

# **LIQUID CONTROLS GROUP**

CORKEN | FAURE HERMAN | LIQUID CONTROLS | SAMPI | SPONSLER | TOPTECH SYSTEMS

INTEGRATED TERMINAL SOLUTIONS



# LIQUID CONTROLS GROUP INTEGRATED TERMINAL SOLUTIONS

Maximize the potential of your facilities and consistently earn peak revenues. Liquid Controls Group (LCG) Integrated Terminal Solutions combine operator-friendly automation and corporate-wide data management with the industry's premier pumps, meters and valves. LCG has the capacity to provide comprehensive terminal automation and control systems as well as the flexibility to customize smaller solutions for your specific needs. By matching components from our wide range of products, you can create a custody transfer system ideally suited to your facility. And as a global, single-source provider, you can get your Liquid Controls Group Integrated Terminal Solution anywhere in the world.



## A WIDE RANGE OF SOLUTIONS

Own the peace of mind you need to manage your terminal at peak levels. Liquid Controls Group Integrated Terminal Solutions match components to improve accuracy, control responsiveness and product flow. Together, LCG's sturdy hardware and agile software stabilize your custody transfer system, so you can devote more time to your business. Our components are designed for future expansions and upgrades, and they assimilate seamlessly into your existing system.



## VALUABLE PRODUCTS

Increase your uptime and return on investment. Liquid Controls Group components have set the industry standard for accuracy and longevity. LCG consists of seven manufacturers. Seven mature companies, who, over the years, have built solid reputations on quality and innovation. LCG Integrated Terminal Solutions leverage their shared resources and industry knowledge to supply operator-friendly, streamlined systems that last.

## ONE CONVENIENT SOURCE

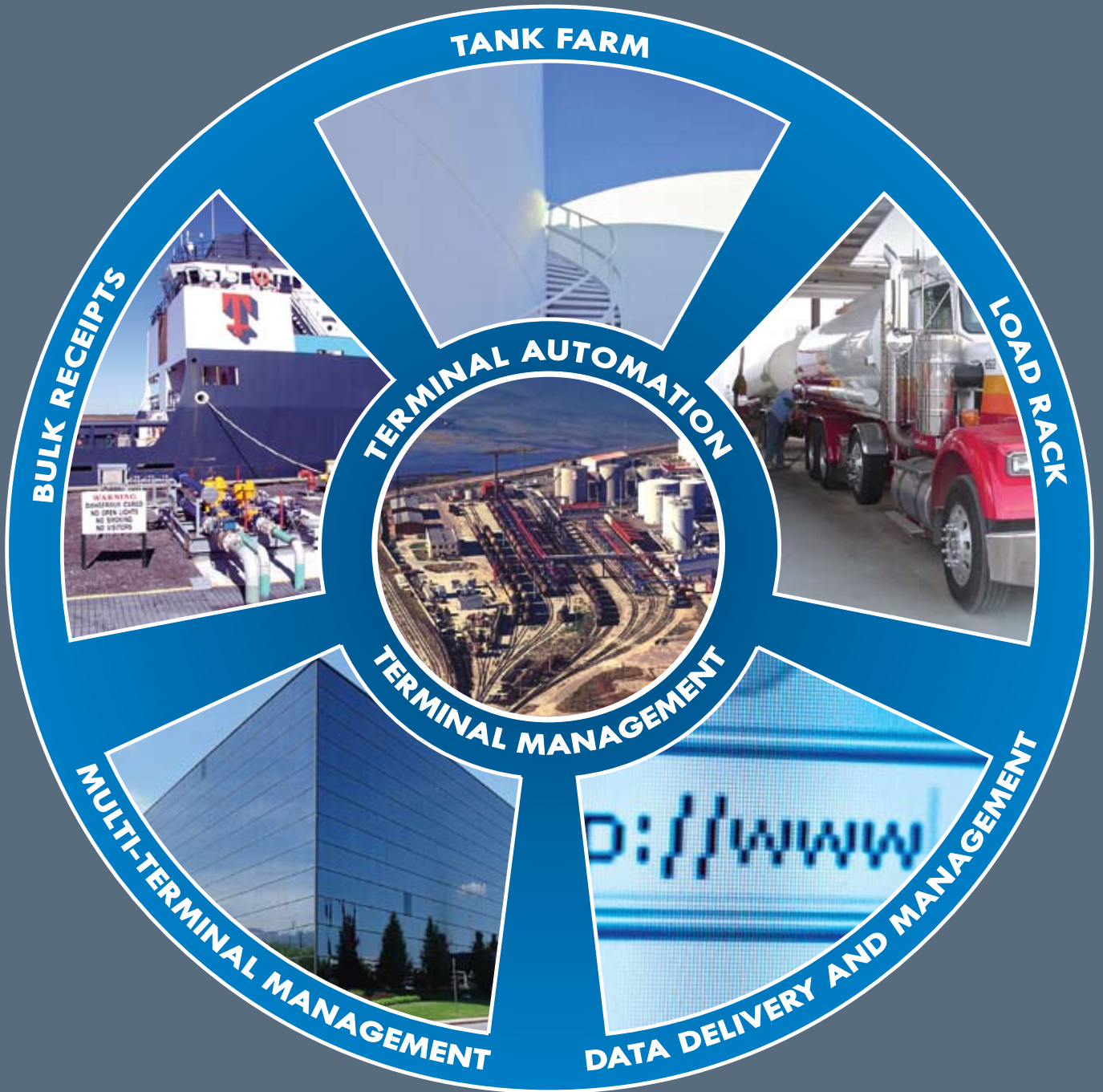
Eliminate lost time and the additional expense of managing multiple suppliers. As a single-source provider, the Liquid Controls Group streamlines your supply chain during installations, maintenance, upgrades and expansions. As a collection of seven reputable companies, we can provide an extensive knowledge base to ensure pain-free installations and service.

