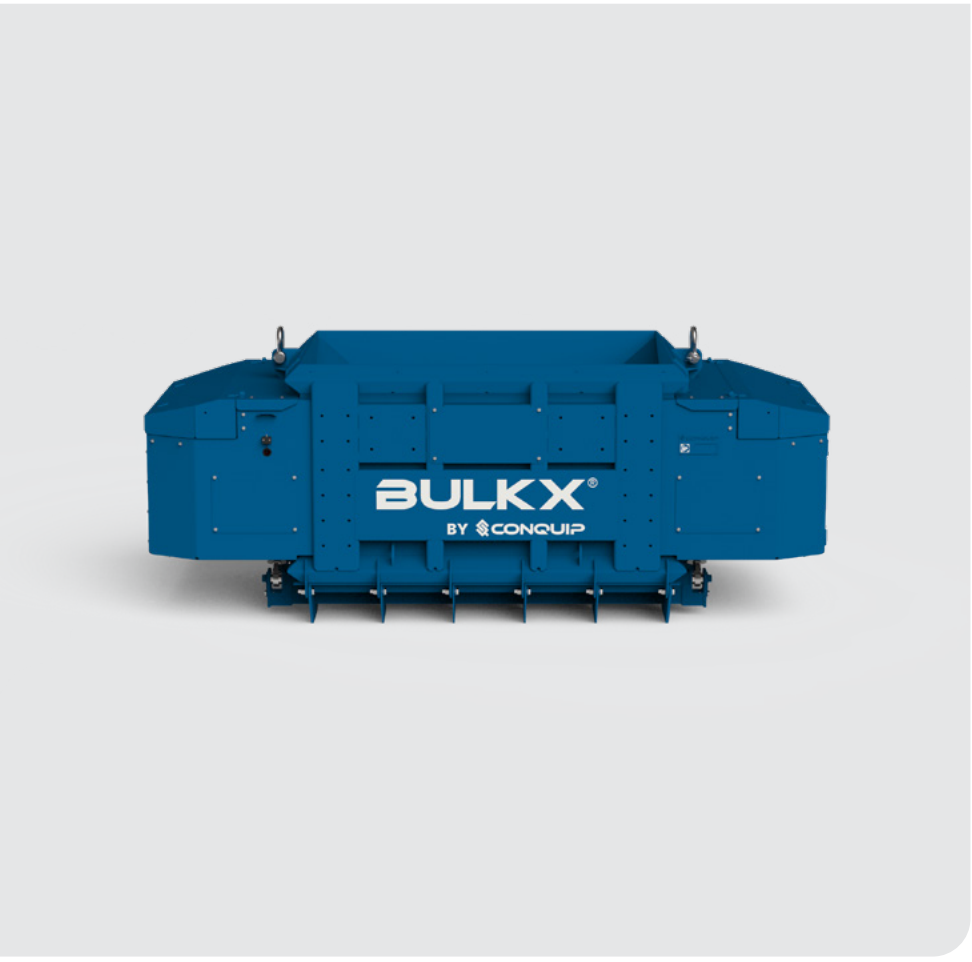
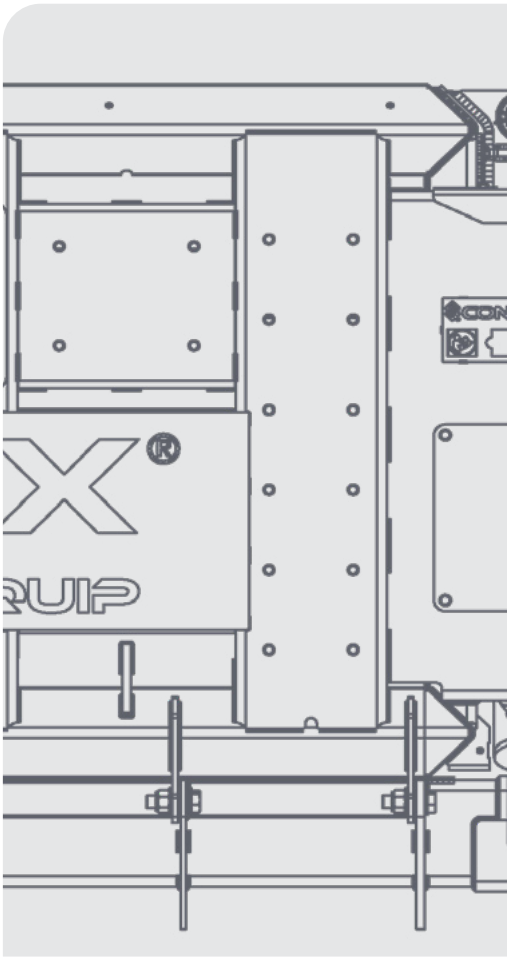
USER GUIDE

