0812	73
4-191301-1/8-6	90EF-1488CL-0206	77
4-191301-1/4-8	90EF-1488CL-0408	77
4-191301-3/8-10	90EF-1488CL-0610	77
4-191301-1/2-12	90EF-1488CL-0812	77
4-191301-3/4-16	90EF-1488CL-1216	77
4-191301-1-20	90EF-1488CL-1620	77
4-191301-1 1/4-24	90EF-1488CL-2024	77
4-191301-1 1/2-32	90EF-1488CL-2432	77
4-191302-6	90ELB-1488D-0606	102
4-191302-8	90ELB-1488D-0808	102
4-191302-10	90ELB-1488D-1010	102
4-191302-12	90ELB-1488D-1212	102
4-191302-16	90ELB-1488D-1616	102
4-191302-20	90ELB-1488D-2020	102
4-191302-24	90ELB-1488D-2424	102
4-191302-32	90ELB-1488D-3232	102
4-191304-1/4-6	90EF-1600CL-0406	115
4-191304-3/8-8	90EF-1600CL-0608	115
4-191304-1/2-12	90EF-1600CL-0812	115
4-191304-3/4-16	90EF-1600CL-1216	115
4-191304-1-16	90EF-1600CL-1616	115
4-191304-1-20	90EF-1600CL-1620	115
4-191304-1 1/4-20	90EF-1600CL-2020	115
4-191304-1 1/4-24	90EF-1600CL-2024	115
4-191304-1 1/2-32	90EF-1600CL-2432	115
4-191304-2-32	90EF-1600CL-3232	115
4-191305-6	90ELB-1600D-0606	118
4-191305-8	90ELB-1600D-0808	118
4-191305-12	90ELB-1600D-1212	118
4-191305-16	90ELB-1600D-1616	118



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-191305-20	90ELB-1600D-2020	118
4-191305-24	90ELB-1600D-2424	118
4-191305-32	90ELB-1600D-3232	118
4-191307-1/4-6	90EF-1602CL-0406	123
4-191307-3/8-8	90EF-1602CL-0608	123
4-191307-1/2-12	90EF-1602CL-0812	123
4-191307-3/4-12	90EF-1602CL-1212	123
4-191307-3/4-16	90EF-1602CL-1216	123
4-191307-1-16	90EF-1602CL-1616	123
4-191308-6	90ELB-1602D-0606	125
4-191308-8	90ELB-1602D-0808	125
4-191308-12	90ELB-1602D-1212	125
4-191308-16	90ELB-1602D-1616	125
4-2001-2-4	8650-2-4-NICU	151
4-2001-2-5	8650-2-5-NICU	151
4-2001-4-4	8650-4-4-NICU	151
4-2001-4-5	8650-4-5-NICU	151
4-2001-4-6	8650-4-6-NICU	151
4-2001-6-6	8650-6-6-NICU	151
4-2001-6-8	8650-6-8-NICU	151
4-2001-8-8	8650-8-8-NICU	151
4-2001-8-10	8650-8-10-NICU	151
4-2001-8-12	8650-8-12-NICU	151
4-2001-12-10	8650-12-10-NICU	151
4-2001-12-12	8650-12-12-NICU	151
4-2021-2-4	8638-2-4-NICU	152
4-2021-4-4	8638-4-4-NICU	152
4-2021-4-6	8638-4-6-NICU	152
4-2021-4-8	8638-4-8-NICU	152
4-2021-6-6	8638-6-6-NICU	152
4-2021-6-8	8638-6-8-NICU	152
4-2021-6-10	8638-6-10-NICU	152
4-2021-6-12	8638-6-12-NICU	152
4-2021-8-4	8638-8-4-NICU	152
4-2021-8-6	8638-8-6-NICU	152
4-2021-8-8	8638-8-8-NICU	152
4-2021-8-10	8638-8-10-NICU	152
4-2021-8-12	8638-8-12-NICU	152
4-2021-12-8	8638-12-8-NICU	152
4-2021-12-12	8638-12-12-NICU	152
4-2021-16-16	8638-16-16-NICU	152
4-202123-8-10	8652-8-10-NICU	142
4-202123-10-10	8652-10-10-NICU	142
4-202123-10-12	8652-10-12-NICU	142
4-202123-12-10	8652-12-10-NICU	142
4-202123-12-12	8652-12-12-NICU	142
4-202123-14-10	8652-14-10-NICU	142

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-202123-14-12	8652-14-12-NICU	142
4-202123-14-16	8652-14-16-NICU	142
4-202123-16-16	8652-16-16-NICU	142
4-202123-18-16	8652-18-16-NICU	142
4-202123-18-20	8652-18-20-NICU	142
4-202123-20-24	8652-20-24-NICU	142
4-202123-22-20	8652-22-20-NICU	142
4-202123-22-24	8652-22-24-NICU	142
4-202123-26-24	8652-26-24-NICU	142
4-202123-26-32	8652-26-32-NICU	142
4-202140-4-4	8651-4-4-NICU	143
4-202140-6-6	8651-6-6-NICU	143
4-202140-8-8	8651-8-8-NICU	143
4-202140-12-12	8651-12-12-NICU	143
4-202140-16-16	8651-16-16-NICU	143
4-202140-20-20	8651-20-20-NICU	143
4-202140-24-24	8651-24-24-NICU	143
4-202140-32-32	8651-32-32-NICU	143
4-202142-1/8-4	4307-0-4-NICU	145
4-202142-1/4-6	4307-1-6-NICU	145
4-202142-1/4-8	4307-1-8-NICU	145
4-202142-3/8-6	4307-2-6-NICU	145
4-202142-3/8-8	4307-2-8-NICU	145
4-202142-3/8-10	4307-2-10-NICU	145
4-202142-1/2-6	4307-3-6-NICU	145
4-202142-1/2-8	4307-3-8-NICU	145
4-202142-1/2-10	4307-3-10-NICU	145
4-202142-1/2-12	4307-3-12-NICU	145
4-202142-1/2-16	4307-3-16-NICU	145
4-202142-3/4-12	4307-4-12-NICU	145
4-202142-3/4-16	4307-4-16-NICU	145
4-202142-3/4-20	4307-4-20-NICU	145
4-202142-1-20	4307-5-20-NICU	145
4-202142-1-24	4307-5-24-NICU	145
4-202142-1 1/4-24	4307-6-24-NICU	145
4-202142-1 1/2-24	4307-7-24-NICU	145
4-202142-1 1/2-32	4307-7-32-NICU	145
4-202142-2-32	4307-8-32-NICU	145
4-2022-2-3	8636-2-3-NICU	150
4-2022-2-4	8636-2-4-NICU	150
4-2022-2-5	8636-2-5-NICU	150
4-2022-4-3	8636-4-3-NICU	150
4-2022-4-4	8636-4-4-NICU	150
4-2022-4-5	8636-4-5-NICU	150
4-2022-4-6	8636-4-6-NICU	150
4-2022-4-8	8636-4-8-NICU	150
4-2022-6-6	8636-6-6-NICU	150

176



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-2022-6-8	8636-6-8-NICU	150
4-2022-8-6	8636-8-6-NICU	150
4-2022-8-8	8636-8-8-NICU	150
4-2022-8-10	8636-8-10-NICU	150
4-2022-8-12	8636-8-12-NICU	150
4-2022-12-8	8636-12-8-NICU	150
4-2022-12-10	8636-12-10-NICU	150
4-2022-12-12	8636-12-12-NICU	150
4-2022-16-16	8636-16-16-NICU	150
4-2022-20-16	8636-20-16-NICU	150
4-2022-20-20	8636-20-20-NICU	150
4-2022-24-24	8636-24-24-NICU	150
4-2022-32-32	8636-32-32-NICU	150
4-2022-40-40	8636-40-40-NICU	150
4-202232-1/4-4	4238-4-1-NICU	146
4-202232-1/4-6	4238-6-1-NICU	146
4-202232-1/4-8	4238-8-1-NICU	146
4-202232-3/8-6	4238-6-2-NICU	146
4-202232-1/2-6	4238-6-3-NICU	146
4-202232-1/2-8	4238-8-3-NICU	146
4-202232-1/2-10	4238-10-3-NICU	146
4-202232-1/2-12	4238-12-3-NICU	146
4-202232-1/2-16	4238-16-3-NICU	146
4-202232-3/4-12	4238-12-4-NICU	146
4-202232-3/4-16	4238-16-4-NICU	146
4-202232-1-16	4238-16-5-NICU	146
4-202232-1-20	4238-20-5-NICU	146
4-202232-1-24	4238-24-5-NICU	146
4-202232-1 1/4-24	4238-24-6-NICU	146
4-202232-1 1/2-24	4238-24-7-NICU	146
4-202240-4-4	8640-4-4-NICU	144
4-202240-6-6	8640-6-6-NICU	144
4-202240-8-8	8640-8-8-NICU	144
4-202240-12-12	8640-12-12-NICU	144
4-202240-16-16	8640-16-16-NICU	144
4-202240-20-20	8640-20-20-NICU	144
4-202240-24-24	8640-24-24-NICU	144
4-202240-32-32	8640-32-32-NICU	144
4-202242-1/8-4	8635-0-4-NICU	147
4-202242-1/4-6	8635-1-6-NICU	147
4-202242-1/4-8	8635-1-8-NICU	147
4-202242-3/8-6	8635-2-6-NICU	147
4-202242-3/8-8	8635-2-8-NICU	147
4-202242-3/8-10	8635-2-10-NICU	147
4-202242-1/2-8	8635-3-8-NICU	147
4-202242-1/2-10	8635-3-10-NICU	147
4-202242-1/2-12	8635-3-12-NICU	147