## AVAILABLE GLOBALLY

Profit from Liquid Controls Group Integrated Terminal Solutions anywhere in the world. LCG is comprised of six industry leading brands, seven business units in five countries and over 500 distributors on six continents.



# LIQUID CONTROLS GROUP INTEGRATED TERMINAL SOLUTIONS APPLICATIONS MAP



# TERMINAL AUTOMATION AND MANAGEMENT



Enhance your automation capabilities and account for every drop and vapor of product. Built upon the solid foundation of the Liquid Controls Group's pumps, meters and valves, Toptech Systems' automation and data-management tools can revitalize your terminal operations. At the load rack, the MultiLoad II handles the most complex blending and additive schemes found in today's terminaling markets. In the office, the TMS6 gives you universal control over your terminal via a user-friendly desktop interface. Both are extremely flexible. The TMS6 can control almost any terminal configuration imaginable, and the MultiLoad II can act as either an independent control system or a remote unit for a terminal system. LCG also offers a wide range of safety and security features to suit your unique terminal needs.

**ERP Management**  
**Multi-Language Support**  
**Facility Status and Control**  
**Access Control and Security**  
**Load Rack Automation**  
**Stock Accounting**  
**Inventory Management**  
**Allocations Management**



## TOPTECH SYSTEMS • TMS6™

An extremely flexible and full-featured stock accounting system, Toptech's TMS6 system makes it easy to track every gallon of product coming into and out of your facility. With TMS6, it's easy to schedule bulk receipts and load rack traffic. TMS6 interfaces with almost any automatic tank gauging system to graphically display data on tank levels, temperatures and product quantities. TMS6 can manage multiple stockholders with its stock accounting features for commingled inventory management.



### TOPTECH SYSTEMS • MULTILOAD II™

Streamline load racks and simplify your operations. MultiLoad II eliminates the need for multiple interfaces within a bay. Control functions are combined into a single system so that only one driver interface is necessary for each loading lane. The MultiLoad II controller can operate as a remote unit for a terminal management system or as an independent load rack control system.



### TOPTECH SYSTEMS • RCU II™

A rugged industrial data terminal designed for driver/operator interface, TMS6 uses the RCU II to control access to entry and exit gates, load racks and BOL request stations. TMS6 supports customized prompts via the RCU II for account number, order number, truck number, language selection and other critical information.



### TOPTECH SYSTEMS • ACR™

A heavy-duty, multi-purpose access control device. Equipped with a non-captive proximity card reader, the ACR can be used at either indoor or outdoor access control points.



