



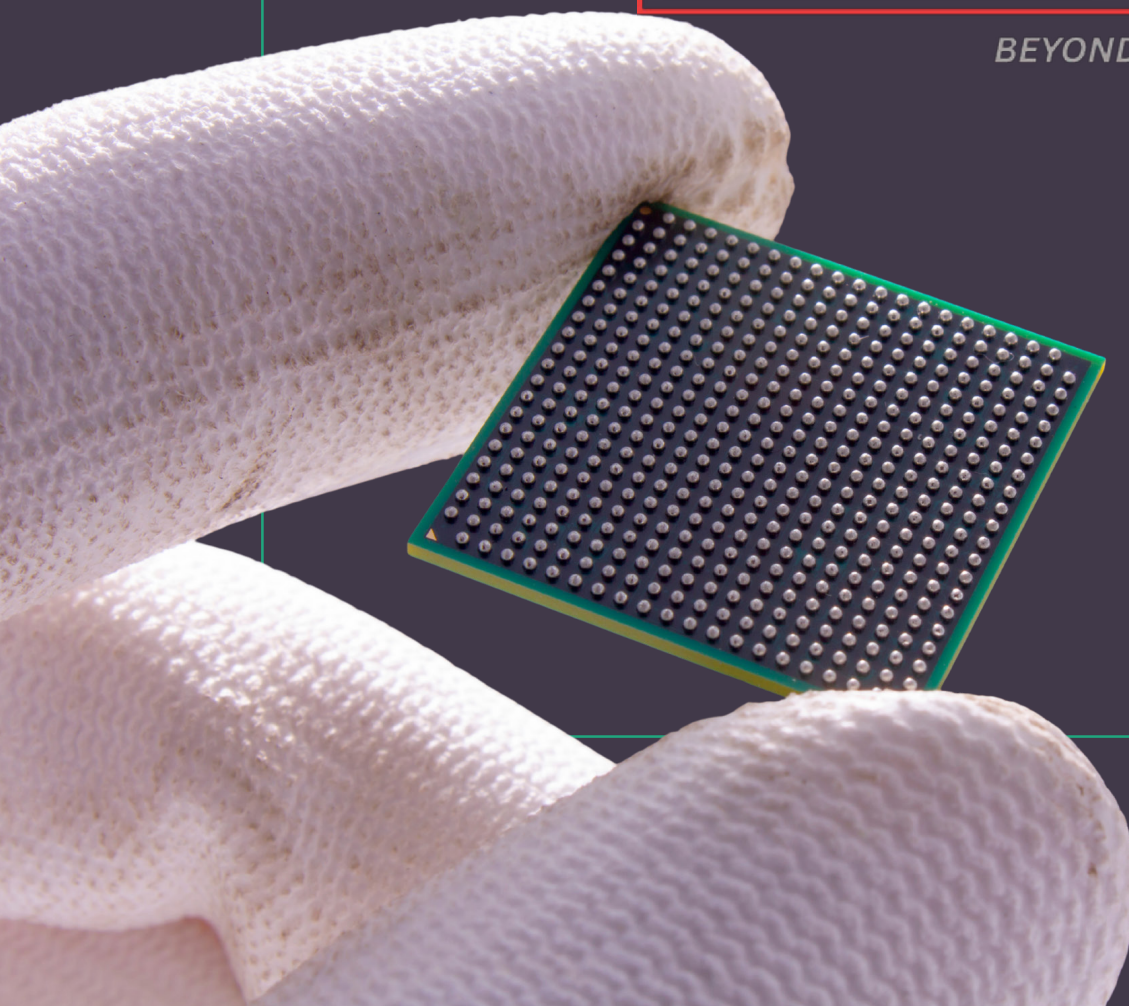
SEMICONDUCTOR

ELECTROPOLISHED
RA<0.25
RA<0.51
AND BETTER FINISH ON REQUEST

rensa



BEYOND THE LIMITS OF PURITY



**UHP GASES,
PURE MEDIA
TRANSPORTATION,
DATA CENTERS**

ABOUT US

Rensa is a global leader in high-quality stainless steel tubes and fittings, trusted by industries where precision and reliability are non-negotiable. With two decades of expertise serving pharmaceutical, bio-pharmaceutical, food, beverage, and other high-purity sectors, Rensa has built a reputation for engineering excellence, rigorous quality control, and dependable global supply.

