

## FITTING MATERIAL SELECTION

The 4000 psi rated Adapters and Permanent Ext-Swage fittings are offered in the following materials for use with various tubing materials, fluid and operating temperature:

### MATERIAL AND CODING

Titanium	Code T	Indicates commercially pure Titanium per AMS4921.
Aluminum Alloy	Code D	Indicates 6061-T6 per QQ-A-225/8 except overaged to 23,000 and 33,000 psi yield strength.

### COMPATIBILITY OF FITTING AND TUBING MATERIALS (Recommended tube wall per MIL-F-85421.) (Fitting Code) (Tubing material)

T	Titanium Alloy 3AL-2.5V per AMS4944 or similar.
D	Aluminum Alloy 6061-T6 per MIL-T-7081 or similar.

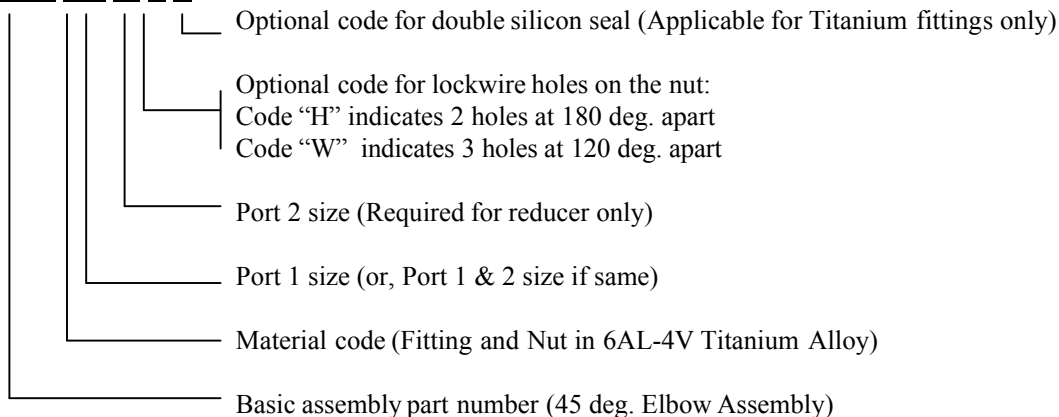
## SIZE AND MATERIAL VERSUS OPERATING PRESSURE

Fitting/tubing operating pressures vary according to size and material. The following shows standard size range and corresponding operating pressures:

FITTING SIZE	TUBE O.D.	OPERATING PRESSURE (psi) PER FITTING MATERIAL	
		Titanium	Alum Alloy
04	1/4	4000	1000
06	3/8	4000	1000
08	1/2	4000	1000
10	5/8	4000	1000
12	3/4	4000	1000
16	1	4000	1000
20	1-1/4	4000	1000
24	1-1/2	2000	1000

## EXAMPLE OF PART NUMBER FOR ORDERING FITTINGS

AP11336 T12 08 H Y



**Note:** Contact Airdrome Precision Components for special fitting configuration, material and/or size not listed in this catalog.

- X Offers a compact envelope, lightweight and strong fitting joint.
- X Assembly of tube assemblies can be made in place for production and repair applications.

## **STANDARD PROCUREMENT SPECIFICATIONS FOR INTERNALLY SWAGED TO BEAM SEAL FITTINGS**

SAE AS4459 or Military MIL-F-85421 specifications define Form, Fit, Function and Procurement requirements for Int-Swage to Beam Seal sleeves.

## **QUALIFICATION AND APPROVAL STATUS**

Airdrome fittings were qualified per AS4459 and MIL-F-85421 specifications and are approved for use in various military, space and commercial programs at AIDC, Allison, British Aerospace, Boeing, Lockheed, Northrop/Grumman, Sikorsky, etc.

## **FITTING MATERIAL SELECTION**

The fittings are offered in the following materials for use with various tubing materials, fluid and operating temperature:

### **MATERIAL AND CODING**

Titanium Alloy	Code T	Indicates 6AL-4V per AMS4965.
Cres	Code N	Indicates Inconel 718 per AMS5663.
	Code P	Indicates 17-4PH, H-1075 cond. per AMS5643.

