

Balcrank

Fluid Management Solutions

Automotive | Commercial | Industrial



Fluid Management Solutions

In today's bulk fluid market, we see an average of 10% shrinkage in bulk fluid inventory due to theft, reconciliation, and failure to bill for oil on the repair order. These systems monitor each dispense and provide a secure system that allows tracking of each drop of oil. Systems are offered in very simple configurations with low security to complex feature-rich systems that provide complete security of your inventoried bulk products. They are password protected, linked to a repair order and require the technician to also preset the required fluid dispense amount. Once the dispense is complete, no other product is allowed to dispense unless it is on a separate ticket. Advanced reporting capability allows management to see reports based on each fluid product, who dispensed, when and how much fluid. It also tracks inventory in the bulk tank and can send an alert to your fluid supplier when tank levels get low or high in the case of used fluids. Lost inventory can have a dramatic effect on your cost of inventory as oil can be one of the highest costs of inventory in a service shop.

Product Selection Matrix



FEATURES	NEX-U-	SYNERGY
Max. number of dispense points	Unlimited	255
Max. number of fluids	Without U-tank: Unlimited With U-tank: 50	Unlimited
Fluid names	✓	✓
Number of keypads	Without U-tank: Unlimited With U-tank: 50	Unlimited
Job number validation	✓	✓
Job numbers	✓	✓
Simultaneous keypad operation	✓	✓
Simultaneous dispense	✓	✓
Max. number of tanks	Without U-tank: Unlimited With U-tank: 50	Unlimited
Calculated tank declining balance	✓	✓
Real-time tank monitoring	✓	✓
Tank report over e-mail	✓	✓
PIN code validation	✓	✓
Operation PIN codes	✓	✓
Max. number of PINs	Unlimited	Unlimited
Extensive user permission configuration	✓	✓
Preset volumes	✓	✓
Hose Reel ID	✓	✓
Operator names	✓	✓
Dispense from keypads	✓	✓
Dispense from PC	✓	✓
Dispense from smart phone/tablet	✓	
Max. number of transaction history	U-track: Unlimited U-dat: 5000	Unlimited
Print reports	✓	✓
Print receipt	✓	Local / Network
Custom reports	✓	✓
Bar Code / Card reader / Dallas Key	✓	✓
Wireless	✓	
Bluetooth	✓	
DMC Integration - CDK	✓	✓

Nex-U.®

NEX-U.® Fluid Monitoring Systems

NEX-U.® provides you with the control and the information you require to make your operation more profitable. You will be able to account for every drop of lubricant and other service fluids used.



Today's Challenges

Lost inventory equals lost profit; with today's high oil prices, inventory control eliminates that concern.

The Solution

For almost any lubricant usage or shop size, with today's high cost for these fluids, NEX-U.® quickly pays for itself. Once it is paid for, savings go right to the operation's bottom line in the form of profit; profit previously lost.

NEX-U.® has been conceived with the user in mind, making fluid management and fluid inventory control an easy and trouble-free activity.

NEX-U.® adapts to your way of working

NEX-U.® is a hybrid system that brings you all the advantages of wireless flexibility and hard-wired reliability



A bidirectional communication is established through web services. The user enters their PIN number and the work order. DMS will prompt a message whether this information exists or not. NEX-U.® offers multiple operating modes depending on the customer's needs.

NEX-U.® installation must be performed by a Balcrank NEX-U.® Certified Distributor. Contact your Balcrank representative for additional information.

Wireless flexibility

- Data can be transmitted wirelessly among the different system components, eliminating long and expensive cable runs
- Easily adds new components when required as your needs grow
- System uses existing Wi-Fi® networks, simplifying its installation. No need for special, custom made, network components

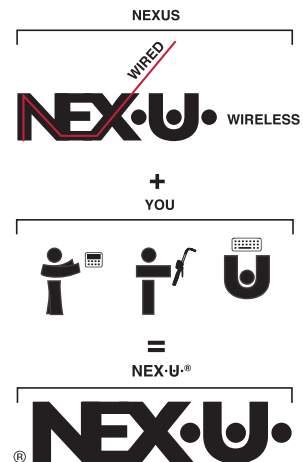
Hard-wired reliability

- A constant and reliable power source is always present to power the solenoid valves that control fluid delivery.
- No uncharged batteries to let you down.
- Hard-wired data transmission to avoid interferences and other obstacles which might interfere with wireless data transmission