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-202242-1/2-16	8635-3-16-NICU	147
4-202242-3/4-12	8635-4-12-NICU	147
4-202242-3/4-16	8635-4-16-NICU	147
4-202242-3/4-20	8635-4-20-NICU	147
4-202242-1-16	8635-5-16-NICU	147
4-202242-1-20	8635-5-20-NICU	147
4-202242-1-24	8635-5-24-NICU	147
4-202242-1 1/4-24	8635-6-24-NICU	147
4-202242-1 1/2-24	8635-7-24-NICU	147
4-202242-1 1/2-32	8635-7-32-NICU	147
4-202242-2-32	8635-8-32-NICU	147
4-2027-4-4	8641-6-6-NICU	149
4-2027-6-6	8641-6-6-NICU	149
4-2027-8-8	8641-6-6-NICU	149
4-2027-10-10	8641-6-6-NICU	149
4-2027-12-12	8641-6-6-NICU	149
4-2027-16-12	8641-6-6-NICU	149
4-2027-16-16	8641-6-6-NICU	149
4-2027-20-20	8641-6-6-NICU	149
4-202702-4-4	6728-4-4-NICU	148
4-202702-4-6	6728-4-6-NICU	148
4-202702-4-8	6728-4-8-NICU	148
4-202702-5-5	6728-5-5-NICU	148
4-202702-5-6	6728-5-6-NICU	148
4-202702-6-4	6728-6-4-NICU	148
4-202702-6-6	6728-6-6-NICU	148
4-202702-6-8	6728-6-8-NICU	148
4-202702-6-10	6728-6-10-NICU	148
4-202702-8-4	6728-8-4-NICU	148
4-202702-8-5	6728-8-5-NICU	148
4-202702-8-6	6728-8-6-NICU	148
4-202702-8-8	6728-8-8-NICU	148
4-202702-8-10	6728-8-10-NICU	148
4-202702-8-12	6728-8-12-NICU	148
4-202702-10-4	6728-10-4-NICU	148
4-202702-10-6	6728-10-6-NICU	148
4-202702-10-8	6728-10-8-NICU	148
4-202702-10-10	6728-10-10-NICU	148
4-202702-10-12	6728-10-12-NICU	148
4-202702-10-16	6728-10-16-NICU	148
4-202702-12-6	6728-12-6-NICU	148
4-202702-12-8	6728-12-8-NICU	148
4-202702-12-10	6728-12-10-NICU	148
4-202702-12-12	6728-12-12-NICU	148
4-202702-12-14	6728-12-14-NICU	148
4-202702-12-16	6728-12-16-NICU	148
4-202702-12-20	6728-12-20-NICU	148



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-202702-14-10	6728-14-10-NICU	148
4-202702-14-12	6728-14-12-NICU	148
4-202702-14-16	6728-14-16-NICU	148
4-202702-16-8	6728-16-8-NICU	148
4-202702-16-10	6728-16-10-NICU	148
4-202702-16-12	6728-16-12-NICU	148
4-202702-16-16	6728-16-16-NICU	148
4-202702-16-20	6728-16-20-NICU	Call for Details
4-202702-20-12	6728-20-12-NICU	Call for Details
4-202702-20-16	6728-20-16-NICU	Call for Details
4-202702-20-20	6728-20-20-NICU	148
4-202702-20-24	6728-20-24-NICU	148
4-202702-24-16	6728-24-16-NICU	Call for Details
4-202702-24-20	6728-24-20-NICU	Call for Details
4-202702-24-24	6728-24-24-NICU	Call for Details
4-202702-32-32	6728-32-32-NICU	Call for Details
4-2041-4-4	8646-4-4-NICU	157
2-2041-6-6	8646-6-6-NICU	157
4-2041-8-8	8646-8-8-NICU	157
4-2081-4-2	8645-4-2-NICU	157
4-2081-6-4	8645-6-4-NICU	157
4-2081-8-4	8645-8-4-NICU	157
4-2081-8-6	8645-8-6-NICU	157
4-2081-12-8	8645-12-8-NICU	157
4-2081-16-8	8645-16-8-NICU	157
4-2081-16-12	8645-16-12-NICU	157
4-2082-2	8644-2-NICU	156
4-2082-4	8644-4-NICU	156
4-2082-6	8644-6-NICU	156
4-2082-8	8644-8-NICU	156
4-2082-2-2	8649-2-2-NICU	Call for Details
4-2083-4-2	8649-4-2-NICU	Call for Details
4-2083-4-4	8649-4-2-NICU	Call for Details
4-2083-6-4	8649-6-4-NICU	Call for Details
4-2083-6-6	8649-6-6-NICU	Call for Details
4-2083-8-4	8649-8-4-NICU	Call for Details
4-2083-8-6	8649-8-6-NICU	Call for Details
4-2083-8-8	8649-8-8-NICU	Call for Details
4-2083-12-12	8649-12-12-NICU	Call for Details
4-2083-16-16	8649-16-16-NICU	Call for Details
4-2215-5-8	8637-5-8-NICU	153
4-2215-6-5	8637-6-5-NICU	153
4-2215-8-10	8637-8-10-NICU	153
4-2215-8-12	8637-8-12-NICU	153
4-2215-10-8	8637-10-8-NICU	153
4-2215-10-12	8637-10-12-NICU	153
4-2215-12-10	8637-12-10-NICU	153

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-2215-12-16	8637-12-16-NICU	153
4-2215-16-20	8637-16-20-NICU	153
4-2215-24-20	8637-24-20-NICU	153
4-221501-6-4	8639-6-4-NICU	154
4-221501-8-4	8639-8-4-NICU	154
4-221501-8-6	8639-8-6-NICU	154
4-221501-10-6	8639-10-6-NICU	154
4-221501-12-6	8639-12-6-NICU	154
4-221501-12-8	8639-12-8-NICU	154
4-221501-16-6	8639-16-6-NICU	154
4-221501-16-10	8639-16-8-NICU	154
4-221501-16-10	8639-16-10-NICU	154
4-221501-16-12	8639-16-12-NICU	154
4-221501-20-16	8639-20-16-NICU	154
4-411-4	EF-1488A-0404	69
4-411-5	EF-1488A-0505	69
4-411-6	EF-1488A-0606	69
4-411-8	EF-1488A-0808	69
4-411-10	EF-1488A-1010	69
4-411-12	EF-1488A-1212	69
4-411-16	EF-1488A-1616	69
4-411-20	EF-1488A-2020	69
4-411-24	EF-1488A-2424	69
4-411-32	EF-1488A-3232	69
4-411-40	EF-1488A-4040	69
4-411-48	EF-1488A-4848	69
4-4411-4	EF-1488ACR-0404	Call for Details
4-4411-4-5	EF-1488ACR-0405	Call for Details
4-4411-5	EF-1488ACR-0505	Call for Details
4-4411-6	EF-1488ACR-0606	Call for Details
4-4411-6-8	EF-1488ACR-0608	Call for Details
4-4411-8-6	EF-1488ACR-0806	Call for Details
4-4411-8	EF-1488ACR-0808	Call for Details
4-4411-8-10	EF-1488ACR-0810	Call for Details
4-4411-10-8	EF-1488ACR-1008	Call for Details
4-4411-10	EF-1488ACR-1010	Call for Details
4-4411-10-12	EF-1488ACR-1012	Call for Details
4-4411-12-10	EF-1488ACR-1210	Call for Details
4-4411-12	EF-1488ACR-1212	Call for Details
4-4411-14-12	EF-1488ACR-1412	Call for Details
4-4411-16	EF-1488ACR-1616	Call for Details
4-4411-20	EF-1488ACR-2020	Call for Details
4-4411-20-24	EF-1488ACR-2024	Call for Details
4-4411-24	EF-1488ACR-2424	Call for Details
4-4411-32	EF-1488ACR-3232	Call for Details
4-4721-4-4	EF-1600A-0404	107
4-4721-5-4	EF-1600A-0504	107

178



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-4721-6-4	EF-1600A-0604	107
4-4721-6-6	EF-1600A-0606	107
4-4721-8-6	EF-1600A-0806	107
4-4721-8-8	EF-1600A-0808	107
4-4721-10-8	EF-1600A-1008	107
4-4721-10	EF-1600A-1010	107
4-4721-12-8	EF-1600A-1208	107
4-4721-12	EF-1600A-1212	107
4-4721-14-12	EF-1600A-1412	Call for Details
4-4721-16-12	EF-1600A-1612	Call for Details
4-4721-16	EF-1600A-1616	107
4-4721-20-16	EF-1600A-2016	Call for Details
4-4721-20	EF-1600A-2020	107
4-4721-24-20	EF-1600A-2420	Call for Details
4-4721-24	EF-1600A-2424	107
4-4721-32	EF-1600A-3232	107
4-4722-4-4	EF-1600MP-0404	110
4-4722-6-4	EF-1600MP-0604	110
4-4722-6-6	EF-1600MP-0606	110
4-4722-6-8	EF-1600MP-0608	110
4-4722-8-8	EF-1600MP-0808	110
4-4722-8-10	EF-1600MP-0810	110
4-4722-12-12	EF-1600MP-1212	110
4-4722-16-12	EF-1600MP-1612	110
4-4722-16-16	EF-1600MP-1616	110
4-4722-20-20	EF-1600MP-2020	110
4-4722-24-24	EF-1600MP-2424	110
4-4722-32-32	EF-1600MP-3232	110
4-4730-4-4	EF-1602A-0404	Call for Details
4-4730-5-4	EF-1602A-0504	Call for Details
4-4730-6-4	EF-1602A-0604	Call for Details
4-4730-6-6	EF-1602A-0606	119
4-4730-8-6	EF-1602A-0806	Call for Details
4-4730-8-8	EF-1602A-0808	119
4-4730-10-8	EF-1602A-1008	119
4-4730-10	EF-1602A-1010	119
4-4730-12-8	EF-1602A-1208	Call for Details
4-4730-12	EF-1602A-1212	119
4-4730-14-12	EF-1602A-1412	Call for Details
4-4730-16-12	EF-1602A-1612	Call for Details
4-4730-16	EF-1602A-1616	119
4-4730-20-16	EF-1602A-2016	Call for Details
4-900599-2	8647-2-NICU	156
4-900599-4	8647-4-NICU	156
4-900599-6	8647-6-NICU	156
4-900599-8	8647-8-NICU	156
4-900599-10	8647-10-NICU	156

