

# Non-drip Selective Plating

Discover the SIFCO ASC Advanced Solution Control System, a portable all-in-one plating system featuring dripless technology



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# A Game Changer: Sustainable & cost-effective

For a wide range of industries – from aerospace to military, marine, petrochemical, oil and gas, and paper – **selective electroplating is preferable** to conventional thermal spray and tank plating methods.

Why? Its ability to be performed on site simply makes it an **inherently safer** and **more environmentally-friendly** option. What's more, **the system is portable** – enabling it to be brought directly to the specific part or component.

The SIFCO ASC Advanced Solution Control System (ASCS) is an innovative piece of electroplating

technology, featuring **dripless functionality**.

That means all chemical solutions are recycled back into the cart's solution management system right at the surface of the workpiece without the use of trays to catch the solution – providing a **clean and efficient work environment**.

### Key benefits include:

- Portability & convenience
- Quality of repairs & maintenance
- Cost effective & sustainable



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# The **SIFCO** Process<sup>®</sup>

The SIFCO Process<sup>®</sup> is the leading method of selective electroplating localized areas on components without the use of an immersion tank. We provide contract services, chemical solutions and equipment for surface enhancement to improve component performance, minimize downtime and reduce manufacturing costs.

- In the concept and design phase, we offer R&D and engineering expertise to develop a solution for your application.
- In the production phase, our technical support team of consultants and contract service technicians can provide the skill and labor to carry out the most demanding applications.
- Our procurement and logistics teams ensure solutions, supplies and equipment are readily available when and where you need them.
- Our sales and technical staff support you throughout the process.



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# Why SIFCO ASC is the **global leader** in selective plating

**At SIFCO ASC, we continually strive to improve the plating process.**

As the global leader in selective plating technology, we've provided practical, cost-effective brush plating solutions for both OEM components and parts requiring refurbishment in the aerospace, oil and gas, general industry and power generation sectors for over 50 years.

It remains our mission to provide safer, cleaner work environments when using the SIFCO Process® of selective plating. And, with the recent launch of our encapsulated plating technology, capitalizing on this process was the natural next step in the development of our dripless plating systems.

SIFCO ASC is unrivaled when it comes to engineering capabilities for the selective plating industry. Our team's sound technical background and awareness of electrical and mechanical constraints help us generate innovative designs and concepts, creating technological breakthroughs to meet customer's demand.

From custom anodes to automated auxiliary equipment to fully robotic plating cells, SIFCO ASC's dedicated team of mechanical and design engineers - based in the US and France – are capable of meeting all your plating requirements.





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# Designed for smarter applications: our tooling

The selection of the proper preparatory and plating tools is a very important factor in determining how rapidly and effectively a particular job will be carried out.

That's why we developed a collection of tools for the ASCS to cover a variety of geometries and contact areas, ranging from 0.07 dm<sup>2</sup> (1 in<sup>2</sup>) to an incredible 1 dm<sup>2</sup> (15.5 in<sup>2</sup>).

Our dripless tools allow for flexibility in your application and deposit. Technicians can use a variety of cover materials such as white TuffWrap, PermaWrap, or cotton jacket, no different than standard brush plating.

And no matter the tooling the deposit can be plated in any orientation... horizontally, vertically, and upside down with no difference in performance or result – this alone is a significant achievement compared to the standard brush plating process.

In addition, our tools can be combined – creating infinitely shape-shifting anodes to meet the most specific plating applications.



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# The benefits of our system

Selective plating is no longer a strictly manual process. And there are many different reasons (and ways) to automate your operation. We all know selective plating has its benefits, such as in-situ repairs, reduced masking and downtime, and even minimizing hydrogen embrittlement.

But once you automate, you add even more benefits to the list, like optimization of cycle times, reduced ergonomic risk, and data logging. When designing the Advanced Solution Control System, and the SMART tooling, we were able to capitalize on these benefits.

By using the ASCS, technicians will gain even more benefits such as an increase in safety, a limited process footprint, and operational gains. With the use of the dripless tooling, not only will exposure to fumes and chemicals be significantly reduced, but waste will also decline with the use of less masking, cover materials, and cleaning supplies.

## Benefits of the ASCS:

- Optimization and standardization of cycle times
- Increased throughput and productivity
- Programmable parameters for volts, amps, and amp hours for process control and consistency
- Reduced human errors
- Reduced labor
- Ergonomic risk reduction
- Chemical exposure reduction
- Data logging/reporting

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## The Nano

Best for basic operations of two process steps or less.

This manual unit utilizes the TechnoPlate® with its removable controller, allowing the technician to continuously monitor the amps and volts without ever having to turn around. Recommended for applications such as Anodizing , Zinc-Nickel, Cadmium and Passivation.

## The Prime

Handles the most complex applications and can hold up to nine different plating solutions.

An expansion of the Nano, this fully automated system is designed to supply and vacuum the preparatory and plating solutions right at the area of the work piece. The plating solutions are then recycled back to their original containers while the preparatory solutions and water rinses are directed to a waste containment system.

Equipped with an HMI controlled rectifier, the Prime allows the technician to program each process step, continually monitor the operation, and log data in real time. It also has an integrated pumping system and utilizing the TechnoFlow® heated flow system for any applications requiring solutions at an elevated temperature.

And with the unique Cleaning-in-Place (CIP) feature, you don't have to worry about potentially harmful mixing of chemicals - allowing for applications such as Anodizing, Zinc-Nickel and passivation, Cadmium and passivation, Nickel, Nickel-Tungsten, Copper, Silver, and Gold. Essentially, the Prime is a full plating operation in the footprint of a standard pallet.



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# Coatings and Performance

With the Advanced Solution Control System, the applications are endless. After rigorous testing, the samples have proven that the repeatability and reproducibility of the deposits plated with the dripless tools are comparable if not improved over the standard brush plating processes.

The Zinc-Nickel plating tests consistently achieve uniform thickness deposits, while still maintaining the optimal Nickel composition of 10-14%, ideal for providing corrosion protection.

Corrosion protection is imperative in many applications. SIFCO ASC deposits are tested to ASTM B117 Salt Spray method. Zinc-Nickel plated with the ASCS dripless tooling achieves 96 hours as well as 128 hours without visually showing white corrosion product – satisfying various industry specifications.

In addition to the salt spray, panels bend tested in accordance with ASTM B571 passed without flaking or delamination.

Last but not least, because all of the prep and plating steps are programmed to define all voltage, amps, and amp-hours – the repeatability from one technician to another provides for a well-controlled process leading to superior plating results every time.





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# You're in good hands...

SIFCO ASC, a Quaker Houghton company, are the world leaders in selective electroplating.

For over 50 years SIFCO Applied Surface Concepts (ASC) has provided selective electroplating and anodizing services, chemical solutions and equipment for over 50 years.

Recognized as the global leader, we help our customers meet their selective plating requirements. While providing technical resources throughout the life cycle of your products.

Headquartered in the US and operating at a global level, SIFCO ASC has several strategically located facilities around the world to help with your maintenance and turnaround projects.



## Contact us today at a location near you:

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