NEX-U.® contributes to increased productivity in vehicle service operations

- Provides total control and record of every fluid dispensed
- Secures fluid access to authorized technicians only
- Provides accurate, real-time fluid inventory information

NEXUS + YOU = NEX-U.®



NEX-U.® combines the Latin word "NEXUS", which means connection to wireless or hard-wired connected system components, with "U" (You), the system User, the Human.

Nex-U® U-net

U-net is the key NEX-U® component. It is the central processing unit that controls the system communications and houses the U-track software.



- U-net includes a powerful 2.4 GHz processor and 4 GB RAM
- It controls the system functions and manages the wired and wireless communication between the NEX-U® components
- It has two CAN BUS ports (in/out) for wired communications with other NEX-U® components and an ethernet port that allows U-net to connect to the shop LAN

U-net also includes the U-track software

U-track is a powerful web-based software package that gives you full control of fluid usage and inventory. It is a web-based software that allows multi-user applications. All PCs or tablets in the same network and in the same location can have access to U-track. U-track can work using any web browser.

Compatible with: Chrome, Firefox, and Microsoft Edge.



A bidirectional communication is established through web service. NEX-U® offers multiple operating modes depending on the customer needs.

U-track benefits:

- Simple and intuitive system set-up
- Simplified system maintenance (manage users, fluid inventory, etc.)
- Manage all the system hard-wired and wireless communication
- Generate a wide variety of reports, which can be easily exported to CSV and txt formats
- Record and manage Validated Preset Transactions (required for operating with U-Vision⁺)
- Transform any PC terminal in the workshop into a NEX-U® virtual keypad license required

U-track also contributes to increasing your

operations efficiency and profitability:

- Keeps control of the quantity of fluid dispensed in the system
- Improves inventory accuracy, generating automatic warnings and email notifications for reorders at critical predefined inventory levels
- Generates a variety of reports, to help you track dispense information such as date and time, technician, work order, fluid dispensed, volume delivered, etc.

Nex-U.® U-dat & U-dat Power+

U-dat allows system access to technicians either through a PIN code or using a RFID card



- U-dat includes a 7" full color graphics display and a complete QWERTY keypad
- U-dat supports CAN BUS cable communications that carry data and power to open the solenoid valves in the system. "Plug-and-play" connectors make cabling easy
- U-dat includes the transformer required to simultaneously open up to 8 solenoid valves

Optional Bluetooth printer (see accessories pg. 122).

NEX-U.® adapts to the way you work and it offers multiple possibilities for accessing the system.

Technicians can access NEX-U.® via:

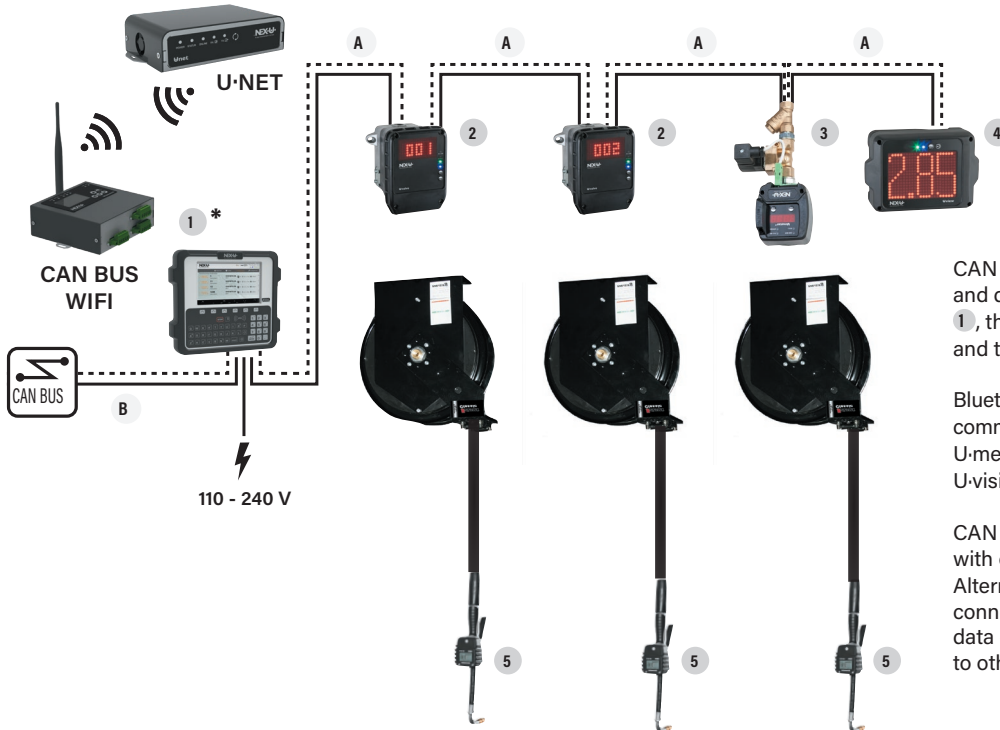
- U-dat: System access keypad
- U-vision+
- Any device connected to the same network as U-net (laptop, smartphone or tablet)

U-dat connection panel

All wired connections can be quickly and easily done without opening the U-dat. It is possible to connect a printer, an external RFID reader, or a barcode reader to the RS-232 port.

Compatible with: Chrome, Firefox, and Microsoft Edge.

Access through U-dat



CAN BUS cable A, transmits power and data between the U-dat keypad 1, the U-valves 2, the U-meter+ 3 and the U-view remote display 4.

Bluetooth® connection is used to communicate each U-valve 2 and U-meter+ 3 with its corresponding U-vision 5 hand-held display.

CAN BUS cable B communicates with other NEX-U.® components. Alternatively, if the keypad 1, is connected to the wireless network, data can be transmitted wirelessly to other NEX-U.® components.

* Dispense input

Nex-U.® U-vision & U-vision Power+

U-vision+ adapts to any Balcrank oil control handle and transforms the handle into a hand-held display and keypad for access to the NEX-U.® system.



Use the U-vision to display reel, battery and delivery. Use U-vision+ to dispense and to interact with the system.

- Modular design fits standard non-metered control handle
- Display dispensed data
- Display and input data

U-vision

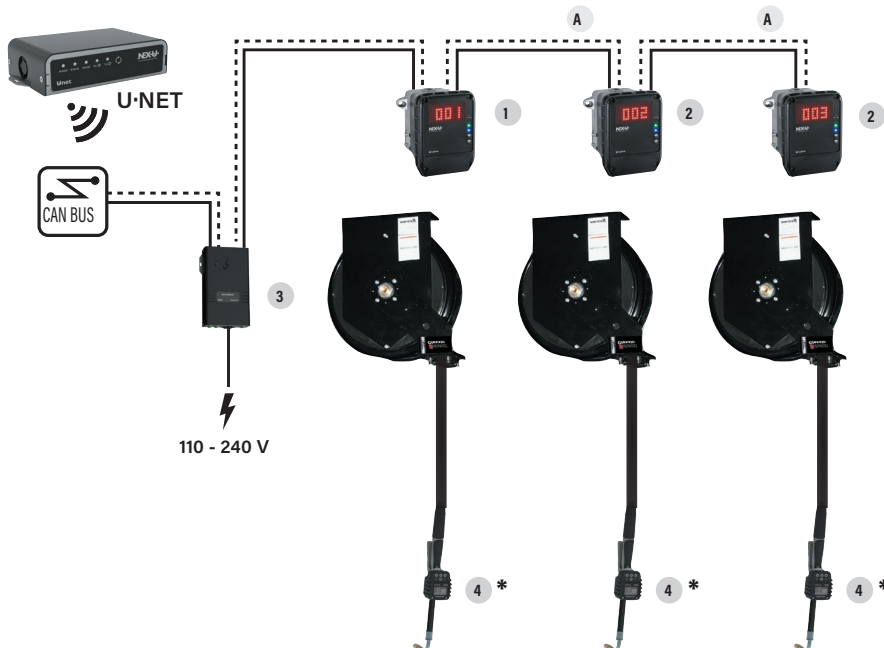
Hand-held display module to fit a Balcrank oil control handle. Includes a backlight display connected via Bluetooth® with a U-valve, U-meter+ or U-count module and it displays the following parameters:

- Hose reel (fluid outlet number and fluid dispensed type)
- Battery life and Bluetooth® signal strength
- Volume delivered and operation progress
- Solenoid valve open or closed

U-vision+ U-vision+ includes a six-button keypad and it can replace the U-dat keypad for data entry in the system as it allows the following operations:

- User access through PIN entry
- Scroll through existing open job orders to select the one corresponding to each operation or enter the job order number (digits only)
- Enter the volume of fluid to be dispensed
- Confirm fluid type and transaction

Access through U-vision+



Power and data are transmitted using CAN BUS cable **A** between the U-valve+ **1** and the other U-valves **2**. Power to energize the solenoid valves is supplied by the U-power **3**, connected to U-valve+ **1**.

Each U-valve+ **1** and U-valve **2** is connected to its corresponding U-vision+ **4**, hand-held display and systems access Keypad.

Wireless data transmission is done by U-valve+ **1**.

* Dispense input

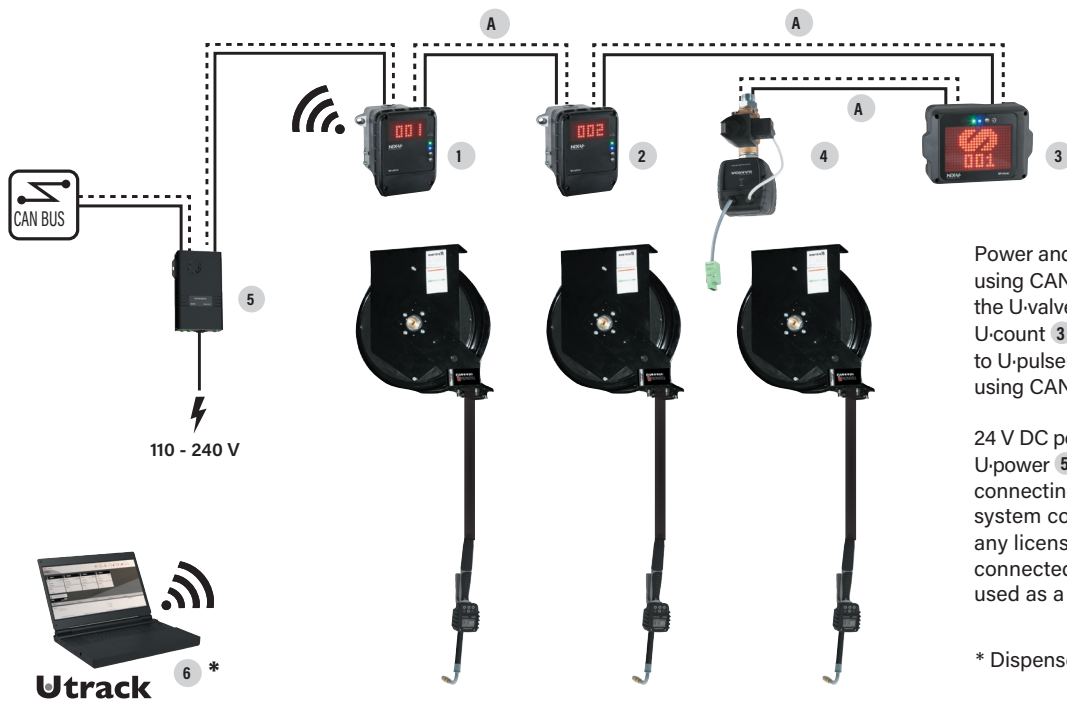
Nex-U[®] U-valve & U-valve Power⁺

U-valve is a compact unit combining a high accuracy pulse meter, a solenoid valve and a large cleanable fluid screen filter with an electronic module. This module is required to control the meter and valve operation and to communicate with other system components.