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4-900599-12	8647-12-NICU	156
4-900599-16	8647-16-NICU	156
4-FF1066-6-4	8643-6-4-NICU	155
4-FF1066-8-4	8643-8-4-NICU	155
4-FF1066-8-6	8643-8-6-NICU	155
4-FF1066-10-6	8643-10-6-NICU	155
4-FF1066-12-6	8643-12-6-NICU	155
4-FF1066-12-8	8643-12-8-NICU	155
4-FF1066-16-6	8643-16-6-NICU	155
4-FF1066-16-8	8643-16-8-NICU	155
4-FF1066-16-10	8643-16-10-NICU	155
4-FF1066-16-12	8643-16-12-NICU	155
4-FF1066-20-16	8643-20-16-NICU	155
401-4B	EF-B1488G-0404	Call for Details
401-5B	EF-B1488G-0505	Call for Details
401-6B	EF-B1488G-0606	Call for Details
401-8B	EF-B1488G-0808	Call for Details
401-10B	EF-B1488G-1010	Call for Details
401-12B	EF-B1488G-1212	Call for Details
41-190885-1/8-4	EF-SM1602C-0204	122
41-190885-1/4-6	EF-SM1602C-0406	122
41-190885-3/8-6	EF-SM1602C-0606	122
41-190885-3/8-8	EF-SM1602C-0608	122
41-190885-1/2-12	EF-SM1602C-0812	122
41-190885-3/4-12	EF-SM1602C-1212	122
41-190885-3/4-16	EF-SM1602C-1216	122
41-190885-1-16	EF-SM1602C-1616	122
41-190885-1 1/4-16	EF-SM1602C-2016	Call for Details
41-190909-1/8-4	EF-SM1600C-0204	113
41-190909-1/4-6	EF-SM1600C-0406	113
41-1909-3/8-6	EF-SM1600C-0606	113
41-190909-3/8-8	EF-SM1600C-0608	113
41-190909-1/2-12	EF-SM1600C-0812	113
41-190909-3/4-16	EF-SM1600C-1216	113
41-190909-1-16	EF-SM1600C-1616	113
41-190909-1-20	EF-SM1600C-1620	113
41-190909-1 1/4-16	EF-SM1600C-2016	113
41-190909-1 1/4-20	EF-SM1600C-2020	113
41-190909-1 1/4-24	EF-SM1600C-2024	113
41-190909-1 1/2-32	EF-SM1600C-2432	113
41-190909-2-32	EF-SM1600C-3232	113
41-191304-1/4-6	90EF-SM1600CL-0406	116
41-191304-3/8-8	90EF-SM1600CL-0608	116
41-191304-1/2-12	90EF-SM1600CL-0812	116
41-191304-3/4-16	90EF-SM1600CL-1216	116
41-191304-1-16	90EF-SM1600CL-1616	116
41-191304-1-20	90EF-SM1600CL-1620	116



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
41-191304-1 1/4-20	90EF-SM1600CL-2020	116
41-191304-1 1/4-24	90EF-SM1600CL-2024	116
41-191304-1 1/2-32	90EF-SM1600CL-2432	116
41-191304-2-32	90EF-SM1600CL-3232	116
41-191305-6	90ELB-SM1600D-0606	117
41-191305-8	90ELB-SM1600D-0808	117
41-191305-12	90ELB-SM1600D-1212	117
41-191305-16	90ELB-SM1600D-1616	117
41-191305-20	90ELB-SM1600D-2020	117
41-191305-24	90ELB-SM1600D-2424	117
41-191305-32	90ELB-SM1600D-3232	117
41-191307-1/4-6	90EF-SM1602CL-0406	124
41-191307-3/8-8	90EF-SM1602CL-0608	124
41-191307-1/2-12	90EF-SM1602CL-0812	124
41-191307-3/4-12	90EF-SM1602CL-1212	124
41-191307-3/4-16	90EF-SM1602CL-1216	124
41-191307-1-16	90EF-SM1602CL-1616	124
41-191308-6	90ELB-SM1602D-0606	126
41-191308-8	90ELB-SM1602D-0808	126
41-191308-12	90ELB-SM1602D-1212	126
41-191308-16	90ELB-SM1602D-1616	126
41-4721-4-4	EF-SM1600A-0404	108
41-44721-5-4	EF-SM1600A-0504	108
41-4721-6-4	EF-SM1600A-0604	108
41-4721-6-6	EF-SM1600A-0606	108
41-4721-8-6	EF-SM1600A-0806	108
41-4721-8-8	EF-SM1600A-0808	108
41-4721-10-8	EF-SM1600A-1008	108
41-4721-10	EF-SM1600A-1010	108
41-4721-12-8	EF-SM1600A-1208	108
41-4721-12	EF-SM1600A-1212	108
41-4721-14-12	EF-SM1600A-1412	Call for Details
41-4721-16-12	EF-SM1600A-1612	Call for Details
41-4721-16	EF-SM1600A-1616	108
41-4721-20-16	EF-SM1600A-2016	Call for Details
41-4721-20	EF-SM1600A-2020	108
41-4721-24-20	EF-SM1600A-2420	Call for Details
41-4721-24	EF-SM1600A-2424	108
41-4721-32	EF-SM1600A-3232	108
41-4730-4-4	EF-SM1602A-0404	Call for Details
41-4730-5-4	EF-SM1602A-0504	Call for Details
41-4730-6-4	EF-SM1602A-0604	Call for Details
41-4730-6-6	EF-SM1602A-0606	120
41-4730-8-6	EF-SM1602A-0806	Call for Details
41-4730-8-8	EF-SM1602A-0808	120
41-4730-10-8	EF-SM1602A-1008	120
41-4730-10	EF-SM1602A-1010	120

Aeroquip Part No.	Hydrasearch Part No.	Page No.
41-4730-12-8	EF-SM1602A-1208	Call for Details
41-4730-12	EF-SM1602A-1212	120
41-4730-14-12	EF-SM1602A-1412	Call for Details
41-4730-16-12	EF-SM1602A-1612	Call for Details
41-4730-16-16	EF-SM1602A-1616	120
41-4730-20-16	EF-SM1602A-2016	Call for Details
411-4B	EF-B1488A-0404	70
411-5B	EF-B1488A-0505	70
411-6-4B	EF-B1488A-0604	70
411-6B	EF-B1488A-0606	70
411-8B	EF-B1488A-0808	70
411-10-8B	EF-B1488A-1008	70
411-10B	EF-B1488A-1010	70
411-12-10B	EF-B1488A-1210	70
411-12B	EF-B1488A-1212	70
411-16-12B	EF-B1488A-1612	70
411-16B	EF-B1488A-1616	70
411-20B	EF-B1488A-2020	70
411-24B	EF-B1488A-2424	70
411-32B	EF-B1488A-3232	70
411-190911-3/8-10	EF-MSS1488C-0610	76
411-190911-1/2-12	EF-MSS1488C-0812	76
411-190911-3/4-16	EF-MSS1488C-1216	76
411-190911-1-20	EF-MSS1488C-1620	76
412-2-4B	EF-B1488MP-0204	68
412-4-4B	EF-B1488MP-0404	68
412-4-5B	EF-B1488MP-0405	68
412-4-6B	EF-B1488MP-0406	68
412-6-8B	EF-B1488MP-0608	68
412-8-10B	EF-B1488MP-0810	68
412-12-12B	EF-B1488MP-1212	68
412-16-16B	EF-B1488MP-1616	68
412-20-20B	EF-B1488MP-2020	68
412-24-24B	EF-B1488MP-2424	68
412-32-32B	EF-B1488MP-3232	68
412-190093-16	90ELB-MSS1488D-1616	106
412-190093-20	90ELB-MSS1488D-2020	106
412-190093-32	90ELB-MSS1488D-3232	106
412-190093-40	90ELB-MSS1488D-4040	106
412-190103-3/4-20	90EF-MSS1488FL4-1220	Call for Details
412-1091031 1/2-32	90EF-MSS1488FL4-2432	Call for Details
412-190109-1/2-16	EF-MSS1488F5-0816	86
412-190109-3/4-20	EF-MSS1488F5-1220	86
412-190109-1-24	EF-MSS1488F5-1624	86
412-190109-1 1/4-32	EF-MSS1488F5-2032	86
412-190109-1 1/2-32	EF-MSS1488F5-2432	86
412-190109-2-32	EF-MSS1488F5-3232	86



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
412-190109-2-32	EF-MSS1488F5-3232	86
412-190109-2-40	EF-MSS1488F5-3240	86
412-190124-3/4-20	90EF-MSS1488FL5-1220	96
412-190124-1 1/4-32	90EF-MSS1488FL5-2032	96
412-190124-1 1/2-32	90EF-MSS1488FL5-2432	96
412190124-2-32	90EF-MSS1488FL5-3232	96
412-190127-1 1/2-32	EF-MSS1488A7-2432	Call for Details
412-190717-40	90ELB-449E-40-SS	28
412-190717-48	90ELB-449E-48-SS	28
412-190767-2 1/2-40	EF-449A4-2.5-40-SS	16
412-190767-2 1/2-48	EF-449A4-2.5-48-SS	16
412-190767-3-48	EF-449A4-3-48-SS	16
412-190767-4-64	EF-449A4-4-64-SS	16
412-190814-2-1/2-40	EF-449A1-2.5-40-SS	11
413-190769-2-40	90EF-449B4-2-40-BSS	23
413-190769-2 1/2-40	90EF-449B4-2.5-40-BSS	23
413-190769-2-1/2-48	90EF-449B4-2.5-48-BSS	23
413-190769-3-48	90EF-449B4-3-48-BSS	23
413-190769-3-1/2-64	90EF-449B4-3.5-64-BSS	23
413-190769-4-64	90EF-449B4-4-64-BSS	23
44-411-40	EF-B1488A-4040	70
44-411-48	EF-B1488A-4848	70
44-412-40-40	EF-B1488MP-4040	68
44-412-48-48	EF-B1488MP-4848	68
4414-4B	EF-B1488MF-0404	Call for Details
4414-5B	EF-B1488MF-0505	Call for Details
4414-6B	EF-B1488MF-0606	Call for Details
4414-8B	EF-B1488MF-0808	Call for Details
4414-10B	EF-B1488MF-1010	Call for Details
4414-12B	EF-B1488MF-1212	Call for Details
4414-16B	EF-B1488MF-1616	Call for Details
4414-20B	EF-B1488MF-2020	Call for Details
4414-24B	EF-B1488MF-2424	Call for Details
4414-32B	EF-B1488MF-3232	Call for Details
446-202142-1/4-6	4307-1-6-NICU	145
446-202142-1/4-8	4307-1-8-NICU	145
446-202142-1/2-8	4307-3-8-NICU	145
446-202142-1/2-12	4307-3-12-NICU	145
446-202142-3/4-16	4307-4-16-NICU	145
446-202142-1-20	4307-5-20-NICU	145
446-202142-1-1/2-32	4307-7-32-NICU	145
446-202142-2-32	4307-8-32-NICU	145
446-202232-1-16	4307-116-5-NICU	146
459-190124-2-32	90EF-MMB1488FL5-3232	Call for Details
4721-4-4S	EF-S1600-0404	Call for Details
4721-5-4S	EF-S1600-0504	Call for Details
4721-6-4S	EF-S1600-0604	Call for Details

