



**TITLE: APPROVED SOURCES FOR
RAW MATERIALS AND
PROCESSES**

Spec. No.: **P0-1, Sec. IV**
ECO No.: **MPP607518 Rev. E**
ECO Date: **July 13, 2011**

ENGINEERING SPECIFICATION

**SECTION IV: OUTSIDE PROCESSING
AND PURCHASED COMPONENTS**

Page 1 of 3

1.0 SCOPE

This specification delineates the approved sources for the procurement of components and external processing services. Procurement sources are restricted to those designated in Tables 1 and 2 herein.

Note: For the special processes listed in Table 1, the class, grade, and/or type must be specified on the drawing.

Table 1. APPROVED OUTSIDE PROCESSING SOURCES

Process	Applicable Specification or Industry Standard	Conditions	Approved Source of Supply
Cadmium Plate	QQ-P-416	All	Industrial Plating
Paint and Coating, Application and Finish	M4-110	All	Advanced Metal Finisher B & C Plating Spacesonics Sheetmetal Spraytronics Accurate Metal Finishing
Copper Plating	AMS-2418	All	MPP/Power Grid Plate Shop
Dip Brazing	AWS C3.7	All	Continental Thermal Fusion Amalar
Electroless Nickel, Nickel Boron	ASTM B607-91, Type 1	All	Inta
Electropolish	CPI Part Number Drawing	All	A&E Industries of Fountain MPP/Power Grid Plate Shop Any source specified on the CPI drawing
Gold, Electrolytic	MIL-DTL-45204	All	MPP/Power Grid Plate Shop Inta
Helix Body Honing	CPI Part Number Drawing	All	Metric Design MPP Machine Shop

Revision Information

Add molybdenum pins to Table 1 under nickel sulfamate plating

Verify revision before use.



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Page 2 of 3

Table 1. APPROVED OUTSIDE PROCESSING SOURCES (Continued)

Process	Applicable Specification or Industry Standard	Conditions	Approved Source of Supply
Nickel, Dull Watts	AMS-QQ-N-290	All	MPP/Power Grid Plate Shop
		Helix Kovar Cathode Parts Only	Inta
		EIMAC Cavity & Hardware Parts only	Industrial Plating
Nickel, Sulfamate	MIL-P-27418 AMS-2424	All	MPP/Power Grid Plate Shop
		Molybdenum Pins & Helix Kovar Cathode Parts Only	Inta
		EIMAC Cavity & Hardware Parts only	Industrial Plating
Silver	ASTM B700	All	MPP/Power Grid Plate Shop
		EIMAC Cavity & Hardware Parts only	Industrial Plating

Table 2. APPROVED PURCHASED COMPONENT SOURCES

Component	Applicable Specification or Industry Standard	Conditions	Approved Source of Supply
0.15 l/s Ion Pump	P20-8	All	Varian Vacuum, Italy
High-Reliability Vaclon® Pumps	P20-6	All	Varian Vacuum, Italy Any source specified on CPI drawing
Braze Assemblies	P20-2	Metal-to-Metal Seals	Bodycote Altair
		Metal-to-Ceramic Seals	Altair



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Page 3 of 3

Table 2. APPROVED PURCHASED COMPONENT SOURCES (Continued)

Component	Applicable Specification or Industry Standard	Conditions	Approved Source of Supply
Dispenser Cathodes	P20-4 EIA 941	M-Coating of Dispenser Cathodes	Semicon Associates
		Dispenser Cathodes	Semicon Associates Spectra-Mat
Homogenous Dispenser Cathodes	P20-5 EIA 941	All	Semicon Associates
Photoetched Grids	P20-7	All	Elcon
RF Center Pins (Heat Treated and Plated)	CPI Part Number Drawing	All	Par Precision
Welded Bellows	P20-1	All	Senior Metal Bellows