- Reduces installation time and eliminates the risk of leaks when using separate components
- It has a large, high visibility LED display which shows the U-valve number assigned in the system and the U-valve operation
- Four different LED lights that show the U-valve operation for diagnosis and two buttons for system configuration
- U-valve supports CAN BUS cable communication that transmits data and the electric power required to open the solenoid valve and Bluetooth[®] connection to a U-vision or a U-vision⁺ fluid handle with display
- U-valve⁺ includes Wi-Fi[®] communications for data transmission to other system components

PC - Laptop Connection



Power and data are transmitted using CAN BUS cable **A** between the U-valve⁺ **1**, U-valve **2** and U-count **3**. U-count **3** is connected to U-pulser solenoid valve **4** also using CAN BUS connection.

24 V DC power is supplied by U-power **5** to U-valve⁺ **1** connecting using Wi-Fi[®] with all system components, including any licensed terminal **6** that is connected to U-track and can be used as a virtual access keypad.

* Dispense input

Nex-U.® Compact

NEX-U.® also offers solutions for smaller workshops where web-based software is not needed. NEX-U.® Compact is a simple system based on a special U-dat keypad that is able to control a maximum of 8 dispensing points.



The Keypad includes a 7" colored screen and a simplified version of the U-track software.

The software included provides workshops with:

- Full control of bulk stored fluid usage.
- Inventory control using declining balance method. NEX-U.® Compact will give a warning signal once a certain inventory is reached, and restricts access to those outlets that have run out of inventory.
- Ability to generate full reports in CSV format that can provide useful management information.

NEX-U.® Compact 75.

With a 75 W transformer for opening up to 2 solenoid valves and dispensing 2 fluids

NEX-U.® Compact 320.

With a 320 W transformer for opening up to 8 solenoid valves and dispensing 8 fluids

Nex-U.® Mobile

NEX-U.® Mobile allows fluid inventory and usage control in mobile service trucks.

NEX-U.® Mobile is a special U-dat keypad module, which includes the software required for an autonomous operation, can control up to maximum of 8 fluid outlets. Completed transactions can be saved to a USB memory stick in an Excel format.



NEX-U.® MOBILE can work with any NEX-U.® fluid meter: U-valve; U-meter or U-meter+ with 24 V DC solenoid valve and filter.

Standard U-count and U-pulser solenoid valve are compatible with NEX-U.® Mobile as long as they are connected to a 24 V DC solenoid valve.

NEX-U.® Mobile Keypad

24 V DC keypad or opening up to 8 solenoid valves and dispensing 8 fluids

Nex-U.® U-tank

Provides real-time inventory control, reducing concerns about running out of inventory or used fluid tanks overflow.



The number of input and output ports are:

- One analog input per tank for a pressure probe with 4-20 mA or 0-10V
- Three digital inputs per tank for a low, intermediate or high-level probe ⁽¹⁾
- One output per tank for a solenoid valve to control air supply to each pump
- One output per tank for an electro-pneumatic valve to prevent tank overflow
- One output for controlling an air solenoid valve to stop the air supply to all pumps when the workshop is closed
- One output per tank for controlling a flash warning light or an acoustic alarm

U-tank supports CAN BUS wired communication with other NEX-U.® system components plus Wi-Fi® with optional CAN BUS to Wi-Fi® converter.