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4721-6-6S	EF-S1600-0606	Call for Details
4721-8-6S	EF-S1600-0806	Call for Details
4721-8-8S	EF-S1600-0808	Call for Details
4721-10-8S	EF-S1600-1008	Call for Details
4721-10S	EF-S1600-1010	Call for Details
4721-12-8S	EF-S1600-1208	Call for Details
4721-12-10S	EF-S1600-1210	Call for Details
4721-12S	EF-S1600-1212	Call for Details
4721-14-12S	EF-S1600-1412	Call for Details
4721-16-12S	EF-S1600-1612	Call for Details
4721-16S	EF-S1600-1616	Call for Details
4721-20S	EF-S1600-2020	Call for Details
4721-24S	EF-S1600-2424	Call for Details
4721-32S	EF-S1600-3232	Call for Details
4722-4-4S	EF-S1600MP-0404	Call for Details
4722-6-4S	EF-S1600MP-0604	Call for Details
4722-6-6S	EF-S1600MP-0606	Call for Details
4722-6-8S	EF-S1600MP-0608	Call for Details
4722-8-8S	EF-S1600MP-0808	Call for Details
4722-8-10S	EF-S1600MP-0810	Call for Details
4722-12-12S	EF-S1600MP-1212	Call for Details
4722-16-12S	EF-S1600MP-1612	Call for Details
4722-16-16S	EF-S1600MP-1616	Call for Details
4722-20-20S	EF-S1600MP-2020	Call for Details
4722-24-24S	EF-S1600MP-2424	Call for Details
4722-32-32S	EF-S1600MP-3232	Call for Details
4725-4-4S	EF-S1600MF-0404	Call for Details
4725-5-4S	EF-S1600MF-0504	Call for Details
4725-6-4S	EF-S1600MF-0604	Call for Details
4725-6-6S	EF-S1600MF-0606	Call for Details
4725-8-6S	EF-S1600MF-0806	Call for Details
4725-8-8S	EF-S1600MF-0808	Call for Details
4725-10-8S	EF-S1600MF-1008	Call for Details
4725-10S	EF-S1600MF-1010	Call for Details
4725-12-8S	EF-S1600MF-1208	Call for Details
4725-12-10S	EF-S1600MF-1210	Call for Details
4725-12S	EF-S1600MF-1212	Call for Details
4725-14-12S	EF-S1600MF-1412	Call for Details
4725-16-12S	EF-S1600MF-1612	Call for Details
4725-16S	EF-S1600MF-1616	Call for Details
4725-20S	EF-S1600MF-2020	Call for Details
4725-24S	EF-S1600MF-2424	Call for Details
4729-6-6S	EF-S1602MP-0606	Call for Details
4729-6-8S	EF-S1602MP-0608	Call for Details
4729-8-8S	EF-S1602MP-0808	Call for Details
4729-12S	EF-S1602MP-1212	Call for Details
4729-16S	EF-S1602MP-1616	Call for Details



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
4730-6-6S	EF-S1602A-0606	Call for Details
4730-8-6S	EF-S1602A-0806	Call for Details
4730-8-8S	EF-S1602A-0808	Call for Details
4730-10-8S	EF-S1602A-1008	Call for Details
4730-12S	EF-S1602A-1212	Call for Details
4730-16S	EF-S1602A-1616	Call for Details
480-190911-3/4-16	EF-T1488C-1216	Call for Details
188-190093-32	90ELB-T1488D-3232	Call for Details
488-190109-2-32	EF-T1488F5-3232	Call for Details
50-190109-1 1/2-32	EF-CS1488F5-2432	Call for Details
50-190109-2-32	EF-CS1488F5-3232	Call for Details
500063-3	TP-3FSB	135
500063-3-1/2	TP-3.5FSB	135
500063-4	TP-4FSB	135
500063-5	TP-5FSB	136
500063-6	TP-6FSB	136
500063-8	TP-8FSB	136
500063-10	TP-10FSB	136
500189-3	TP-3MSB	133
500189-3-1/2	TP-3.5MSB	133
500189-4	TP-4MSB	133
500189-5	TP-5MSB	134
500189-6	TP-6MSB	134
500189-8	TP-8MSB	134
500189-10	TP-10MSB	134
504016-2-1/2D	A-SADL1-25-FLT-A/L	See Cat. 407
504016-4D	A-SADL1-4-FLT-A/L	See Cat. 407
504016-6D	A-SADL1-6-FLT-A/L	See Cat. 407
504016-7D	A-SADL1-7-FLT-A/L	See Cat. 407
504086-7D	A-SADL1-7-FLT-B/U	See Cat. 407
504088-4	A-CLMP-4-R/L	See Cat. 407
504090-2 1/2D	A-FIT/RL1-25-FLT	See Cat. 407
504090-4D	A-FIT/RL1-40-FLT	See Cat. 407
504090-6D	A-FIT/RL1-60-FLT	See Cat. 407
504090-7D	A-FIT/RL1-70-FLT	See Cat. 407
504093-4-7	B-CPL/ROB-FE-7FS	See Cat. 407
504093-5-7	B-CPL/ROB-FE-6FS	See Cat. 407
66-190016-1/2-16	EF-B1488F4-0816	84
66-190016-3/4-20	EF-B1488F4-1220	84
66-190016-1-24	EF-B1488F4-1624	84
66-190016-1 1/4-32	EF-B1488F4-2032	84
66-190016-1 1/2-32	EF-B1488F4-2432	84
66-190016-2-32	EF-B1488F4-3232	84
66-190016-2-40	EF-B1488F4-3240	84
66-190016-2 1/2-40	EF-B1488F4-4040	84
66-190016-2 1/2-48	EF-B1488F4-4048	84
66-190016-3-48	EF-B1488F4-4848	84

Aeroquip Part No.	Hydrasearch Part No.	Page No.
66-190093-16	90ELB-B1488D-1616	105
66-190093-20	90ELB-B1488D-2020	105
66-190093-24	90ELB-B1488D-2424	105
66-190093-32	90ELB-B1488D-3232	105
66-190093-40	90ELB-B1488D-4040	105
66-190093-48	90ELB-B1488D-4848	105
66-190103-1/2-16	90EF-B1488FL4-0816	93
66-190103-3/4-16	90EF-B1488FL4-1216	93
66-190103-3/4-20	90EF-B1488FL4-1220	93
66-190103-1-16	90EF-B1488FL4-1616	93
66-190103-1-24	90EF-B1488FL4-1624	93
66-190103-1 1/4-32	90EF-B1488FL4-2032	93
66-190103-1 1/2-32	90EF-B1488FL4-2432	93
66-190103-2-32	90EF-B1488FL4-3232	93
66-190103-2-40	90EF-B1488FL4-3240	93
66-190103-2 1/2-40	90EF-B1488FL4-4040	93
66-190103-2 1/2-48	90EF-B1488FL4-4048	93
66-190103-3-48	90EF-B1488FL4-4848	93
66-190109-1/2-16	EF-B1488F5-0816	87
66-190109-3/4-20	EF-B1488F5-1220	87
66-190109-1-24	EF-B1488F5-1624	87
66-190109-1 1/4-32	EF-B1488F5-2032	87
66-190109-1 1/2-32	EF-B1488F5-2432	87
66-190109-2-32	EF-B1488F5-3232	87
66-190109-2-40	EF-B1488F5-3240	87
66-190109-2 1/2-40	EF-B1488F5-4040	87
66-190109-2 1/2-48	EF-B1488F5-4048	87
66-190109-3-48	EF-B1488F5-4848	87
66-190124-1/2-16	90EF-B1488FL5-0816	97
66-190124-3/4-20	90EF-B1488FL5-1220	97
66-190124-1-24	90EF-B1488FL5-1624	97
66-190124-1 1/4-32	90EF-B1488FL5-2032	97
66-190124-1 1/2-32	90EF-B1488FL5-2432	97
66-190124-2-32	90EF-B1488FL5-3232	97
66-190124-2-40	90EF-B1488FL5-3240	97
66-190124-2 1/2-40	90EF-B1488FL5-4040	97
66-190124-2 1/2-48	90EF-B1488FL5-4048	97
66-190124-3-48	90EF-B1488FL5-4848	97
66-190911-3/4-16	EF-B1488C-1216	74
66-190911-1-20	EF-B1488C-1620	74
66-190911-1 1/4-24	EF-B1488C-2024	74
66-190911-1 1/2-32	EF-B1488C-2432	74
67-190016-1/2-16	EF-MB1488F4-0816	Call for Details
67-190016-3/4-20	EF-MB1488F4-1220	Call for Details
67-190016-1-24	EF-MB1488F4-1624	Call for Details
67-190016-1-1/4-32	EF-MB1488F4-2032	Call for Details
67-190016-1-1/2-32	EF-MB1488F4-2432	Call for Details