APPLICATIONS

1 UHP Water Distribution Systems

Ultra-clean tubing for 18+ MΩ-cm water loops used in wafer rinsing, cleaning, and fabrication.

Clean Gas Delivery Lines 2

High-purity piping for process gases like nitrogen, argon, hydrogen, oxygen, and specialty gases used in deposition, etching, and cleaning processes.

3 Chemical Delivery Systems

Safe and contamination-free transport of high-purity acids, solvents, and slurry mixtures for photolithography and CMP (Chemical Mechanical Polishing).

Slurry & CMP Lines 2

Smooth, Electropolished interiors to maintain slurry consistency and prevent particle build-up during wafer polishing.

3 Data Center Cooling & High-Tech Facilities

Precision tubing for pure media transport in advanced electronics, display manufacturing, and cleanroom environments.



Rensa Max is our dedicated brand for the semiconductor and high-tech industries, delivering ultra-high-purity stainless steel tubing and fittings engineered for UHP gases, pure media, and advanced process systems. Manufactured in controlled environments and finished to surface roughness values as low as $Ra < 0.25 \mu m$, Rensa Max products meet or exceed ASME BPE, SEMI, and ASTM standards. Rensa Max combines cutting-edge technology, uncompromising cleanliness, and global reach to serve industries where purity is mission-critical.

RENSA MAX

WHY

- **Ultra-Clean Finishes** – Electropolished to $Ra < 0.25 \mu m$ (EP) or $Ra < 0.51 \mu m$ (MP), with better finishes available on request.
- **Global Standards Compliance** – Manufactured to ASME BPE, SEMI F19, and ASTM specifications for full international compatibility.
- **Cleanroom Manufacturing & Packaging** – Controlled environment production and double-bagged, nitrogen-purged packaging to preserve cleanliness.
- **100% Traceability** – Heat number marking and MTR access through our secure online system.
- **Orbital Weld Ready** – Precision dimensions and consistent surface finish for flawless, repeatable welds.



COMPLETE
PROCESS
CONTROL

COIL PROCUREMENT
TUBES & PIPES
MANUFACTURING
FITTINGS
MANUFACTURING
ELECTROPOLISHING
IN-HOUSE LAB TESTING
PACKAGING AS PER
INTERNATIONAL STANDARD
ONLINE
MATERIAL CERTIFICATE

Quality- Consistency- Delivered

PRODUCTS AND SPECIFICATIONS

DIMENSIONS

Tubes and Fittings

1/8" x 0.022" to 6" x 0.109"

According to ASTM A269 / A270 / A632

Pipe

NPS 8, 10, 12 Schedule 10S

Pipe according to ASTM A312

GRADE (MOC)

- 1.4404 CS
- UNS S31603 (316L)
- N06022 (C-22)

GRADE (MOC)

SURFACE FINISH

Surface Finish

- Ra <0.25 µm
- Ra <0.51 µm
- Ra <0.64 µm
- Special Finish on Request

When purity is non-negotiable, Rensa Max is the choice for semiconductor fabs, clean gas delivery systems, and advanced manufacturing facilities worldwide.

Attribute	ASME BPE Recommendation	Rensa Electropolishing
EP Layer Thickness	15 Å minimum	39 Å
Cr/Fe Ratio	Greater Than 1	4.5

Rensa Test Results

Cr/Fe Ratio: 4.5
(Much higher than the ASME BPE requirement). Much stronger passivation layer and enhanced corrosion resistance.

Oxide Layer: 39 Å
(More than 2.5 times the ASME minimum).

Cr-Enriched Layer: 31 Å
While ASME BPE focuses on total oxide depth, Rensa's additional chromium enrichment enhances protection, like an extra coating that ensures long-term resistance to harsh conditions.

CrOx/FeOx Ratio: 3.2
The better the ratio, the stronger the anti-corrosion properties, making the material more reliable for critical pharmaceutical and UHP applications

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our other brands



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Positively Smooth

Biopure[™]
by rensa

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EDGE ∞

DEFINING THE FUTURE OF ELECTROPOLISHING

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