

SepTrac™ Smart System

Monitor, Analyze, Communicate, Optimize



 **KOVALUS**
Separation Solutions™

The KSS Advantage

For over 50 years, KOVALUS SEPARATION SOLUTIONS™ (KSS) has been an industry leader in separation technology. With an extensive portfolio of products and systems, KSS has worked with thousands of customers worldwide to bring them effective and reliable solutions across food & beverage, dairy, general industrial, and life science markets.

At KSS, our commitment to customers spans across R&D, piloting, large-scale implementation, and continued after-sales services. To further simplify operations, we developed the SepTrac™ Smart System, a cloud-based customer portal that captures system performance data in real time for remote monitoring and offers self-service options for quicker engagement.

SepTrac Smart System at a Glance

In a world that favors digital transformation and availability of data, why should you expect anything different from your operation? The SepTrac smart system links to any KSS system to gather live data, send notifications and alerts, store documentation and influent logs, and provide an easy point of access to our dedicated customer service teams. Offered as standard and premium versions, the program is designed to save operators time and allow for faster decision making.

Features and Benefits

- Remotely monitor system performance through live data
- Obtain an updated HMI without third-party software
- Consolidate relevant documentation
- Enter influent data and store logs in one place
- View KSS ASSIST™ contract details and historical reports
- Track part installations and current orders
- Request replacement parts with one click
- Receive performance alerts and part replacement notifications
- Report a product issue
- Quickly get in touch with a KSS representative

| Feature | Standard | Premium |
|--------------------------------|----------|---------|
| KSS contact quick links | ✓ | ✓ |
| Report A Problem form | ✓ | ✓ |
| Installed membrane information | ✓ | ✓ |
| Quick orders | ✓ | ✓ |
| Shipment tracking | ✓ | ✓ |
| KSS ASSIST | ✓ | ✓ |
| System documents | ✓ | ✓ |
| Influent data entry and logs | ✓ | ✓ |
| HMI view | | ✓ |
| Live data charts | | ✓ |
| Performance dashboard | | ✓ |

Note: A router device is required for Premium accounts.

SepTrac Smart System Features

Live Performance Data Dashboard and Charts

Remote system monitoring takes data collection and analytics to the next level. The SepTrac™ smart system offers an easy-to-use dashboard that is completely customizable depending on system type, application, operating mode (batch vs. continuous), and user preference. It eliminates the need to download and manipulate process data, a time-consuming effort that is seamlessly automated in the SepTrac program.

The performance dashboard can show complete system performance or be broken down into subsystems. Parameters captured in this dashboard include:

- Performance metrics (productivity, quality, etc.)
- Operating conditions (pressure, flow, temperature, etc.)