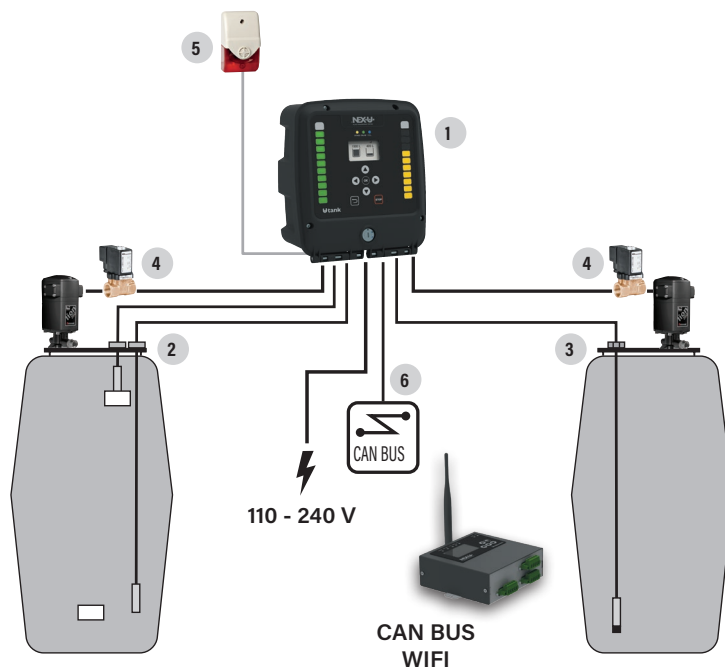
U-tank is a monitor module capable of controlling two tanks using digital or analog level gauges. Can be connected to solenoid valves to control pump operation, and to external warning devices.

U-tank has two independent graphic displays and level bars, where the inventory available in each tank can be checked. It also has a set-up keypad for inventory adjustment if required⁽¹⁾.
See pg. 124 for probes and alarm

Only for connection with U-dat, U-valve, or an adjacent U-meter. Requires a 24 V DC solenoid valve.

(1) The use of digital probes does not allow real-time inventory monitoring. NEX-U.® will use declining balance for inventory control and will require manual inventory adjustment when fluid is supplied to the tank.

Tank Monitoring



U-tank **1** can monitor up to two tanks. Each tank can be fitted with low and high level sensors **2** or with a pressure gauge **3** for real-time control of the inventory in the tank. U-tank **1** can also control pump operation opening or closing an air solenoid valve **4** that prevents pump from running dry or air entering the oil distribution lines if there is no oil in the tanks.

U-tank **1** can also control a remote flash light or siren **5** to warn when any tank is empty. U-tank **1** can communicate with other NEX-U.® elements using Wi-Fi® or through CAN BUS **6** wired connection.

Synergy Components

Multi Point Dispense Module, Keypad and LED Display



Multi Point Dispense Module



Keypad



LED Display

Multi-Point Dispense Module

- The Multi-Point Dispense Module handles metering and fluid solenoid control from any keypad or PC in the entire system.
- One module controls up to 4 reel dispense points and offers a keyed manual override.
- Every outlet port can be given unique functions: Volume, time out, job number, group access, Pulse Per Unit, display information, min./max. volume.

Keypad

- The standard keypads are designed to be located in strategic locations to allow remote entry of reel selection, PIN, job number, etc.
- Can be equipped with optional Serial Port Kit for use with an external reader.
- No limit for number of keypads in the system.
- Any reel dispense points can be opened from any keypad.

LED Display

- Large display, easy to see from long distances.
- The active reel dispense points is shown in the lower left corner.
- When equipped with a clock module or connected with a PC LED Display unit shows the current time when the system is not in use.
- Displays the active dispense volume
- Can display tank volume when used in a system with a tank control module and an analog sensor.



Compatible with CDK. A bidirectional communication is established through web service.

Fluid Inventory Control PC Interface Module and Printer Module



Printer Module

PC Interface Module

- Interfaces Synergy system to the PC
- Includes basic software
- Allowing graphic visualization of the Synergy system components.
- Export system data to a simple text file.
- Synchronization of the system time with the PC
- Enhance system capabilities with Synergy Professional software, see page 130 for software upgrade, sold separately.
- Operator interface, includes powerful database manager with professional software, page 130

Printer Module

- Interfaces FIC system to the optional ticket printer
- Internal database stores user, PIN, and job information, when no PC is used
- Transaction details printed on the optional ticket printer
- Can also be used in a PC system for job tickets anywhere in a system layout

Tank Surveillance Module and Tank Control Module



Tank Surveillance Module

Tank Surveillance Module

- The Tank Surveillance Module is used to monitor up to 4 fresh and/or waste oil tanks per module using either high/low level sensors or analog probes. Control pumps - automatic start and stop
- Controls up to 4 solenoids (air or fluid) and can be used for either standalone tank monitoring or integrated with a PC based system