### TOPTECH SYSTEMS • VERIFID™

Prove the identity of transport drivers. Toptech's fingerprint verification system, VeriFID, is both convenient and reliable. Driver cards only validate the card that is presented, not who is presenting it. PIN's can be lost, loaned to someone or stolen. With VeriFID, you establish a person's identity rather than relying on what they know or what they have.



# BULK RECEIPTS



**Skid Assembly**  
**Metering**  
**Pumping**  
**Valve Flow Control**  
**Leak Detection**  
**Stock Accounting**

**LIQUID CONTROLS GROUP**

Receive product quickly, accurately and safely with the Liquid Controls Group's selection of premium products. To meet your specific needs, components can be engineered, designed and assembled as a complete skid system. Add a MultiLoad II and TMS6 to gain an agile accounting and data management platform on an easy to use interface.



## **TOPTECH SYSTEMS • TMS6™**

Toptech's TMS6 system makes it easy to track every gallon of product coming into and out of your facility. With graphical tank level indicator screens, it's easy to determine when you need to schedule your next bulk receipt.



## **TOPTECH SYSTEMS • MULTILOAD II™**

Ideally scaled to fit offloading applications, Toptech's versatile MultiLoad II products offer solutions that allow terminal operators to purchase just the right amount of control without sacrificing quality or features.



### FAURE HERMAN • HELICAL TURBINE METERS

Faure Herman's robust construction and definitive design ensure accuracy, reliability and a long service life. A helical, free running rotor situated axially in the meter body keeps pressure drops and back pressure to a minimum. Faure Herman's helical turbine meters can accommodate a wide range of viscosities and product volume.



### LIQUID CONTROLS SPONSLER • TURBINE METERS

A precision-crafted, hydraulically balanced rotor mounted in the flow stream provides accurate linear output and volumetric flow measurement for gases and clean, low viscosity liquids.



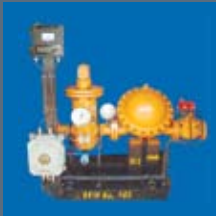
### FAURE HERMAN • ULTRASONIC METERS

Eliminate pressure drops. Faure Herman's ultrasonic meters are the perfect solution for pipeline leak detection. Accurate and easily maintained, they are unequalled in high volume railcar and barge unloading applications.



### LIQUID CONTROLS • POSITIVE DISPLACEMENT METERS

Known for extraordinary long service lives, Liquid Controls positive displacement meters provide reliable measuring and remarkable endurance. They are engineered with no metal-to-metal contact inside the measuring chamber to ensure minimal wear and dependable accuracy.



### SAMPI • SKID SYSTEMS

Eliminate costly downtime during upgrades and new construction. SAMPI skid systems are a convenient plug and play load rack solution. Fabricated using time-tested Liquid Controls Group components and designed to customer specifications, SAMPI skid systems are a pain free, high-value answer to your off loading needs.



### CORKEN • COMPRESSORS

Corken compressors are ideal for transferring liquids between pressurized tanks, off-loading/loading-out liquids, recovering residual vapor and evacuating vapors for maintenance.