SMART-RELEASE BULKX





DISCLAIMER

Do not attempt to handle or operate this equipment before you have received sufficient training. Before use, operatives must have carried out all checks featured on the Visual Inspection Sheet on page 31. It is imperative that you have read the General Safety Instructions on page 32 and sufficiently familiarised yourself with the Operational Procedures in this document.

Note that this item is compliant only to the standards specified in this User Guide and it is therefore the duty of the responsible person(s) to review and ensure compliance.

CONTENTS

INTRODUCTION

OVERVIEW

With decades of experience in the design, manufacture, and support of construction equip-ment throughout the UK and EU, and built on the same DNA as our standard BulkX Range, the Smart-Release BulkX sets the standard for safety, efficiency, and adaptability, in the transportation of earth (muck) from an excavation zone.

Constructed on a modular architecture, the Smart-Release BulkX development is formed around the ethos of “reliability through durability” with the ultimate objective of maximising our customers’ and partners’ uptime and productivity while reducing their costs.

Unlike our standard BulkX range where a static gantry was a prerequisite, the new Smart-Release BulkX utilises a cableless control system to remotely discharge the skip in a pre-assigned location on-site.

Available in several sizes, ranging from 4,000L (10,000Kg WLL) to 14,000L (28,000Kg WLL), the new Smart-Release BulkX range compliments the majority of site-specific requirements.

KEY BENEFITS

CONTINUOUS OPERATION, MAXIMUM OUTPUT

Powered by a maintenance-free, lead acid battery pack capable of running 250 cycles* on a single charge without requiring an external battery management system.

FLEXIBLE CHARGING, MINIMAL DOWNTIME

Supplied with an external charger allowing a battery pack to be fully charged in 7 hours or overnight. To minimise downtime, a depleted battery pack can be quickly and easily disconnected and replaced with a fully charged pack.

REMOTE OPERATED, HYDRAULIC SYSTEM

Reliable hydraulics provide consistent smooth operation of the doors with precise control during cycles. The BulkX can be remotely-operated from a multitude of locations on-site, making it ideal for many waste removal and transportation applications.

VERSATILE DISCHARGE CAPABILITIES

This BulkX system can be discharged when suspended over a truck, muck bay, stockpile, or any preassigned area on-site, eliminating the reliance to place on a surface or gantry, improving productivity and providing more flexibility across a project's duration.

SELECTION OF LIFTING ARRANGEMENTS

Every project is different; a choice of a two-leg lifting chain or a spreader beam with varying lengths of drop chains means the Smart-Release BulkX can be adapted to suit site-specific requirements across a variety of excavation and tunnelling projects.

ENHANCED PERSONNEL SAFETY

Remote-controlled operation ensures all site personnel are positioned safely from the discharge area when the skip is emptied, increasing safety on-site.

REMOTE CONTROL WITH DIGITAL DISPLAY

The robust, radio remote control features a built-in digital interface displaying the system's status, the remote’s signal strength and the charge percentage of both the battery pack and remote control.