- Equipped with key switch for normal operation, emergency override and On/Off functions
- Green, red, & yellow LED's on the front cover provide current tank status at a glance
- Used Oil - warning lights indicate ready, high level, and full
- Fresh oil - warning lights indicate ready, low level, and empty



Tank Control Module

Tank Control Module

- The Tank Control Module is used to monitor up to 4 fresh and/or used oil tanks per module using either high/low level sensors or analog probes. Control pumps - automatic start and stop
- Controls air solenoid valves

- Equipped with key switch for normal operation, emergency override and On/Off functions
- Controls waste pump/solenoid valves providing high level warning for Used Oil or low level warning and reorder point for fresh oil on PC

Fluid Inventory Control Synergy Web App Keypad



Synergy Web App Keypad

The Synergy Web App Keypad enables increased flexibility, mobility and efficiency by initiating Synergy dispenses from a web capable device such as a smartphone, tablet or computer web browser. Using the web app keypad allows a workshop use their own internal IT components, regardless of platform, to perform fluid dispensing operations using Synergy.

Easy set up

- A driver is added to the Synergy engine which communicates with our central WebKeypad Server
- Users and administrators are set up on our WebKeypad Server
- Any devices required to access the system are configured

How it works

When everything is configured the workflow is identical to using regular keypads, such as selecting the reel, entering the PIN and workorder number and finally the volume to be dispensed.

Built-in bar code scanner

The web app keypad features a built-in software based scanner for inputting work order numbers via QR codes or conventional bar codes.