182



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
67-190016-2-32	EF-MB1488F4-3232	Call for Details
67-190016-2-40	EF-MB1488F4-3240	Call for Details
67-190016-2-1/2-40	EF-MB1488F4-4040	Call for Details
67-190016-2-1/2-48	EF-MB1488F4-4048	Call for Details
67-190016-3-48	EF-MB1488F4-4848	Call for Details
67-190093-16	90ELB-MB1488D-1616	104
67-190093-20	90ELB-MB1488D-2020	104
67-190093-24	90ELB-MB1488D-2424	104
67-190093-32	90ELB-MB1488D-3232	104
67-190093-40	90ELB-MB1488D-4040	104
67-190093-48	90ELB-MB1488D-4848	104
67-190109-3/4-20	EF-MB1488F5-1220	85
67-190109-1-24	EF-MB1488F5-1624	85
67-190109-1 1/4-32	EF-MB1488F5-2032	85
67-190109-1 1/2-32	EF-MB1488F5-2432	85
67-190109-2-32	EF-MB1488F5-3232	85
67-190109-2-40	EF-MB1488F5-3240	85
67-190124-1/2-16	90EF-MB1488FL5-0816	95
67-190124-3/4-20	90EF-MB1488FL5-1220	95
67-190124-1-24	90EF-MB1488FL5-1624	95
67-190124-1 1/4-32	90EF-MB1488FL5-2032	95
67-190124-1 1/2-32	90EF-MB1488FL5-2432	95
67-190124-2-32	90EF-MB1488FL5-3232	95
67-190911-3/4-16	EF-MB1488C-1216	73
67-190911-1-20	EF-MB1488C-1620	73
67-190911-1 1/4-24	EF-MB1488C-2024	73
67-190911-1 1/2-32	EF-MB1488C-2432	73
72078-2 1/2-40	A-ADP-25FS-25F	See Cat. 407
72078-4-64D	A-ADP-4FS-4F	See Cat. 407
72078-6-64D	A-ADP-4FS-6F	See Cat. 407
72078-6-7D	A-ADP-7FS-6F	See Cat. 407
72078-6-96D	A-ADP-6FS-6F	See Cat. 407
72078-7-7D	A-ADP-7FS-7F	See Cat. 407
72078-8-7D	A-ADP-7FS-8F	See Cat. 407
72430-2 1/2D	A-SADL-25-FLT-A/L	See Cat. 407
72430-4D	A-SADL-4-FLT-A/L	See Cat. 407
72430-6D	A-SADL-6-FLT-A/L	See Cat. 407
72430-7D	A-SADL-7-FLT-A/L	See Cat. 407
72460-7D	A-SADL-7-FLT-B/U	See Cat. 407
72461-2 1/2D	A-FIT/RL-25-FLT	See Cat. 407
72461-4D	A-FIT/RL-4-FLT	See Cat. 407
72461-6D	A-FIT/RL-6-FLT	See Cat. 407
72461-7D	A-FIT/RL-7-FLT	See Cat. 407
72461-2 1/2-40D	A-ADP-25F-25MS	See Cat. 407
73537-4-64D	A-ADP-4F-4MS	See Cat. 407
73537-6-64D	A-ADP-6F-4MS	See Cat. 407
73537-6-7D	A-ADP-6F-7MS	See Cat. 407

Aeroquip Part No.	Hydrasearch Part No.	Page No.
73537-6-96-D	A-ADP-6F-6MS	See Cat. 407
73537-7-40D	A-ADP/TPR-7F-25MS	See Cat. 407
73537-7-7D	A-ADP-7F-7MS	See Cat. 407
73537-7-96D	A-ADP-7F-6MS	See Cat. 407
73537-8-40D	A-ADP/TPR-8F-25MS	See Cat. 407
73537-8-7D	A-ADP-8F-7MS	See Cat. 407
81-190093-3232	90ELB-CSS1488D-3232	Call for Details
82-190124-3232	90EF-CSS1488FL5-3232	Call for Details
900758-1-1/4	B-CLMP-1.25S	132
900758-1-1/2	B-CLMP-1.5S	132
900758-2	B-CLMP-2S	132
900758-2-1/2	B-CLMP-2.5S	132
900758-3	B-CLMP-3S	132
900758-3-1/2	B-CLMP-3.5S	132
900758-4	B-CLMP-4S	132
900758-5	B-CLMP-5S	132
900758-6	B-CLMP-6S	132
900758-8	B-CLMP-8S	132
900758-10	B-CLMP-10S	132
900758-12	B-CLMP-12S	132
900762-15	C18380	132
900762-17	C18293	132
900762-18	C18302	132
900762-19	C18335	132
900762-21	C18290	132
900762-22	C18381	132
900762-23	C18336	132
900762-26	C18364	132
900762-27	C18382	132
900762-28	C38383	132
900762-29	C18391	132
900762-30	C18392	132
900858-2 1/2	A-CLMP-25S	See Cat. 407
900858-4	A-CLMP-4S	See Cat. 407
900858-6	A-CLMP-6S	See Cat. 407
900858-7	A-CLMP-7S	See Cat. 407
93-190911-1/8-6	EF-MB1488C-0206	75
93-190911-1/4-8	EF-MB1488C-0408	75
93-190911-3/8-10	EF-MB1488C-0610	75
93-190911-1/2-12	EF-MB1488C-0812	75
93-191301-1/8-6	90EF-BM1488CL-0206	78
93-191301-1/4-8	90EF-BM1488CL-0408	78
93-191301-3/8-10	90EF-BM1488CL-0610	78
93-191301-1/2-12	90EF-BM1488CL-0812	78
93-191301-3/4-16	90EF-BMC1488CL-1216	78
93-191301-1-20	90EF-BMC1488CL-1620	78
93-191301-1 1/4-24	90EF-BMC1488CL-2024	78



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
93-191301-1 1/2-32	90EF-BMC1488CL-2432	78
93-191302-6	90ELB-BMC1488D-0606	103
93-191302-8	90ELB-BMC1488D-0808	103
93-191302-10	90ELB-BMC1488D-1010	103
93-191302-12	90ELB-BMC1488D-1212	103
93-191302-16	90ELB-BMC1488D-1616	103
AE38042-0808	EF-8-150F-B16.5-BS	Call for Details
AE38042-1010	EF-10-150F-B16.5-BS	Call for Details
AE38042-8080	EF-5-150F-B16.5-BS	Call for Details
AE38042-9696	EF-6-150F-B16.5-BS	Call for Details
AE38047-0808	90EF-8-150F-B16.5-SS	Call for Details
AE38047-1010	90EF-10-150F-B16.5-SS	Call for Details
AE38047-8080	90EF-5-150F-B16.5-SS	Call for Details
AE38047-9696	90EF-6-150F-B16.5-SS	Call for Details
AE38122-2432	90EF-H1488CL-2432	Call for Details
AE38113-2424	EF-HM1489C-2424	Call for Details
FB-7296-01	H/A-7-REC-104L	See Cat. 407
FC132-40	HS4182-40	2
FC132-48	HS4182-48	2
FC132-64	HS4182-64	2
FC133-06	HS133-06	4
FC133-08	HS133-08	4
FC133-12	HS133-12	4
FC133-16	HS133-16	4
FC133-20	HS133-20	4
FC133-24	HS133-24	4
FC133-32	HS133-32	4
FC137-12	ISC-12C	138
FC137-16	ISC-16C	138
FC137-20	ISC-20C	138
FC137-24	ISC-24C	138
FC137-32	ISC-32C	138
FC267-96	HOS-22240-6B	5
FC5048-3232-188	EF-1546A5-2-40	35
FC5048-4048-188	EF-1546A5-2.5-48	35
FC5048-4848-188	EF-1546A5-3-48	35
FC5048-6464-188	EF-1546A5-4-64	35
FC5048-6464-416	EF-1546A5-4-64-T	Call for Details
FC5309-3240-188	EF-1546A4-2-40	34
FC5309-4040-188	EF-1546A4-2.5-40	34
FC5309-4040-410	EF-1546A4-2.5-40SS	Call for Details
FC5309-4048-188	EF-1546A4-2.5-48	34
FC5309-4848-188	EF-1546A4-3-48	34
FC5309-5664-188	EF-1546A4-3.5-64	34
FC5309-6464-188	EF-1546A4-4-64	34
FC5309-6464-416	EF-1546A4-4-64-T	Call for Details
FC7100-0606-4	EF-1489A-0606	60

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FC7100-0806-4	EF-1489A-0806	60
FC7100-0808-4	EF-1489A-0808	60
FC7100-1008-4	EF-1489A-1008	60
FC7100-1208-4	EF-1489A-1208	60
FC7100-1212-4	EF-1489A-1212	60
FC7100-1412-4	EF-1489A-1412	60
FC7100-1612-4	EF-1489A-1612	60
FC7100-1616-4	EF-1489A-1616	61
FC7100-2016-4	EF-1489A-2016	61
FC7100-2020-4	EF-1489A-2020	61
FC7100-2420-4	EF-1489A-2420	61
FC7100-2424-4	EF-1489A-2424	61
FC7100-3232-4	EF-1489A-3232	61
FC7180-0406-4	EF-1489C-0406	62
FC7180-0408-4	EF-1489C-0408	62
FC7180-0606-4	EF-1489C-0606	62
FC7180-0608-4	EF-1489C-0608	62
FC7180-0612-4	EF-1489C-0612	62
FC7180-0808-4	EF-1489C-0808	62
FC7180-0812-4	EF-1489C-0812	62
FC7180-0816-4	EF-1489C-0816	63
FC7180-1216-4	EF-1489C-1216	63
FC7180-1216-411	EF-SS1489C-1216	Call for Details
FC7180-1616-4	EF-1489C-1616	63
FC7180-1620-4	EF-1489C-1620	63
FC7180-2016-4	EF-1489C-2016	63
FC7180-2020-4	EF-1489C-2020	63
FC7180-2024-4	EF-1489C-2024	63
FC7180-2424-4	EF-1489C-2424	63
FC7180-2432-4	EF-1489C-2432	63
FC7180-3232-4	EF-1489C-3232	63
FC7182-0406-4	90EF-1489CL-0406	64
FC7182-0408-4	90EF-1489CL-0408	64
FC7182-0608-4	90EF-1489CL-0608	64
FC7182-0812-4	90EF-1489CL-0812	64
FC7182-1216-4	90EF-1489CL-1216	65
FC7182-1616-4	90EF-1489CL-1616	65
FC7182-1620-4	90EF-1489CL-1620	65
FC7182-2020-4	90EF-1489CL-2020	65
FC7182-2024-4	90EF-1489CL-2024	65
FC7182-2424-4	90EF-1489CL-2424	65
FC7182-2432-4	90EF-1489CL-2432	65
FC7182-3232-4	90EF-1489CL-3232	65
FC7183-0606-4	90ELB-1489D-0606	66
FC7183-0808-4	90ELB-1489D-0808	66
FC7183-1212-4	90ELB-1489D-1212	66
FC7183-1616-4	90ELB-1489D-1616	67