MINIMAL MAINTENANCE

Simple, reliable hydraulic system reducing overall maintenance, accompanied by a one-year warranty that provides contractors with complete peace-of-mind.

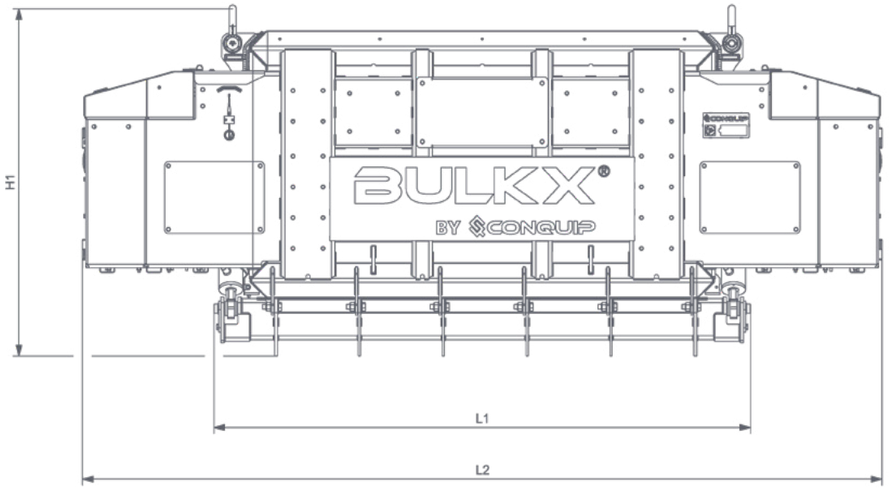
COMPLIANT TO STANDARDS

Built and tested according to British & European standards including BS EN ISO 4413, BS EN 60204-32, BS EN 62745, EN ISO 12100.

ENGINEERED, DEVELOPED, MANUFACTURED AND TESTED IN ENGLAND

* Battery run time may vary depending on application environment and nature of use.

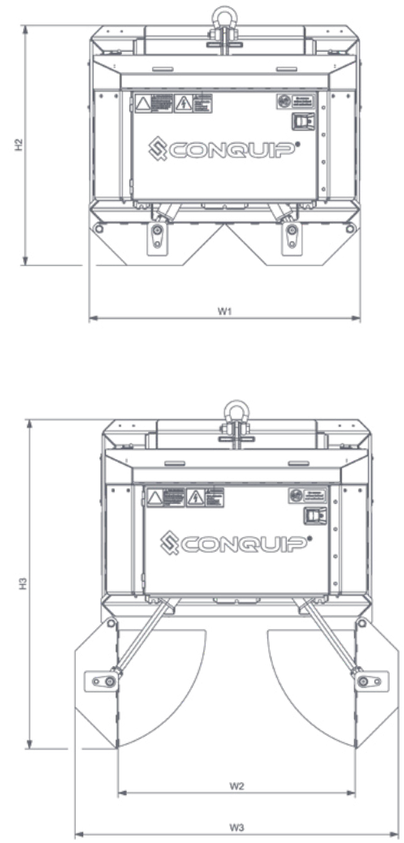
SPECIFICATION



CODE	L1 (mm)	L2 (mm)	H1 (mm)	MASS (kg)	WLL* (kg)	CAPACITY (litres)
CA550-04000	2700	4000	1700	3650	10,000	4000
CA550-06000	3200	4500	1900	4600	14,000	6000
CA550-08000	4000	5300	1900	4850	20,000	8000
CA550-12000	4750	6050	2300	5100	28,000	12,000

*Working Load Limit
NB: Greedy boards are available on each standard skip size for additional capacities up to 14,000 litres

SPECIFICATION



CODE	W1 (mm)	W2 (mm)	W3 (mm)	H2 (mm)	H3 (mm)
CA550-04000	1800	1570	2150	1600	2175
CA550-06000				1800	2375
CA550-08000				1800	2375
CA550-12000				2150	2725