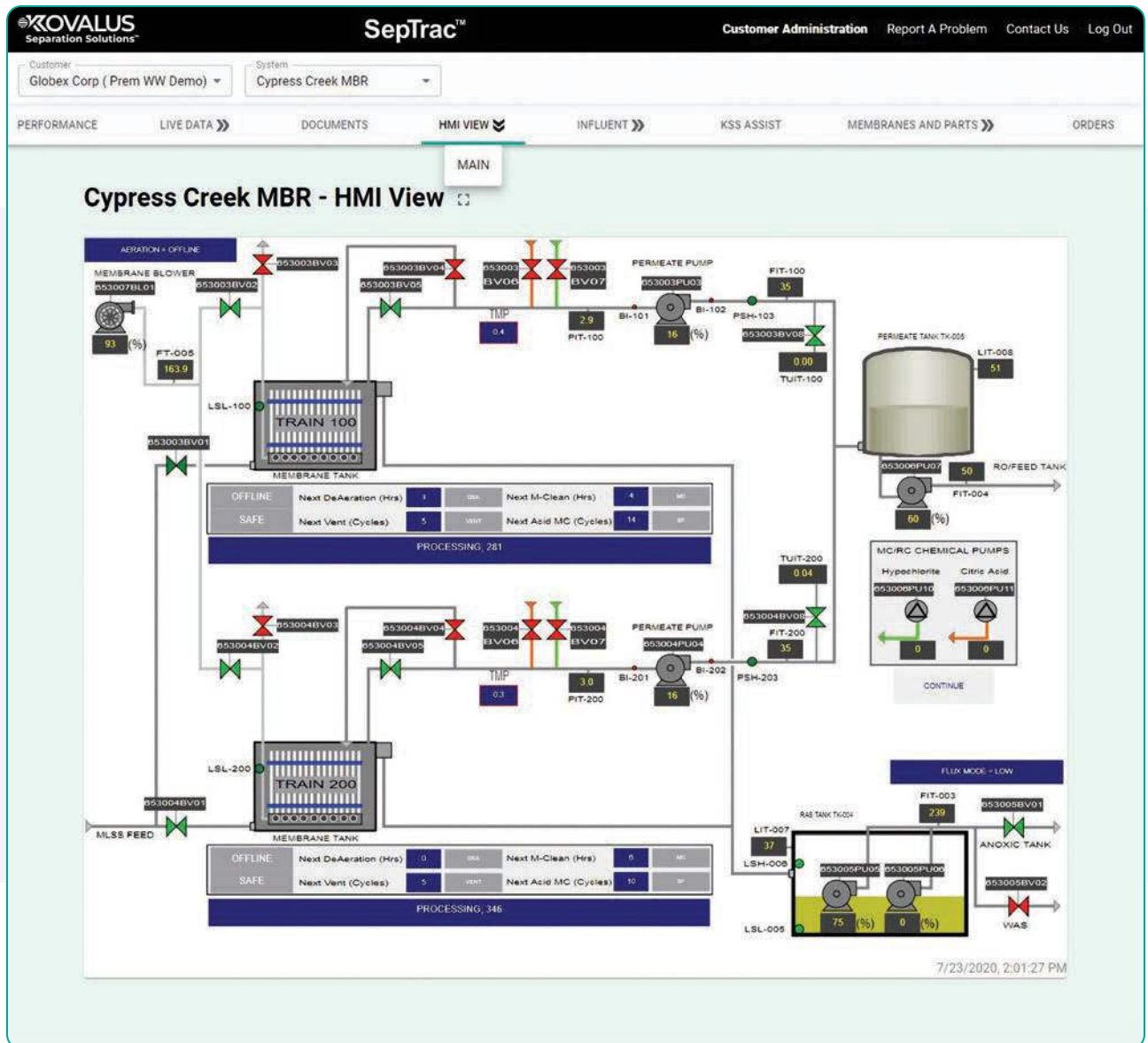
SepTrac Smart System Features

Consolidation of Documents

The SepTrac™ smart system stores all system documentation including piping and instrumentation diagrams (P&IDs), equipment specification packets, operating manuals, and system outlines in one place, making any and all system information readily available and easy to find.

HMI View

With the SepTrac smart system, the Human-Machine Interface (HMI) is built directly into the program and is updated several times per minute, eliminating the need for third-party software. Operators can easily and remotely monitor the process and check in on pump and valve configurations, tank levels, and flow conditions.



Influent Data Entry and Logs

Keeping track of influent data is easy with the SepTrac™ smart system. It has a dedicated section for entering feed characteristics of influent, and automatically interprets data into charts for instant analysis. Data can be entered and accessed on a mobile device or tablet remotely or from within the plant. Eliminating the need for redundant logbooks, the SepTrac program keeps all influent data in one place for easy access.

The screenshot shows the SepTrac™ web interface for 'Cypress Creek MBR'. The top navigation bar includes 'Customer Administration', 'Report A Problem', 'Contact Us', and 'Log Out'. The main menu has options for 'PERFORMANCE', 'LIVE DATA', 'DOCUMENTS', 'HMI VIEW', 'INFLUENT', 'KSS ASSIST', 'MEMBRANES AND PARTS', and 'ORDERS'. The 'INFLUENT' menu is expanded, showing 'Charts', 'Logs', and 'Enter Data'. The 'Cypress Creek MBR - Influent Data' section contains a table with columns for 'Name', 'Value', and 'Units'. The table lists parameters: TN, FOG, TP, BOD, TSS, and COD, each with an input field and a unit of 'mg/L'. At the bottom right, there is an 'Entry time' field showing 'August 31st 05:34 p.m.' and a 'SUBMIT' button.