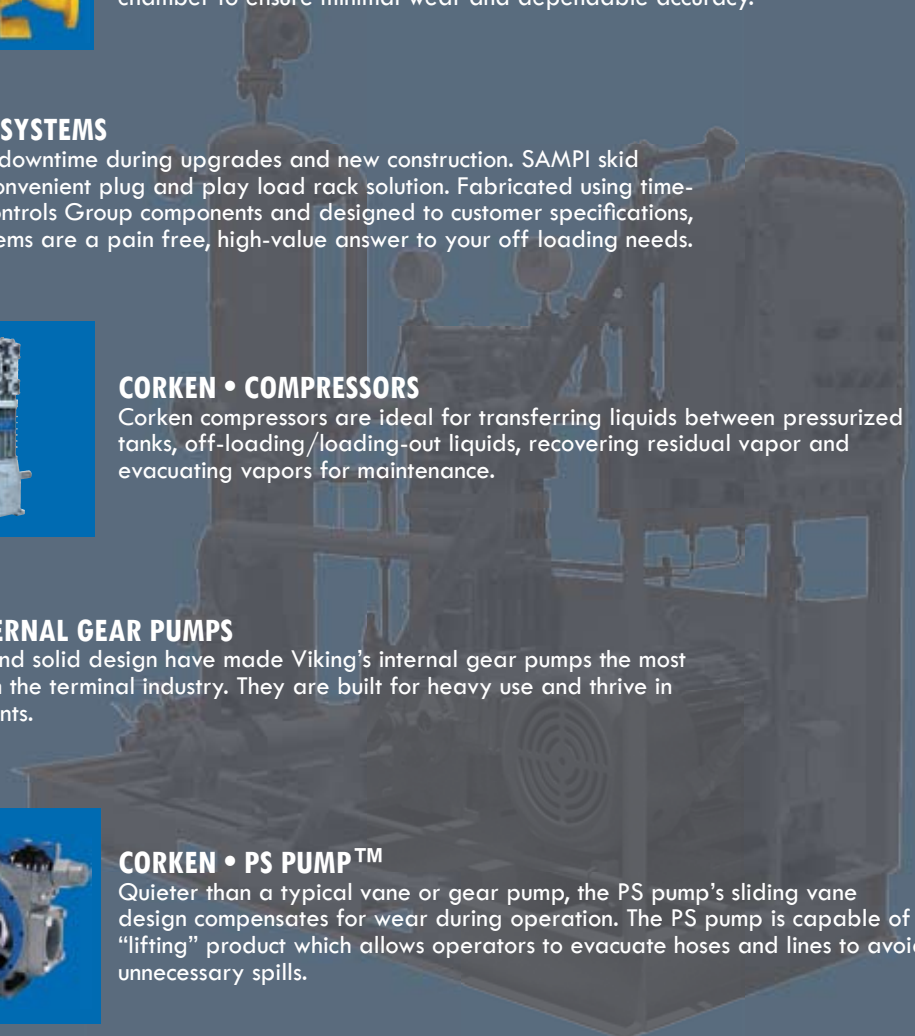
### VIKING • INTERNAL GEAR PUMPS

High capacity and solid design have made Viking's internal gear pumps the most trusted pumps in the terminal industry. They are built for heavy use and thrive in harsh environments.



### CORKEN • PS PUMP™

Quieter than a typical vane or gear pump, the PS pump's sliding vane design compensates for wear during operation. The PS pump is capable of "lifting" product which allows operators to evacuate hoses and lines to avoid unnecessary spills.



# TANK FARM



Simplify tank gauging and product management. With LCG's line of durable valves and TMS6, you can tighten your grip on product inventory, monitor inventory data from your desk and track product according to stockholder ownership. Our goal at LCG is to provide practical solutions, a multifaceted set of options and long-term value for you and your company.

**Tank Gauge Monitoring**

**Valve Flow Control**

**Stock Accounting**

**Inventory Management**

**LIQUID CONTROLS GROUP**



## **TOPTECH • TMS6™**

The TMS6 Tank Gauging option graphically displays data on tank levels, temperatures and product quantities on the "Tank View" status screen. Data can be monitored at user-defined intervals. TMS6 manages stock accounting for commingled inventory management of product owned by multiple stockholders using combined storage.