OPERATIONAL PROCEDURES

GETTING SET UP

DOCUMENTATION

01. Prior to the delivery of the Smart-Release BulkX, Conquip Engineering Group advises that, at the minimum, the documentation/procedures below are in place:

ITEM NUMBER	ITEM DESCRIPTION	YES/ NO	SIGNATURE
01	Are all the responsible operators and support staff trained to use the Smart-Release BulkX?		
02	Are there LOLER and PUWER qualified staff on site to inspect the Smart-Release BulkX upon delivery and throughout its use?		
03	Have the relevant Lift Plan documentation and procedures been approved?		
04	Have the relevant Risk Assessment documentation and procedures been approved?		
05	Have the relevant Health and Safety documentation and procedures been approved?		
06	Are you in possession of all the required certificates and/or documentation for the Smart-Release BulkX?		

PLEASE NOTE:
The above procedures may not suffice for your site and/or application, it is the duty of the responsible personnel on-site to determine their requirements. If in doubt, contact our customer service team who may be able to advise on how best to proceed.

DELIVERY

01. The Smart-Release BulkX is delivered to site by Conquip Engineering Group or one of our trusted partners.

02. The site's responsible personnel unload the Smart-Release BulkX utilising their preapproved procedures (e.g. Lift Plan, Risk Assessment etc).

03. Once the Smart-Release BulkX has been safely placed, the responsible personnel can proceed with the visual inspection.

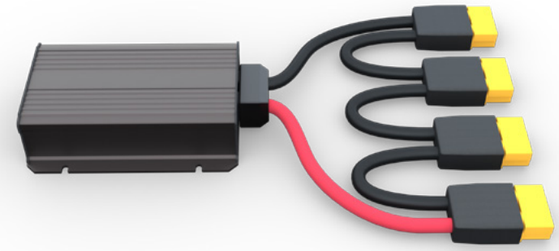
VISUAL INSPECTION

04. Open the access doors and roof hatch on either end of the Smart-Release BulkX and carry out a full visual examination. The Smart-Release BulkX shall exhibit no signs of material distress, deformation, local buckling, weld failure or cracking at any location. You may refer to the Visual Inspection Checklist on page 31.

05. Ensure you have the following items below accompanying the BulkX unit:

ITEM	YES/NO	SIGNATURE
Battery Charging Unit		
Remote Control		
Remote Control Charger		

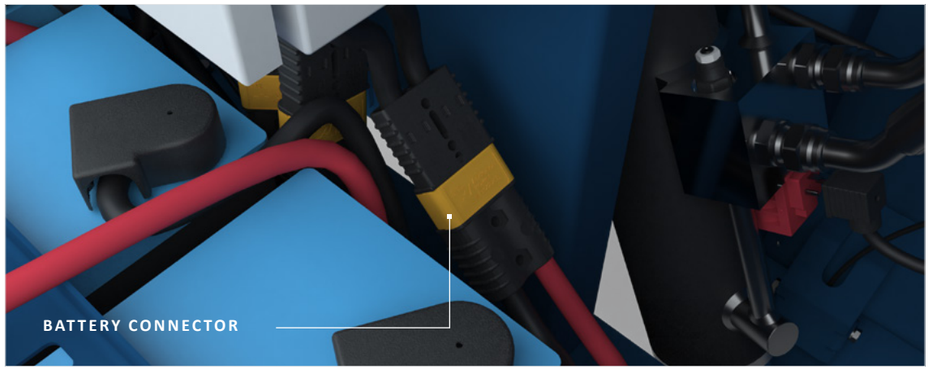
BATTERY CHARGING UNIT



POWERING ON

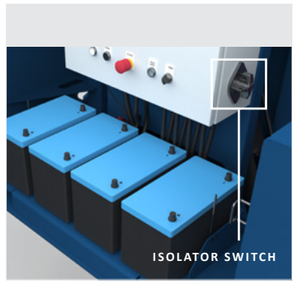
01. Carry out a full visual inspection of the hydraulic and electrical units and the wiring and components prior to powering on the unit. The hydraulic components should exhibit no sign of damage or oil leaks. The electrical components and wiring should exhibit no signs of damage or fraying.