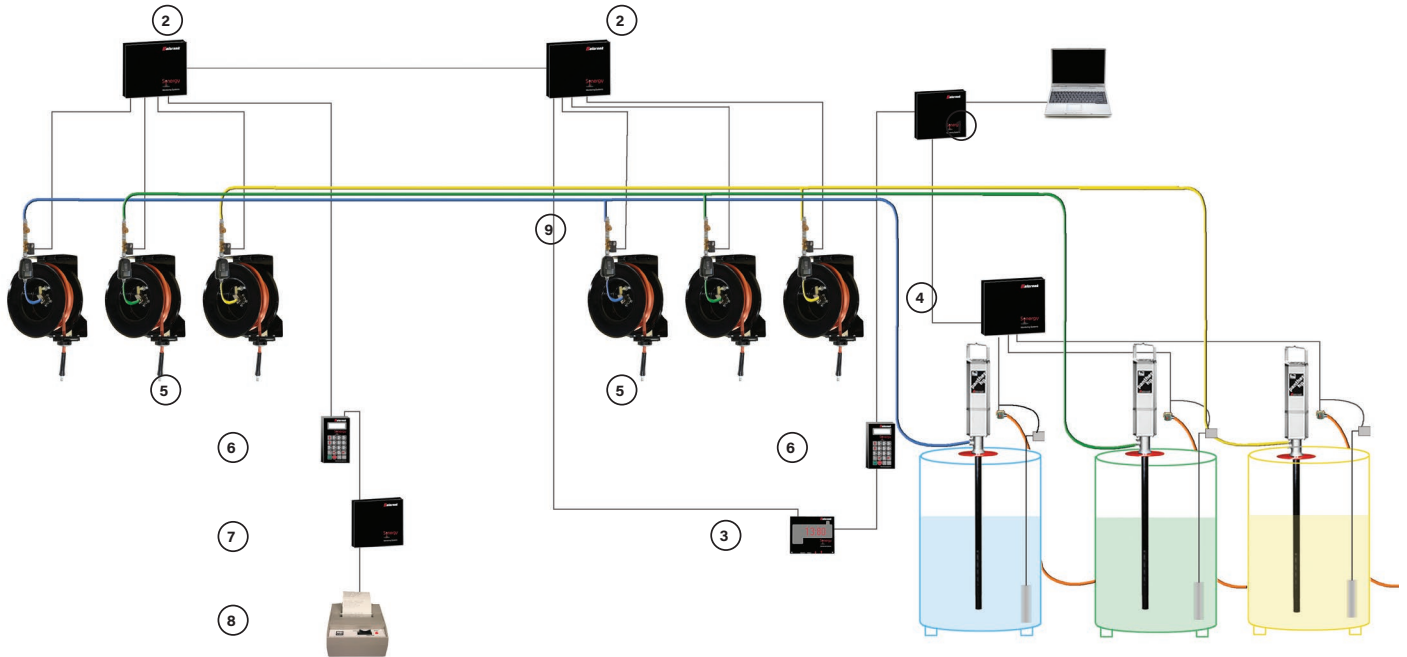
Drivers for external ERP/DMS systems

Works with all OCP 1.xx based drivers for real-time validating of work order numbers in an ERP/DMS system.

Subscription based

The web app keypad is offered as a service with a monthly fee (invoiced annually), this allows your business to easily scale up or down depending on your current needs, providing better overview of the costs. Free support is included for customers with existing Synergy support agreements.

Example of Mid-Range Synergy System



BOM's

- | | |
|---|---|
| <ul style="list-style-type: none"> ① 3110-019 - PC Interface Module ② 3110-017 - Multi-Point Dispense Module (MPDM) ③ 3120-068 - LED Display ④ 3110-020 - Tank Control Module ⑤ Hose Reels x 6 units | <ul style="list-style-type: none"> ⑥ 3110-016 - Standard Keypads ⑦ 3110-018 - Printer Module ⑧ 3120-069 - Ticket Printer ⑨ 3120-033 - Air Solenoids x 3 units |
|---|---|

TM Control



TM Control

Standalone tank controller with 4 channels capable of controlling up to 4 different tanks or fluids. Each channel can connect to a solenoid valve, remote alarm or strobe light.

The TM Control can be used as a high or low-level control to prevent overflow, or as a pump shutoff to prevent the pump from running dry, and allowing air to enter the system.

Main Features

- Controls up to four channels. Each channel can be assigned to a different tank, or multiple channels can be assigned to a single tank
- Each channel controls solenoid valves, relays, external alarms, etc.
- This unit can be a standalone unit; no need to connect to auxiliary software or systems
- TM Control works with tank alert strobe light and alarm 3120-029
- One button for setup, resetting alarms, and system test
- Use the key switch for bypass mode control, setup access, or rebooting the system
- Status LEDs: yellow indicates bypass mode and white on indicates system status; on
- Input LED for each channel; red blinking LED indicates level warning
- Outputs can be configured to "normally-open" or "normally closed"



SAMOA

Uvision

3.80

5.00



VERBODEN TOEGANG
TOEGANG VERBODEN



Balcrank Corporation

90 Monticello Road
Weaverville, NC 28787, USA
Tel.: (800) 747-5300 or (828) 645-4261
Fax: (800) 763-0840 or (828) 658-0840
info@balcrank.com
www.balcrank.com
www.shopbalcrank.com

Customer Support

Tel.: (800) 747-5300 or (828) 645-4261
(Monday to Friday, 8:00 AM - 5:00 PM ET)

- Order entry
- Product availability and information
- Pricing
- Shipping dates and delivery information
- Return Merchandise Authorization

Technical Support

Tel.: (800) 747-5300 or (828) 645-4261
(Monday to Friday, 8:00 AM - 5:00 PM ET)

- Repair advice
- Product application recommendations
- Warranty claims and returns
- Service bulletins

Place an Order

Tel.: (800) 747-5300 or (828) 645-4261

Fax: (800) 763-0840 or (828) 658-0840

- Fax orders day or night
- Order confirmed next business day by fax or e-mail

E-mail: orders@balcrank.com

Online: www.shopbalcrank.com

- Place orders on-line 24/7
- Four convenient ways to shop
- Search by product name or number
- Browse the site and add to cart
- Copy past orders to create a duplicate order
- Rapid order entry
- Pricing is live and specific to your account
- Build, print, save, and manage quotes for access at a later date
- Track shipped orders
- Easy management of personnel access and assigned permissions

Distributor