## **SAMPI • HPV VALVE**

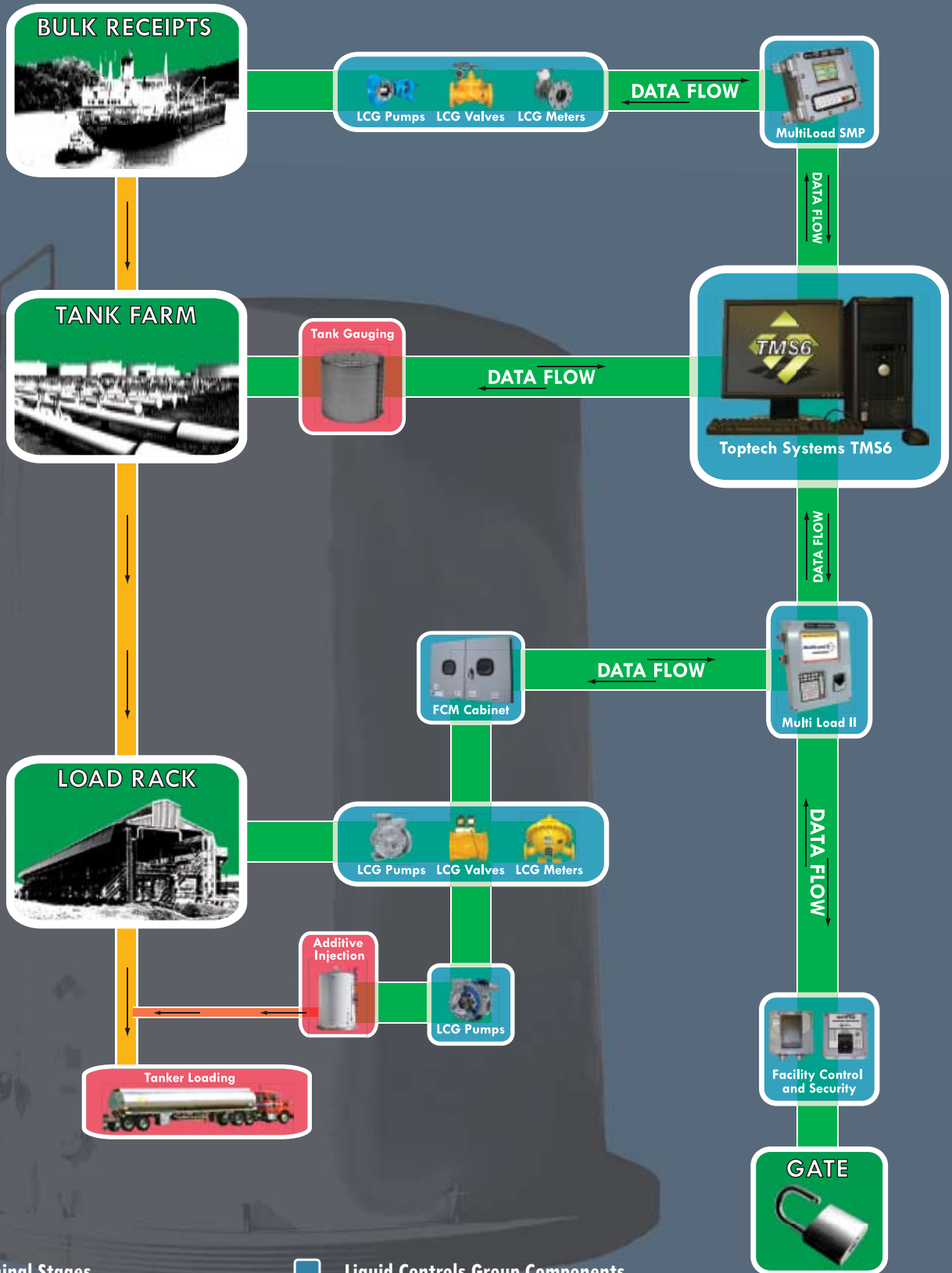
Minimal pressure drop and a smooth flow rate regulation distinguish the SAMPI HPV two stage shut-off valve. Valves are available in aluminum or carbon steel.



## **LIQUID CONTROLS • 2-STAGE DIGITAL VALVE**

LCG digital valves are diaphragm actuated and available in globe and angle patterns. They are available in ductile iron or cast steel.

# LIQUID CONTROLS GROUP INTEGRATED TERMINAL SOLUTIONS DATA FLOW



- Terminal Stages
- Liquid Controls Group Components
- Terminal Operations
- Product Flow

# LOAD RACK



Get more out of your load rack configuration. Liquid Controls Group Integrated Terminal Solutions offer a full line of load rack components and automation. Our valves, meters, pumps and dispensing equipment can be designed, engineered and assembled as a complete SAMPI skid system. Equip your skid system with Toptech Systems' MultiLoad II, and you'll have no problem handling the complex blending and additive schemes found in today's terminaling industry.

**Skid Assembly**  
**Metering**  
**Pumping**  
**Valve Flow Control**  
**Additive Injection**  
**Stock Accounting**  
**Access Control**  
**Blending**

**LIQUID CONTROLS GROUP**



## TOPTECH • TMS6™

Toptech's TMS6 system is an extremely flexible and full-featured stock accounting system. With TMS6, it's easy to schedule and manage load rack traffic. Standard reports are available that track load rack activity by account, carrier, product or meter. TMS6 comes equipped with configurable safety features such as: Load Start Timeout, Pump Run Timeout, and Load Completion Timeout.



## TOPTECH • MULTILOAD II™

Streamline your load rack traffic flow. MultiLoad II eliminates the need for multiple interfaces. Control functions are combined into a single system so only one driver interface is needed for the entire loading lane. The MultiLoad II supports a wide range of blending schemes and additive injection options.



