



THE REVOLUTIONARY S3 PROCESS

Evoqua's revolutionary Sanitize, Start, Stop (S3) process is designed for pharmaceutical water generation systems. While delivering advanced microbial control, the S3 Process consumes significantly less water and energy and produces significantly less wastewater compared to conventional systems — translating into major operating savings and more environmentally responsible, energy-efficient manufacturing processes.

THE SANITIZE, START, STOP CONCEPT IS SIMPLE.

Conventional water systems recirculate during periods of non-use for microbial control. The S3 process eliminates the need for continuous recirculation with a predetermined short heat sanitization cycle. In comparison with traditional periodic sanitization cycles, a typical S3 sanitization cycle of 30-45 minutes delivers superior microbial control, while also delivering savings in energy, water and system consumables.

HOW WILL I BENEFIT FROM THE S3 PROCESS?

Systems that recirculate consume excessive and unnecessary amounts of water and energy, prematurely wearing parts and components, and producing wastewater that must be treated or disposed. Because the S3 Process does not recirculate, it has a number of features that will benefit your water system by significantly decreasing capital and operating expenses.

- Consumes considerably less water and energy and creates significantly less wastewater
- Reduces the demand on system consumables, such as salt, pH adjustment chemicals, dechlorination chemicals and filter cartridges
- Lengthens the life of system components such as pumps, membranes and CDI® modules
- Requires less space and fewer unit processes compared to other systems

WHERE CAN I GET THE S3 PROCESS?

The process used in the S3 system is covered by U.S. Patent No. 8,045,849, European Patent No. EP1885655B1 and is only available from Evoqua. To learn more about the potential operating savings at your plant, contact an S3 system specialist.

WHAT APPLICATIONS ARE MOST IDEAL FOR THE S3 PROCESS?

Any energy and water that recirculates can benefit from the energy savings of the S3 Process. Systems with higher flow rates, redundant trains, high utility costs, and infrequent production schedules will benefit the most from the technology.

The S3 Process can be easily retrofitted to existing systems, especially hot water sanitizable systems.

HOW DOES THE S3 PROCESS WORK?

The S3 process is configured to meet the water demands of your system with two different operating modes for maximum microbial control. In the first mode, the system sanitizes at a predetermined time each day. In the second mode, the system will sanitize after a defined time frame when the system has been dormant.

HOW MUCH COULD THE S3 PROCESS SAVE A PURIFIED WATER SYSTEM TREATING 30 GALLONS PER MINUTE?

First Year Savings:

\$100,000

Annual Electricity Savings:

150,000 kwh

Annual Water Savings:

4,000,000 gallons

NOW, IMAGINE HOW MUCH THE S3 PROCESS CAN SAVE AFTER 10 YEARS OF OPERATION!

Total Savings over 10 Years:

\$1,200,000

Contact us to learn how S3 can improve your microbial control and save you money today:

1-800-435-3233



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