### **COMPATIBILITY OF FITTING AND TUBING MATERIALS (Recommended tube wall per AS4459 and MIL-F-85421) (Fitting Material) (Tubing material)**

Ti Alloy	Titanium Alloy 3AL-2.5V per AMS4944 or, Cres 21-6-9 per AMS5661 or, Cres 304 1/8Hd. per MIL-T-6845 or, Aluminum Alloy 6061-T6 per MIL-T-7081 or similar.
Cres	Cres 21-6-9 per AMS5661 or, Cres 304 1/8Hd. per MIL-T-6845 or similar.

## SIZE AND MATERIAL VERSUS OPERATING PRESSURE

Fitting/tubing operating pressures vary according to size and material. The following shows standard size range and corresponding operating pressures:

FITTING SIZE	TUBE O.D.	OPERATING PRESSURE (psi) PER FITTING MATERIAL	
		Ti Alloy	Cres
03	3/16	5000	3000
04	1/4	5000	3000
05	5/16	5000	3000
06	3/8	5000	3000
08	1/2	5000	3000
10	5/8	5000	3000
12	3/4	5000	3000
14	7/8	4000	3000
16	1	4000	3000
20	1-1/4	4000	3000

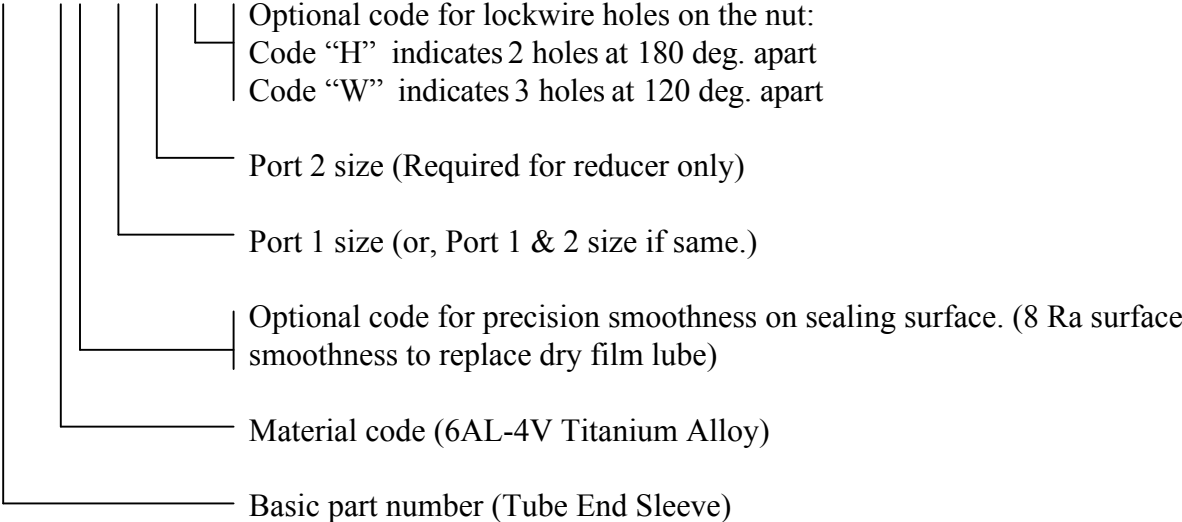
**Note:** Beam Seal port size callout for tube O.D. 1-1/4 shall be 21. (See example of part number.)

## TOOLING

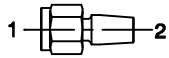
Airdrome fittings are qualified and fully compatible to be swaged by Resistoflex swage tooling. Thus, redundant procurement of Airdrome tooling can be eliminated to benefit our focus on quick fitting deliveries.

**EXAMPLE OF PART NUMBER FOR ORDERING INTERNALLY SWAGED TO BEAM SEAL FITTINGS**

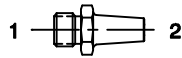
AP440 T F 21 16 H



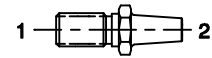
**Note:** Contact Airdrome Precision Components for special fitting configuration, material and/or size not listed in this catalog.