### **FAURE HERMAN • HELICAL TURBINE METERS**

Faure Herman's robust construction and definitive design ensure accuracy, reliability and a long service life. A helical, free running rotor situated axially in the meter body keeps pressure drops and back pressure to a minimum. Faure Herman's helical turbine meters can accommodate a wide range of viscosities and product volume.



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### **CORKEN • COMPRESSORS**

Corken compressors are the perfect solution for transferring liquids between pressurized tanks, off-loading/loading-out liquids, recovering residual vapor and evacuating vapors for maintenance.



# LOAD RACK



## **CORKEN • STATIONARY PUMPS**

The 4" Z4500 stationary pump is ideal for transport loading and multiple bobtail loading. The Z4500 can fill two 3,000 gallon bobtails in 20 minutes or less at typical operating RPMs.



## **VIKING • INTERNAL GEAR PUMPS**

High capacity and solid design have made Viking's internal gear pumps the most trusted pumps in the terminal industry. They are built for heavy use and thrive in harsh environments.



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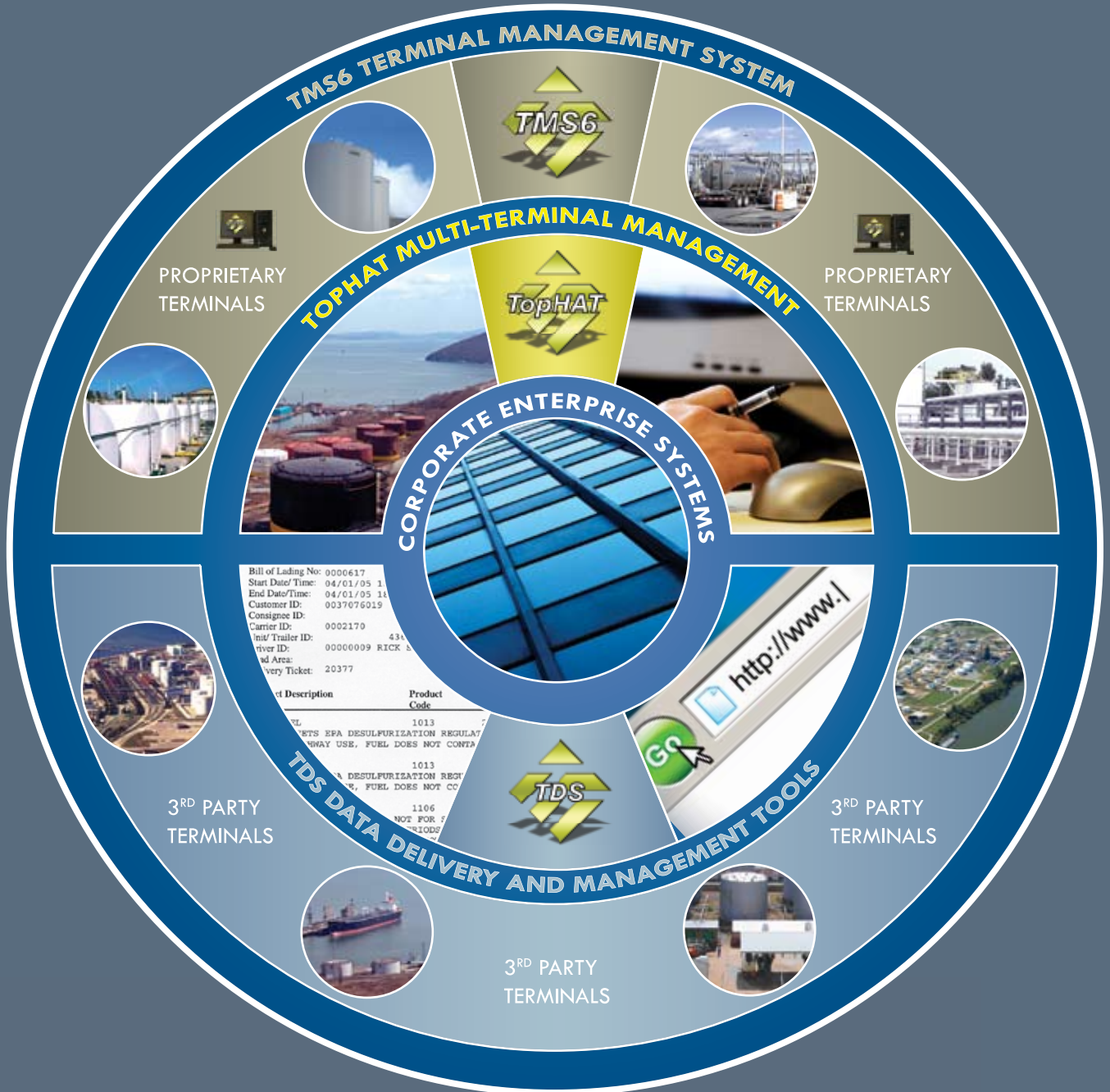