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FC7183-2020-4	90ELB-1489D-2020	67
FC7183-2424-4	90ELB-1489D-2424	67
FC7183-3232-4	90ELB-1489D-3232	67
FC7366-4040-412	EF-449A7-2.5-40-SS	Call for Details
FC7554-3240-188	90EF-1546B5-2-40	40
FC7554-4040-188	90EF-1546B5-2.5-40	40
FC7554-4048-188	90EF-1546B5-2.5-48	40
FC7554-4848-188	90EF-1546B5-3-48	40
FC7554-5664-188	90EF-1546B5-3.5-64	40
FC7554-6464-188	90EF-1546B5-4-64	40
FC7554-6464-416	90EF-1546B5-4-64-T	Call for Details
FC7750-0808-188	EF-8-150/400F	45
FC7750-0808-189	EF-8-150/400F	45
FC7750-1010-188	EF-10-150/400F	45
FC7750-1010-189	EF-10-150/400F	45
FC7750-8080-188	EF-5-150/400F	45
FC7750-8080-189	EF-5-150/400F	45
FC7750-8080-416	EF5-250F-T	Call for Details
FC7750-9696-188	EF-6-150/400F	45
FC7750-9696-189	EF-6-150/400F	45
FC7750-9696-410	EF-6-150/400F-SS	Call for Details
FC7751-0808-188	90EF-8-150/400F	51
FC7751-0808-189	90EF-8-150/400F	51
FC7751-1010-188	90EF-10-150/400F	51
FC7751-1010-189	90EF-10-150/400F	51
FC7751-8080-188	90EF-5-150/400F	51
FC7751-8080-189	90EF-5-150/400F	51
FC7751-8080-416	90EF-5-250F-T	Call for Details
FC7751-9696-188	90EF-6-150/400F	51
FC7751-9696-189	90EF-6-150/400F	51
FC7751-9696-416	90EF-6-250F-T	Call for Details
FC7752-0808-188	90EF-8MS-ER512	56
FC7752-1010-188	90EF-10MS-ER512	56
FC7752-1212-188	90EF-12MS-ER512	56
FC7752-8080-188	90EF-5MS-ER512	56
FC7752-9696-188	90EF-6MS-ER512	56
FC7753-0808-188	90EF-8FS-ER512	57
FC7753-1010-188	90EF-10FS-ER512	57
FC7753-1212-188	90EF-12FS-ER512	57
FC7753-8080-188	90EF-5FS-ER512	57
FC7753-9696-188	90EF-6FS-ER512	57
FC7754-0808-188	90ELB-8-ER512	58
FC7754-0808-410	90ELB-8-ER512-SS	59
FC7754-1010-188	90ELB-10-ER512	58
FC7754-1010-410	90ELB-10-ER512-SS	59
FC7754-1212-188	90ELB-12-ER512	58
FC7754-8080-188	90ELB-5-ER512	58

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FC7754-8080-410	90ELB-8-ER512-SS	59
FC7754-9696-188	90ELB-6-ER512	58
FC7754-9696-410	90ELB-6-ER512-SS	59
FC7754-9696-416	90ELB-6-ER512-T	Call for Details
FC7755-0808-188	EF-8MS-ER512	55
FC7755-1010-188	EF-10MS-ER512	55
FC7755-1212-188	EF-12MS-ER512	55
FC7755-8080-188	EF-5MS-ER512	55
FC7755-9696-188	EF-6MS-ER512	55
FC7780-0808-188	90EF-8-150F-B16.5	54
FC7780-0808-189	90EF-8-150F-B16.5	54
FC7780-1010-188	90EF-10-150F-B16.5	54
FC7780-1010-189	90EF-10-150F-B16.5	54
FC7780-1212-188	90EF-12-150F-B16.5	54
FC7780-1212-189	90EF-12-150F-B16.5	54
FC7780-8080-188	90EF-5-150F-B16.5	54
FC7780-8080-189	90EF-5-150F-B16.5	54
FC7780-8080-416	90EF-5-150F-B16.5-T	Call for Details
FC7780-9696-188	90EF-6-150F-B16.5	54
FC7780-9696-189	90EF-6-150F-B16.5	54
FC7781-0808-188	EF-8-150F-B16.5	48
FC7781-0808-189	EF-8-150F-B16.5	48
FC7781-0808-410	EF-8-150F-B16.5-SS	49
FC7781-1010-188	EF-10-150F-B16.5	48
FC7781-1010-189	EF-10-150F-B16.5	48
FC7781-1010-410	EF-10-150F-B16.5-SS	49
FC7781-1212-188	EF-12-150F-B16.5	48
FC7781-1212-189	EF-12-150F-B16.5	48
FC7781-8080-188	EF-5-150F-B16.5	48
FC7781-8080-189	EF-5-150F-B16.5	48
FC7781-8080-410	EF-5-150F-B16.5-SS	49
FC7781-9696-188	EF-6-150F-B16.5	48
FC778-19696-189	EF-6-150F-B16.5	48
FC7781-9696-410	EF-6-150F-B16.5-SS	49
FC7781-9696-416	EF-6-150F-B16.5-T	Call for Details
FC9056-0812-176	EF-1600A5-0812	111
FC9056-0812-463	EF-1600A5-0812	111
FC9056-0816-176	EF-1600A5-0816	111
FC9056-0816-463	EF-1600A5-0816	111
FC9056-1216-176	EF-1600A5-1216	111
FC9056-1216-463	EF-1600A5-1216	111
FC9056-1220-176	EF-1600A5-1220	111
FC9056-1220-463	EF-1600A5-1220	111
FC9056-1616-176	EF-1600A5-1616	111
FC9056-1616-463	EF-1600A5-1616	111
FC9056-1620-176	EF-1600A5-1620	111
FC9056-1620-463	EF-1600A5-1620	111



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FC9056-1624-176	EF-1600A5-1624	111
FC9056-1624-463	EF-1600A5-1624	111
FC9056-2024-176	EF-1600A5-2024	111
FC9056-2024-463	EF-1600A5-2024	111
FC9056-2032-176	EF-1600A5-2032	111
FC9056-2032-463	EF-1600A5-2032	111
FC9056-2432-176	EF-1600A5-2432	111
FC9056-2432-463	EF-1600A5-2432	111
FC9056-3232-176	EF-1600A5-3232	111
FC9056-3232-463	EF-1600A5-3232	111
FC9073-3240-265	EF-449C-2-40	24
FC9073-3240-375	EF-449C-2-40	24
FC9073-4048-265	EF-449C-2.5-48	24
FC90734048-375	EF-449C-2.5-48	24
FC9074-3240-265	90EF-449D-2-40	26
FC9074-3240-375	90EF-449D-2-40	26
FC9074-4048-265	90EF-449D-2.5-48	26
FC9074-4048-375	90EF-449D-2.5-48	26
FC9224-0812-176	90EF-1600B5-0812	112
FC9224-0812-463	90EF-1600B5-0812	112
FC9224-0816-176	90EF-1600B5-0816	112
FC9224-0816-463	90EF-1600B5-0816	112
FC9224-1216-176	90EF-1600B5-1216	112
FC9224-1216-463	90EF-1600B5-1216	112
FC9224-1220-176	90EF-1600B5-1220	112
FC9224-1220-463	90EF-1600B5-1220	112
FC9224-1616-176	90EF-1600B5-1616	112
FC9224-1616-463	90EF-1600B5-1616	112
FC9224-1620-176	90EF-1600B5-1620	112
FC9224-1620-463	90EF-1600B5-1620	112
FC9224-1624-176	90EF-1600B5-1624	112
FC9224-1624-463	90EF-1600B5-1624	112
FC9224-2024-176	90EF-1600B5-2024	112
FC9224-2024-463	90EF-1600B5-2024	112
FC9224-2032-176	90EF-1600B5-2032	112
FC9224-2032-463	90EF-1600B5-2032	112
FC9224-2432-176	90EF-1600B5-2432	112
FC9224-2432-463	90EF-1600B5-2432	112
FC9224-3232-176	90EF-1600B5-3232	112
FC9224-3232-463	90EF-1600B5-3232	112
FC9423-2032-44	EF-B1488EM-2032	99
FC9423-2032-66	EF-B1488EM-2032	99
FC9423-2432-44	EF-B1488EM-2432	99
FC9423-2432-66	EF-B1488EM-2432	99
FC9423-3232-44	EF-B1488EM-3232	99
FC9423-3232-66	EF-B1488EM-3232	99
FC9423-3240-44	EF-B1488EM-3240	99