02. Ensure the battery pack electrical connectors are installed and secured correctly to the electrical control unit.

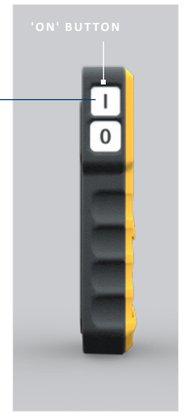


03. Visually check the receiver antenna's condition.

04. Switch the electrical control unit isolator to the "ON" position to allow battery supply to the electrical control unit, the control unit display will power on.

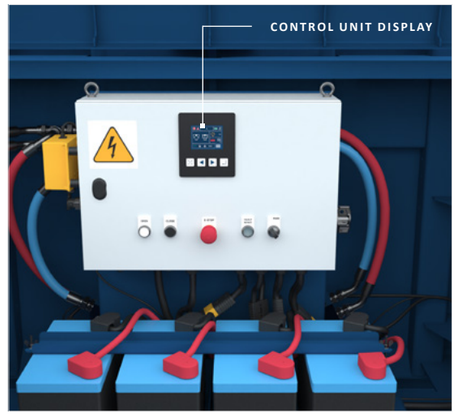


05. On the remote, press and hold the "ON" button until the remote display powers on. When the remote is connected to the BulkX, the signal status will appear on the remote display.

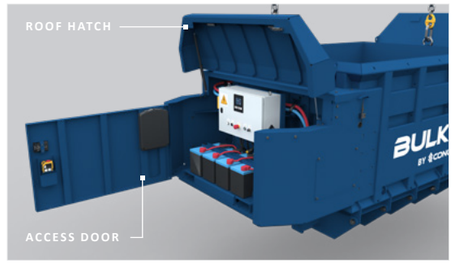


FRONT

RIGHT SIDE



06. Ensure both access doors and the roof hatches are closed and secured prior to any operation or lifting of the BulkX.



OPEN

CLOSED

PREOPERATION TEST CYCLE

01. Before operations can begin, Conquip Engineering Group advises that at least one test cycle is completed prior to any earth (muck) being loaded into the Smart-Release BulkX to confirm the system is nominal.

02. Complete a full inspection compliant to LOLER and PUWER regulations.

03. Connect the master link on the spreader beam onto the crane hook and slowly lift the Smart-Release BulkX approximately one metre above the ground.

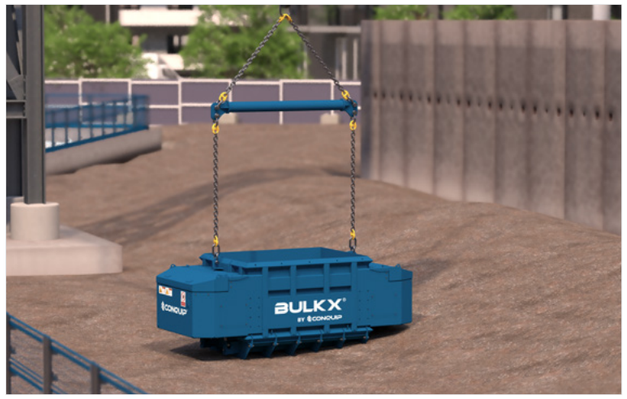
04. Commence with a visual inspection specifically examining the Smart-Release BulkX gate hinges for damage and for any twists in the chains.

05. To open the base doors, press and hold the dead-man switch and open button simultaneously. The doors will open for as long as both buttons are held pressed.

06. Once the skip has settled, carry out another visual inspection specifically examining the door mechanism to ensure it is not being jammed our interrupted through its arc.