## **LIQUID CONTROLS • 2-STAGE DIGITAL VALVE**

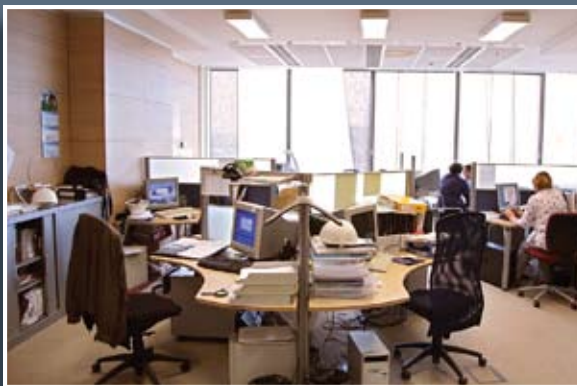
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# LIQUID CONTROLS GROUP INTEGRATED TERMINAL SOLUTIONS CORPORATE DATA STRUCTURE



# MULTI-TERMINAL MANAGEMENT



Optimize your multi-terminal operations for both company-owned and non-owned facilities. TopHAT, a multi-terminal solution, handles complex data translation and routing between terminal sites and the corporate back-office. TopHAT is designed to fit easily into your corporate IT strategy, providing the ideal location for corporate-wide data queries and reporting.

Centralized Data Warehousing

Data Translation and Routing

Centralized Reporting

ERP Systems Alignment

LIQUID CONTROLS  
GROUP



## TOPTECH • TOPHAT™

TopHAT facilitates the transfer of data essential to your accounting and inventory management. Additionally, TopHAT serves as a data warehouse to provide access to both historical and current corporate information that may otherwise be locked up in complex ERP and legacy systems.

# DATA DELIVERY AND MANAGEMENT TOOLS



Inventory Snapshots

Real-time BOL Data

Allocation Management

Dispatched Orders

Obtain real-time transaction data and manage allocations, orders and inventory at third-party terminals, then absorb that data into your ERP system. TDS is an industry-wide, centralized location where terminal owners/operators, suppliers, and marketers/carriers can access their data at a third-party terminals as if they were their own.



## TOPTECH • TDS™

TDS is a data collection service that enables users to retrieve and utilize load transaction data. The load transactions are gathered from the respective terminals and sent to TopTech servers where the transaction data is immediately made available via the Internet.

## **LIQUID CONTROLS GROUP**

The Liquid Controls Group provides custody transfer solutions for the control and management of high-value fluids and gases. In 2001, IDEX combined Corken, Liquid Controls and Sampi to form the Liquid Controls Group. Together, they used their combined resources to design valuable new products and offer cost-effective pump and meter solutions. They laid the foundation for LCG's successful program of collaboration and innovation. With the additions of Liquid Controls Sponsler, Toptech Systems and Faure Herman, LCG quickly became a dependable, single source provider, large enough to supply comprehensive solutions yet flexible enough to customize solutions for unique needs. Today, the Liquid Controls Group has a strong global presence with seven business units in five countries, over 500 distributors on six continents, and six industry leading brands.



### ***YOUR CUSTOMERS — OUR CUSTOMERS***

The Liquid Controls Group (LCG) is part of the IDEX Corporation, a diversified, engineered products company. IDEX leverages the resources of high quality, similar-profile businesses to innovate solutions that bring real and lasting value to you, our customer. At LCG and IDEX, the voice of our customers is our driving force. We are committed to helping you develop better products and services to meet your customers' needs.

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Publication 110-10 (01/08)