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FC9423-3240-66	EF-B1488EM-3240	99
FC9423-4048-44	EF-B1488EM-4048	99
FC9423-4048-66	EF-B1488EM-4048	99
FC9424-2032-44	EF-B1488EF-2032	98
FC9424-2032-66	EF-B1488EF-2032	98
FC9424-2432-44	EF-B1488EF-2432	98
FC9424-2432-66	EF-B1488EF-2432	98
FC9424-3240-44	EF-B1488EF-3240	98
FC9424-3240-66	EF-B1488EF-3240	98
FC9424-4048-44	EF-B1488EF-4048	98
FC9424-4048-66	EF-B1488EF-4048	98
FC9425-2032-44	90ELB-B1488ELM-2032	101
FC9425-2032-66	90ELB-B1488ELM-2032	101
FC9425-2432-44	90ELB-B1488ELM-2432	101
FC9425-2432-66	90ELB-B1488ELM-2432	101
FC9425-3240-44	90ELB-B1488ELM-3240	101
FC9425-3240-66	90ELB-B1488ELM-3240	101
FC9425-4048-44	90ELB-B1488ELM-4048	101
FC9425-4048-66	90ELB-B1488ELM-4048	101
FC9426-2032-44	90ELB-B1488ELF-2032	100
FC9426-2032-66	90ELB-B1488ELF-2032	100
FC9426-2432-44	90ELB-B1488ELF-2432	100
FC9426-2432-66	90ELB-B1488ELF-2432	100
FC9426-3240-44	90ELB-B1488ELF-3240	100
FC9426-3240-66	90ELB-B1488ELF-3240	100
FC9426-4048-44	90ELB-B1488ELF-4048	100
FC9426-4048-66	90ELB-B1488ELF-4048	100
FC9527-3240-188	EF-1546A2-2-40	32
FC9527-3240-189	EF-1546A2-2-40	32
FC9527-4048-188	EF-1546A2-2.5-48	32
FC9527-4048-189	EF-1546A2-2.5-48	32
FC9527-4848-188	EF-1546A2-3-48	32
FC9527-4848-189	EF-1546A2-3-48	32
FC9527-5664-189	EF-1546A2-3.5-64	32
FC9527-5664-189	EF-1546A2-3.5-64	32
FC9527-6464-188	EF-1546A2-4-64	32
FC9527-6464-189	EF-1546A2-4-64	32
FC9528-4040-188	90ELB-1546E-40	43
FC9528-4848-188	90ELB-1546E-48	43
FC9528-6464-188	90ELB-1546E-64	43
FC9528-6464-416	90ELB-1546-64-T	Call for Details
FC9568-3240-188	EF-1546A1-2-40	31
FC9568-3240-189	EF-1546A1-2-40	31
FC9568-4048-188	EF-1546A1-2.5-40	31
FC9568-4048-189	EF-1546A1-2.5-40	31
FC9568-4848-188	EF-1546A1-3-48	31
FC9568-4848-189	EF-1546A1-3-48	31



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FC9568-5664-188	EF-1546A1-3.5-64	31
FC9568-5664-189	EF-1546A1-3.5-64	31
FC9568-6464-188	EF-1546A1-4-64	31
FC9568-6464-189	EF-1546A1-4-64	31
FC9583-3240-265	EF-449CA-2-40	25
FC9583-3240-375	EF-449CA-2-40	25
FC9583-4048-265	EF-449CA-2.5-48	25
FC9583-4048-375	EF-449CA-2.5-48	25
FC9589-3240-265	90EF-449DA-2-40	27
FC9589-3240-375	90EF-449DA-2-40	27
FC9589-4048-265	90EF-449DA-2.5-48	27
FC9589-4048-375	90EF-449DA-2.5-48	27
FC9635-3240-188	EF-1546C-2-40	41
FC9635-4048-188	EF-1546C-2.5-48	41
FC9635-4848-188	EF-1546C-3-48	41
FC9635-5664-188	EF-1546C-3.5-64	41
FC9635-6464-188	EF-1546C-4-64	41
FC9636-3240-188	90EF-1546D-2-40	42
FC9636-4048-188	90EF-1546D-2.5-48	42
FC9636-4848-188	90EF-1546D-3-48	42
FC9636-5664-188	90EF-1546D-3.5-64	42
FC9636-6464-188	90EF-1546D-4-64	42
FC9637-3240-188	90EF-1546B2-2-40	37
FC9637-3240-189	90EF-1546B2-2-40	37
FC9637-4040-188	90EF-1546B2-2.5-40	37
FC9637-4040-189	90EF-1546B2-2.5-40	37
FC9637-4048-188	90EF-1546B2-2.5-48	37
FC9637-4048-189	90EF-1546B2-2.5-48	37
FC9637-4848-188	90EF-1546B2-3-48	37
FC9637-4848-189	90EF-1546B2-3-48	37
FC9637-5664-188	90EF-1546B2-3.5-64	37
FC9637-5664-189	90EF-1546B2-3.5-64	37
FC9637-6464-188	90EF-1546B2-3.5-644-64	37
FC9637-6464-189	90EF-1546B2-4-64	37
FC9638-3240-188	90EF-1546B1-2-40	36
FC9638-3240-189	90EF-1546B1-2-40	36
FC9638-4048-188	90EF-1546B1-2.5-48	36
FC9638-4048-189	90EF-1546B1-2.5-48	36
FC9638-4848-188	90EF-1546B1-3-48	36
FC9638-4848-189	90EF-1546B1-3-48	36
FC9638-5664-188	90EF-1546B1-3.5-64	36
FC9638-5664-189	90EF-1546B1-3.5-64	36
FC9638-6464-188	90EF-1546B1-4-64	36
FC9638-6464-189	90EF-1546B1-4-64	36
FF1000-0406D	A-ADP-4FS-6MS	See Cat. 407
FF1000-0604D	A-ADP-6FS-4MS	See Cat. 407
FF1000-0607D	A-ADP-6FS-7MS	See Cat. 407

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FF1000-0704D	A-ADP-7FS-4MS	See Cat. 407
FF1000-0706D	A-ADP-7FS-6MS	See Cat. 407
FF1000-0704D	A-ADP-7FS-25MS	See Cat. 407
FF1037-4040-175	B-ADP/SW-25FS-25FHT	See Cat. 407
FF1037-4064-175	B-ADP/SW-4FS-25FHT	See Cat. 407
FF1037-6464-175	B-ADP/SW-4FS-4FHT	See Cat. 407
FF1203-6440-175	B-ADP-4FHT-25MHT	See Cat. 407
FF1474-4040-175	B-ADP/SW-25FHT-25MS	See Cat. 407
FF1573-40D	A-ADP/ELB-90-25R	See Cat. 407
FF1574-40D	A-ADP1-ELB-90-25R	See Cat. 407
FF5001-20	TP-1.25FSB	Call for Details
FF5001-20-188	TP-1.25FSB	Call for Details
FF5001-24	TP-1.5FSB	Call for Details
FF5001-24-188	TP-1.5FSB	Call for Details
FF5001-32	TP-2FSB	135
FF5001-32-188	TP-2FSB	135
FF5001-40	TP-2.5FSB	135
FF5001-40-188	TP-2.5FSB	135
FF5002-20	TP-1.25MSB	Call for Details
FF5002-20-188	TP-1.25MSB	Call for Details
FF5002-24	TP-1.5MSB	Call for Details
FF5002-24-188	TP-1.5MSB	Call for Details
FF5002-32	TP-2MSB	133
FF5002-32-188	TP-2MSB	133
FF5002-40	TP-2.5MSB	133
FF5002-40-188	TP-2.5MSB	133
FF5120-6464-175	B-ADP/UN-4FHT-4FHT	See Cat. 407
FF5121-06	ST-CPL/AY-NATO/B	See Cat. 407
FF5122-06	CI-CPL/BS-NATO/A	See Cat. 407
FF5186-4040	B-CPL/HOS-25-QR	See Cat. 407
FF5186-6464	B-CPL/HOS-4-QR	See Cat. 407
FF5330-07	B-AY-S/P	See Cat. 407
FF5331-07	B-AY-D/PR	See Cat. 407
FF5586-4040	A-CPL/HOS-25-AD	See Cat. 407
FF5694-4040-175	B-ADP/SW2-25FHT-25MS	See Cat. 407
FF5993-07-115	B-CPL/ROB-ME-CG	See Cat. 407
FF9060-1	B14988	Call for Details
FF9241-64D	ST-CLMP-4-H/H	See Cat. 407
FF9288-40-175	B-CAP-25FHT	See Cat. 407
FF928-64-175	B-CAP-4FHT	See Cat. 407
FF9289-40-175	B-PLG-25MHT	See Cat. 407
FF9289-64-175	B-PLG-4MHT	See Cat. 407
FF9521-01	D16036	Call for Details
FF9522-01	C18638	Call for Details
FF9566-01	SS-SADLSUP-INBD	See Cat. 407
FF9566-11	C16020	Call for Details
FF9700-64-262	ISS-64	140



Cross Reference Index

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FF9700-80-262	ISS-80	140
FF9700-96-262	ISS-96	140
FF-9700-128-262	ISS-128	140
FF-160-262	ISS-160	140
FF9700-192-262	ISS-192	140
FF9737-01	WR-SLING/AY-25R	See Cat. 407
FF9738-01	ST-UBLT/AY-25R	See Cat. 407
FF9739-08	ST-LNK-1/2D-25R	See Cat. 407
FF9740-08	ST-SHKL-SP/FAS-1/2	See Cat. 407
FF9741-14	ST-SHKL-S/A-7/8	Call for Details
FF9742-08	ST-HK/PEL-FAS-1/2D	See Cat. 407
FF9743-01	TROL-SP/L-25R	See Cat. 407
FF9783-7-9	B-CAP/ROB-ME	See Cat. 407
FH9035-4040-265	90EF-449B4-2.5-40	22
FH9035-4048-265	90EF-449B4-2.5-48	22
FH9035-5664-265	90EF-449B4-3.5-64	22
FH9047-2024-4	90EF-1488CL-2024	77
FH9047-2024-93	90EF-BMC1488CL-2024	78
FH9047-2432-4	90EF-1488CL-2432	77
FH9047-2432-93	90EF-BMC1488CL-2432	78
FH9063-4040-41	90EF-449B7-2.5-40-SS	Call for Details
FH9537-2024-4	8635-6-24-NICU	147
FH9537-2424-4	8635-7-24-NICU	147
FH9538-1624-4	4307-5-24-NICU	145
FH9538-2024-4	4307-6-24-NICU	145
FH9538-2424-4	4307-7-24-NICU	145
FH9538-2432-4	4307-7-32-NICU	145
FJ9477-3240-413	EF-449A6-2-40BSS	17