07. To close the base doors, press and hold the dead-man switch and close buttons simultaneously. The hydraulic gates will close for as long as both buttons are held pressed.

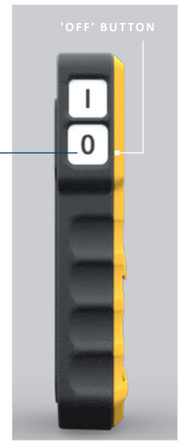
08. Lower the skip back onto the ground in a secure and safe position.



09. Commence with a visual inspection to ensure there has been no damage throughout the pre-operation test cycle.

10. Press and hold the 'OFF' button until the remote display powers off.

11. Open the access door and roof hatch to the electrical control unit and switch the isolator to the “OFF” position.



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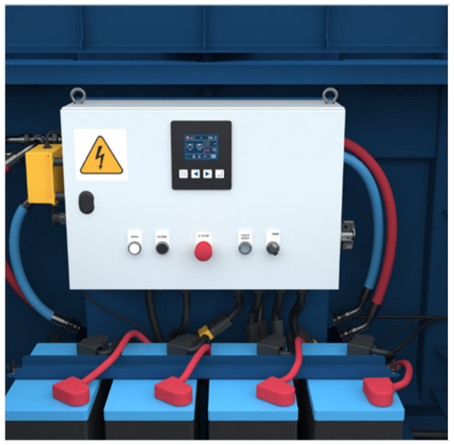


12. Close the access door and roof hatch securely.

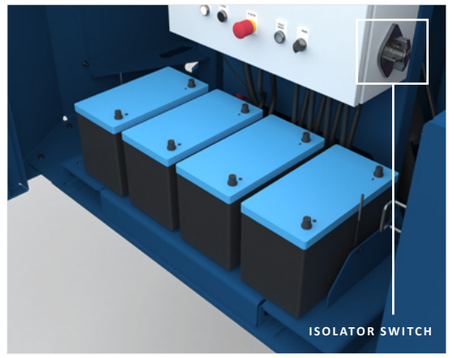
13. The pre-operation test cycle is now complete.

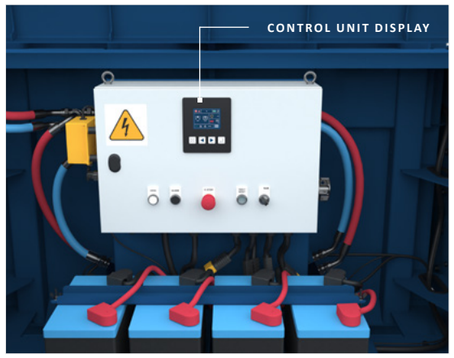
OPERATIONAL USE

01. Conquip Engineering Group advises that prior to the start of each shift at least one test cycle is completed.

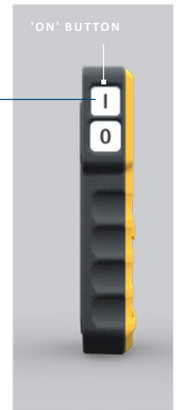
02. Ensure the battery pack and remote control are fully charged.

03. Switch the electrical control unit isolator to the "ON" position to allow battery power supply. The control unit display will power on.





04. On the remote, press and hold the "ON" button until the remote display powers on. When the remote is connected to the BulkX, the signal status will appear on the remote display. Ensure both access doors and roof hatches are closed and secured prior to any operation or lifting of the BulkX.



FRONT RIGHT SIDE

05. Connect the master link on the spreader beam onto the crane hook and slowly lift the Smart-Release BulkX to the excavation location.

06. Fill the Smart-Release BulkX with earth (muck) and ensure it is distributed evenly throughout the skip.

07. Slowly lift the loaded Smart-Release BulkX to the discharge location and ensure the intended area is clear of personnel and safe to discharge the earth (muck) from the skip.