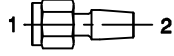
AP642 & AP442



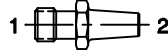
AP640 & AP440



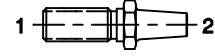
AP641 & AP441



AP644 & AP444



AP643 & AP443



AP645 & AP445

**Int-Swage to Beam Seal Sleeve and Equivalent Industry Standards**

Fitting Shape	Port Sequence for		Airdrome Standard	Aerospace Standard
	Aordrome Part No. only (See Example of Part No.)			
	1	2		
Straight (Short sleeves for production)	F	S	AP642 & AP442	AS4203
	M	S	AP640 & AP440	
	B	S	AP641 & AP441	AS4216
Straight (Long sleeves for repair)	F	S	AP644 & AP444	
	M	S	AP643 & AP443	
	B	S	AP645 & AP445	

Notes: 1. F = Female port, M = Male port, B = Bulkhead male port.

2. AP6xx assigned for Int-Swage port size 08 and smaller and AP4xx assigned for Int-Swage port size 10 and larger.

## STANDARD PROCUREMENT SPECIFICATION FOR INTERNALLY SWAGED TO FLARELESS FITTINGS

SAE AS4459, Military MIL-F-18280 and Boeing BPS-F-125 specifications define Form, Fit, Function and Procurement requirements for Int-Swage to Flareless sleeves.

### QUALIFICATION AND APPROVAL STATUS

Airdrome fittings were qualified per necessary portions of AS4459, MIL-F-18280 and BPS-F-125 requirements. The fittings are approved for use in various military and commercial programs at Boeing, Interfast, Northrop/Grumman, Sikorsky, Tri-Star, Unirex, etc.

### FITTING MATERIAL SELECTION

The fittings are made of Cres for use with various tubing materials, fluid and operating temperature.

#### MATERIAL AND CODING

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Cres	Code H	Indicates 15-5PH per AMS5659
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#### COMPATIBILITY OF FITTING AND TUBING MATERIALS

(Recommended tube wall per AS4459 and MIL-F-18280)

(Fitting Material)

(Tubing material)

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Cres	Cres 21-6-9 per AMS5661 or, Cres 304 1/8Hd. per MIL-T-6845 or similar.
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### SIZE AND MATERIAL VERSUS OPERATING PRESSURE

Fitting/tubing operating pressures vary according to size and material. The following shows standard size range and corresponding operating pressures:

FITTING SIZE	TUBE O.D.	OPERATING PRESSURE (psi)
		PER FITTING MATERIAL Cres
04	1/4	3000
05	5/16	3000
06	3/8	3000
08	1/2	3000
10	5/8	3000
12	3/4	3000
14	7/8	3000
16	1	3000

## TOOLING

Airdrome fittings are qualified and fully compatible to be swaged by Sierracin-Harrison or Ward & Garrison swage tooling. This will benefit Airdrome customers to receive our focus on quick fitting deliveries.

## EXAMPLE OF PART NUMBER FOR ORDERING INTERNALLY SWAGED TO FLARELESS FITTINGS

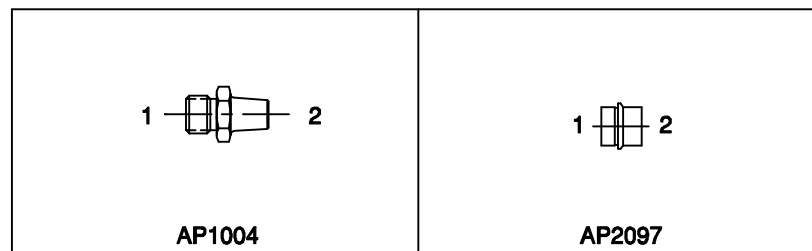
AP2097H12

Size.

Material code (15-5 PH Cres)

Basic part number (Tube End Sleeve)

For fitting materials and sizes not listed, please contact Airdrome Parts Co.



Int-Swage to Flareless Sleeve			
Fitting Shape	Port Sequence for		Airdrome Standard
	Airdrome Part No. (See Example of Part No.)		
	1	2	
Straight	M	S	AP1004
	F	S	AP2097

Note: 1. F = Female port, M = Male port.