| Name | Value | Units |
|------|----------------------|-------|
| TN | <input type="text"/> | mg/L |
| FOG | <input type="text"/> | mg/L |
| TP | <input type="text"/> | mg/L |
| BOD | <input type="text"/> | mg/L |
| TSS | <input type="text"/> | mg/L |
| COD | <input type="text"/> | mg/L |

KSS ASSIST

KSS ASSIST™ is our after-sales service and maintenance program for improving system performance and longevity. Through the KSS ASSIST program, customers benefit from regular site visits, operator training, data collection and analysis, and dedicated telephone support lines.

The SepTrac smart system captures KSS ASSIST contract details and previous site visit reports and provides access to KSS representatives through the click of a button. KSS ASSIST can also be easily renewed through the portal.

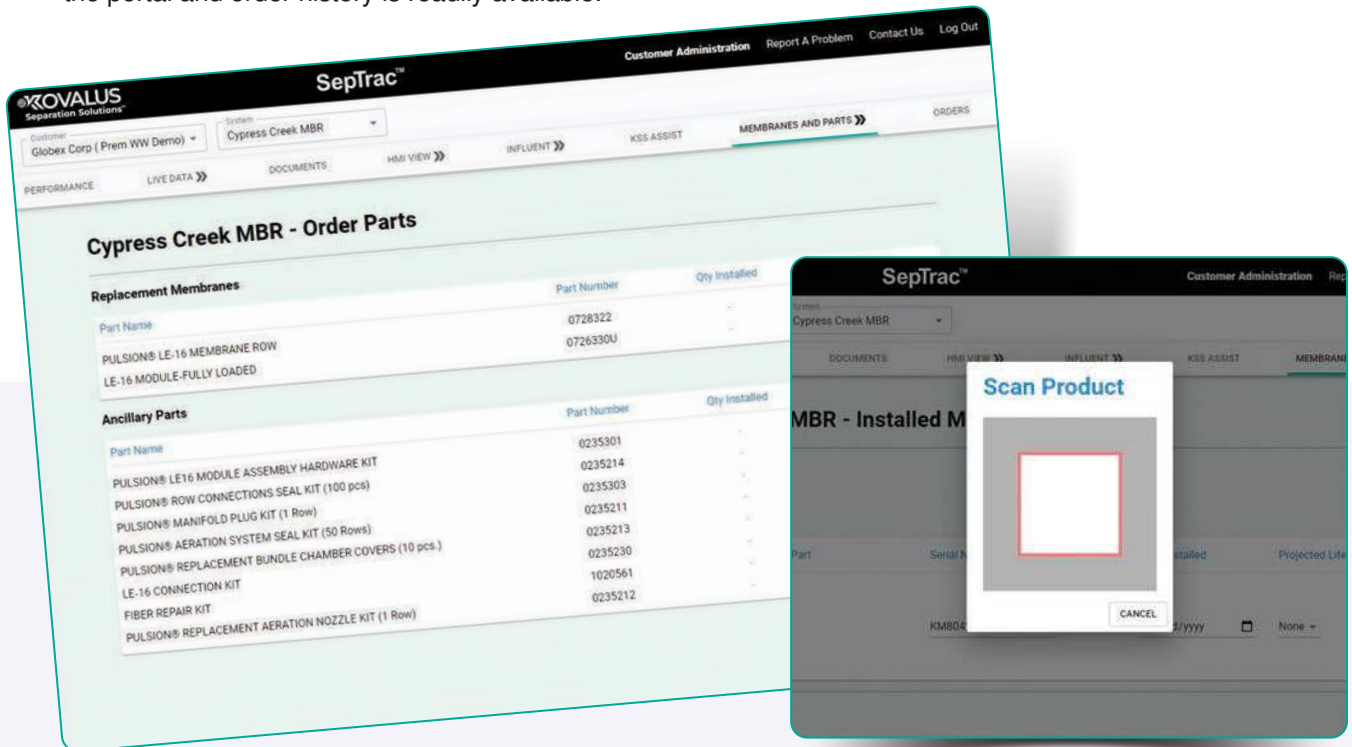
The screenshot shows the SepTrac™ web interface for 'KSS Assist'. The top navigation bar is the same as the previous screenshot. The main menu has 'KSS ASSIST' highlighted. The 'KSS Assist' section displays 'Contract Details' in a table format. The table lists various contract parameters and their values. At the bottom, there are four buttons: 'CONTACT KSS', 'REQUEST KSS ASSIST VISIT', 'REQUEST KSS ASSIST RENEWAL', and 'SEE TRIP REPORTS'.