08. Press and hold the dead-man and open buttons simultaneously to open the base doors and discharge the earth (muck) from the skip. The base doors will open for as long as both buttons are held pressed.

09. Once the skip is fully discharged, press and hold the dead-man and close buttons simultaneously to close the base doors. The base doors will close for as long as both buttons are held pressed.

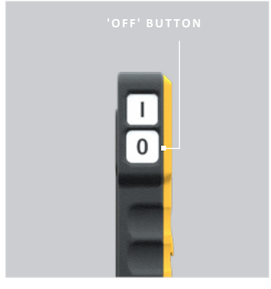
10. Return the Smart-Release BulkX skip to the excavation site and repeat.

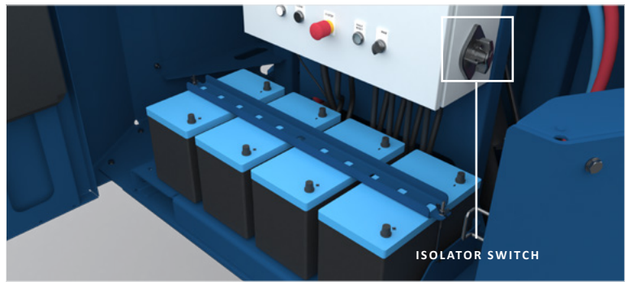
AFTER OPERATIONAL USE

01. Lift the Smart-Release BulkX to the storage location and secure it.

02. Press and hold the power-off button until the remote display powers off.

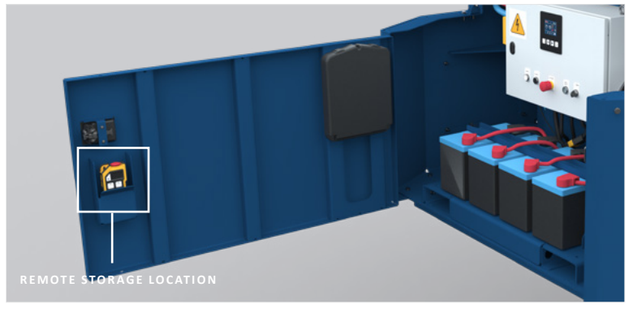
03. Open the access door and roof hatch to the electrical control unit and switch the isolator to the “OFF” position.





04. Conquip advises that the remote control is either stored in the access door storage point or charged if necessary.

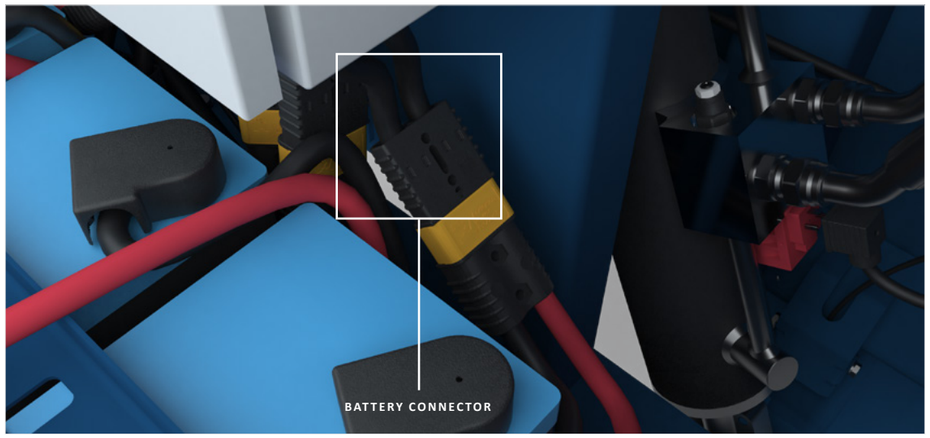
05. Close the access door and roof hatch securely.