Aeroquip Part No.	Hydrasearch Part No.	Page No.
FJ9477-4040-412	EF-449A6-2.5-40-SS	Call for Details
FJ9477-4040-413	EF-449A6-2.5-40-BSS	17
FJ9477-4048-412	EF-449A6-2.5-48-SS	Call for Details
FJ9477-4048-413	EF-449A6-2.5-48-BSS	17
FJ9477-4848-412	EF-449A6-3-48-SS	Call for Details
FJ9477-4848-413	EF-449A6-3-48-BSS	17
FJ9477-5664-413	EF-449A6-3.5-64BSS	17
FJ9477-6464-412	EF-449A6-4-64-SS	Call for Details
FJ9477-6464-413	EF-449A6-4-64-BSS	17
FJ9832-3232-265	EF-BM1488F3-3232	Call for Details
FJ9833-3232-265	90EF-BM1488FL3-3232	Call for Details
FJ9838-3240-188	90EF-1546B3-2-40	38
FJ9838-3240-189	90EF-1546B3-2-40	38
FJ9838-4040-188	90EF-1546B3-2.5-40	38
FJ9838-4040-189	90EF-1546B3-2.5-40	38
FJ9838-4048-188	90EF-1546B3-2.5-48	38
FJ9838-4048-189	90EF-1546B3-2.5-48	38
FJ9838-4848-188	90EF-1546B3-3-48	38
FJ9838-4848-189	90EF-1546B3-3-48	38
FJ9838-5664-188	90EF-1546B3-3.5-64	38
FJ9838-5664-189	90EF-1546B3-3.5-64	38
FJ9838-6464-188	90EF-1546B3-4-64	38
FJ9838-6464-189	90EF-1546B3-4-64	38
FJ9839-9696-410	EF-6-150/400F-SS	Call for Details
FJ9840-8080-416	90EF-5-150/400F-T	Call for Details
FJ9840-9696-410	90EF-6-150/400F-SS	Call for Details
FJ9840-9696-416	90EF-6-150/400F-T	Call for Details
FL3461HHH1344	H/A-SNKL-134.5L	7



Fraction-Decimal Conversion

	<u>Inches</u>	<u>Millimeters</u>		<u>Inches</u>	<u>Millimeters</u>
$\frac{1}{32}$	$\frac{1}{64}$.015625	.3969	$\frac{17}{32}$	$\frac{33}{64}$.515625	13.0969
$\frac{1}{16}$	$\frac{3}{64}$.046875	1.1906	$\frac{9}{16}$	$\frac{35}{64}$.546875	13.8907
$\frac{1}{8}$	$\frac{5}{64}$.078125	1.9844	$\frac{19}{32}$	$\frac{37}{64}$.578125	14.6844
$\frac{3}{32}$	$\frac{7}{64}$.109375	2.7781	$\frac{5}{8}$	$\frac{39}{64}$.609375	15.4782
$\frac{1}{4}$	$\frac{9}{64}$.140625	3.5719	$\frac{21}{32}$	$\frac{41}{64}$.640625	16.2719
$\frac{5}{32}$	$\frac{11}{64}$.171875	4.3656	$\frac{11}{16}$	$\frac{43}{64}$.671875	17.0657
$\frac{3}{16}$	$\frac{13}{64}$.203125	5.1594	$\frac{23}{32}$	$\frac{45}{64}$.703125	17.8594
$\frac{7}{32}$	$\frac{15}{64}$.234375	5.9531	$\frac{3}{4}$	$\frac{47}{64}$.734375	18.6532
$\frac{1}{2}$	$\frac{17}{64}$.265625	6.7469	$\frac{25}{32}$	$\frac{49}{64}$.765625	19.4470
$\frac{5}{8}$	$\frac{19}{64}$.296875	7.5406	$\frac{13}{16}$	$\frac{51}{64}$.796875	20.2407
$\frac{3}{4}$	$\frac{21}{64}$.328125	8.3344	$\frac{27}{32}$	$\frac{53}{64}$.828125	21.0345
$\frac{7}{8}$	$\frac{23}{64}$.359375	9.1282	$\frac{7}{8}$	$\frac{55}{64}$.859375	21.8282
$\frac{15}{16}$	$\frac{25}{64}$.390625	9.9219	$\frac{15}{16}$	$\frac{57}{64}$.890625	22.6220
$\frac{1}{2}$	$\frac{27}{64}$.421875	10.7157	$\frac{29}{32}$	$\frac{59}{64}$.921875	23.4157
$\frac{1}{2}$	$\frac{29}{64}$.453125	11.5094	$\frac{15}{16}$	$\frac{61}{64}$.953125	24.2095
$\frac{1}{2}$	$\frac{31}{64}$.484375	12.3032	$\frac{31}{32}$	$\frac{63}{64}$.984375	25.0032
$\frac{1}{2}$	$\frac{31}{64}$.484375	12.3032	$\frac{1}{2}$	1.000	25.4001

Conversions

Pressure Conversions

PSI to Bar

100 PSI = 6.9 Bars

250 PSI = 17.25 Bars

600 PSI = 41.4 Bars

Bar to PSI

5 Bars = 72.5 PSI

10 Bars = 145 PSI

25 Bars = 362.5 PSI

Measurement Conversions

1 Pound Per Square Inch (PSI) Is equal To:

.068947 Bar

.068045 Atmosphere

144 Pounds Per Square Foot

2.042 Inches of Mercury at 62°F

27.7 Inches of Water at 62°F

2.31 Feet of Water at 62°F

1 Atmosphere Is Equal To:

30 Inches of Mercury at 62°F

33.95 Feet of Water at 62°F

14.7 Pounds Per Square Inch

2116.3 Pounds Per Square Foot

1 Inch Of Mercury At 62°F is Equal To:

1.132 Feet of Water

13.58 Inches of Water

.491 Pounds Per Square Inch

Column of Water 12 Inches High, 1 Inch in Diameter Is Equal To :

.341 Pounds

190

Length Conversion Constants

Millimeters x .039370 = Inches

Meters x 39.370 = Inches

Meters x 3.2808 = Feet

Meters x 1.09361 = Yards

Kilometers x 3,280.8 = Feet

Kilometers x .62137 = Statute Mile

Kilometers x .53959 = Nautical Miles

Inches x 25.4 = Millimeters

Inches x .0254 = Meters

Feet x .30480 = Meters

Yards x .91440 = Meters

Feet x .0003048 = Kilometers

Statute Miles x 1.60935 = Kilometers

Nautical Miles x 1.85325 = Kilometers

Weight Conversion Constants

Grams x .03527 = Ounces (Avd.)

Grams x .033818 = Fluid Ounces(Water)

Kilograms x 35.27 = Ounces (Avd.)

Kilograms x 2.20462 = Pounds (Avd.)

Ounces (Avd.) x 28.35 = Grams

Fluid Ounces(Water) x 29.57 = Grams

Ounces (Avd.) x .02835 = Kilograms

Pounds (Avd.) x .45359 = Kilograms



Cross Reference Index

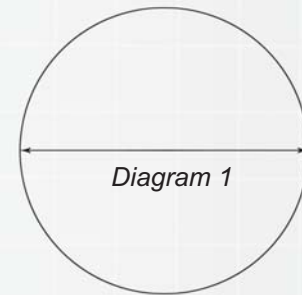
Flow Rate Table

	M ³ /S	M ³ /Min	L/S	L/Min	M ³ /H	Ft ³ /S	CFM
M3/S	1	6 x 10	1 x 10 ³	6 x 10 ⁴	3.6 x 10 ³	3.531 x 10	2.118 x 10 ³
M3/Min	1.66666 x 10 ⁻²	1	1.66666 x 10	1 x 10 ³	6 x 10	5.885 x 10 ⁻¹	3.531 x 10
L/S	1 x 10 ³	6 x 10 ⁻²	1	6 x 10	3.6	3.531 x 10 ⁻²	2.118
L/Min	1.66666 x 10 ⁻⁵	1 x 10 ⁻³	1.666 x 10 ⁻²	1	6 x 10 ⁻²	5.9 x 10 ⁻⁴	3.54 x 10 ⁻²
M3/H	2.77777 x 10 ⁻⁴	1.66666 x 10 ⁻²	2.77777 x 10 ⁻¹	1.66666 x 10	1	9.81 x 10 ⁻³	5.886 x 10 ⁻¹
Ft3/S	2.832 x 10 ⁻²	1.69833	2.832 x 10	1.69833 x 10 ³	1.019 x 10 ²	1	6 x 10
CFM	4.72 x 10 ⁻⁴	2.831 x 10 ⁻²	.472	2.831 x 10	1.6983	1.66666 x 10 ⁻²	1

Frequently Used Terms

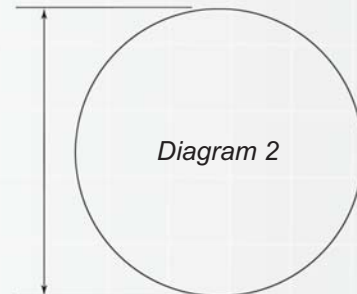
Inside Diameter (I.D.):

The diameter between the inside surface of the hose or fitting. (See Dia. 1)



Outside Diameter (O.D.):

The diameter between the outside surface of the hose or fitting. Using the specially designed Dixon Diameter Tape to measure the circumference of a hose will give you an accurate O.D. (See Dia. 2)



POR:

Price On Request

SCFM:

Standard Cubic Feet per Minute

WOG:

Water, Oil, Gas

191

Notes




Notes



Hydrasearch Co., Inc.
Chesapeake Bay Business Park
100 Log Canoe Circle
Stevensville, MD 21666

Ph: 410.643.8900
Fx: 410.643.8954
www.hydrasearch.com



Hydrasearch



ISO 9001
Registered
Quality
System

ISO 9001

Distributed By:

Hydrasearch Company, Inc.

Chesapeake Bay Business Park
100 Log Canoe Circle
Stevensville, MD 21666

Customer Service: 410.643.8900

Fax: 410.643.8954

www.HYDRASEARCH.com

Additional Hydrasearch Literature:

Aerospace Hose & Fittings

Tech-O-Seal Valves & Fittings

Underway Replenishment Products