| Contract Details | Value |
|---------------------------|----------|
| Status | Inactive |
| Start Date | - |
| End Date | - |
| KSS Site Visits Included | 0 |
| KSS Site Visits Remaining | 0 |
| Last KSS Visit Date | - |
| KSS Service Tech | - |

SepTrac Smart System Features

Installation Details and Easy Order Placement

Our products are all labeled with a unique barcode that can be scanned to instantly upload information into the SepTrac™ smart system. Product information can be logged and categorized into subsystems. When replacements are needed or ancillary parts need to be ordered, a quote request can easily be submitted at the click of a button. Since product and part information is already stored in the portal, simply input the order quantity and hit submit and our account managers will be notified. Current order shipments can be tracked in the portal and order history is readily available.



Alerts and Notifications Keep You on Track

The SepTrac smart system comes equipped with an alerts & notifications system to remind operators and plant managers prior to product end-of-life to order replacement parts. Alerts will also be sent out if system upsets occur so operators can troubleshoot and make necessary adjustments quickly and confidently. Alerts and notifications are sent to the dashboard and through email or text to ensure operators are always informed.



Summary

Report Product Issues and Get In Touch Quickly and Easily

When there is an issue with a product and troubleshooting is needed, a dedicated form can be submitted within the SepTrac™ program to report the problem and get immediate assistance from our quality and customer service team. The SepTrac portal makes it easy to contact KSS either by phone or email. Our dedicated representatives are ready to assist you in any way.

Security

When it comes to cloud-based solutions, KSS recognizes that security is paramount. As a result, we have made security a priority while developing SepTrac. The application is built on and controlled by AWS' state of the art cloud-based platform. The data being analyzed by the application is pushed (and not pulled) over an authenticated and encrypted connection to the cloud by the customer's system. The SepTrac application then digests the data and displays the system information within the user's device. The AWS API gateway is the entry point for all SepTrac data requests and prevents the user from directly accessing the cloud platform.

As for the security of the application itself, we have implemented cryptographic protocols that utilize a secure token-based system to validate user identities. User privileges and data access are determined by security roles and groups assigned to the users when their account is created. KSS is continuously updating and optimizing SepTrac security measures to stay ahead of imminent threats and ensure the safety of your data.

Simplified and Streamlined System Management & Optimization

Equipment operators and plant managers get instant access to critical performance data and system information and are able to engage quickly and easily with KSS customer service and support teams.

- Seamless integration with any KSS system
- Available worldwide
- Links to multiple plants
- Customizable access rights for multiple users
- Enables remote monitoring wherever there is network connectivity
- Available on mobile, desktop, and tablet
- Customizable alerts

Our cloud-based portal revolutionizes system operation and management through live data accessibility and predictive analysis. Designed by KSS process engineers and technology experts, the SepTrac smart system creates on-demand access to decades of experience and expertise – anytime, anywhere.

Paving the Way for Machine Learning

Through the introduction of the SepTrac smart system, we are primed to integrate advanced prescriptive software that will monitor and learn system performance trends to be able to predict upsets before they happen, ultimately reducing maintenance and downtime. With instant access to performance data and automated analysis done round-the-clock, operating systems will become easier than ever before.





KOVALUS SEPARATION SOLUTIONS

KOVALUS SEPARATION SOLUTIONS™ (KSS) is a global leader in separation technologies.

With best-in-class domain expertise, technologies and systems, KSS is uniquely positioned to help customers purify and recover valuable process streams and achieve sustainability goals across food and beverage, life science, and general industrial markets.

Services & Support

After-Sales Services & Maintenance Programs • SepTrac™ Smart System



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