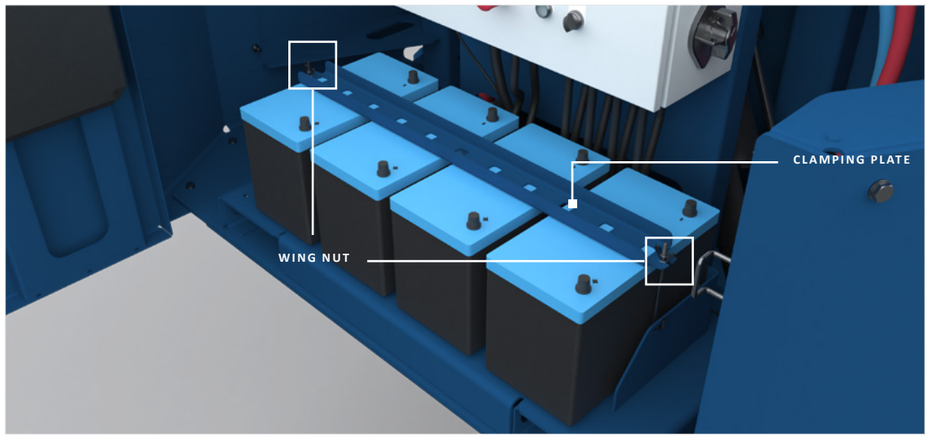
HOW TO CHARGE THE BATTERY PACK

⚠ Prior to starting the battery charging process ensure that the Smart-Release BulkX is powered off and the electrical control unit isolator is switched to the “OFF” position.

01. Disconnect each battery connector from the electrical control unit.



02. Unscrew the wing nuts and remove the battery pack clamping plate from the top of the battery pack.



03. In a suitable location, dry and protected from the elements, plug the battery charging unit’s power cord into the mains (100-240V AC).

04. Connect all of the battery connectors to the battery charging unit connectors, the unit will not charge if any of the batteries are not connected.

05. Power on the battery charging unit, verify that the charge LED indicator is illuminated orange, indicating that charging has commenced.

06. The charging process is complete when the LED indicator light changes to solid green, indicating that the battery has reached its full charge. The approximate charging time from 20% to 100% is 7 hours.

HOW TO REPLACE THE BATTERY PACK

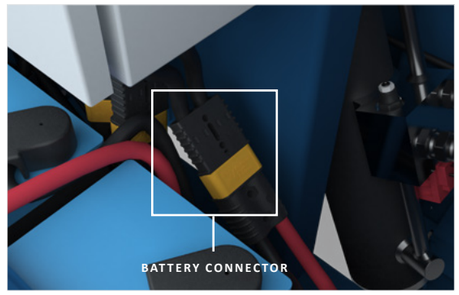
For projects requiring continuous excavation and zero downtime between charges, a depleted battery pack can be removed and replaced with a spare, pre-charged battery pack. Follow the steps below to replace a battery pack:

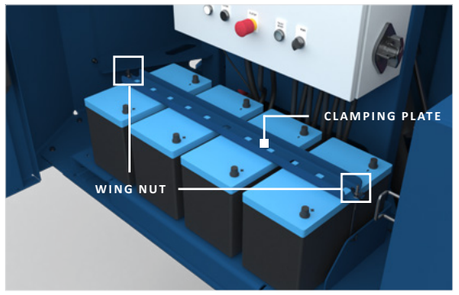
⚠ Prior to starting the battery replacement process ensure that the Smart-Release BulkX is powered off and the electrical control unit isolator is switched to the “OFF” position.

01. Disconnect each battery connector from the electrical control unit.

02. Unscrew the wing nuts and remove the battery pack clamping plate from the top of the battery pack.

03. Lift and remove each individual battery from the Smart-Release BulkX and store in a safe and suitable location.





04. Replace each battery with the fully-charged replacement batteries, ensuring all batteries have been suitable replaced.

05. Ensure all battery terminal clamps are tight and connect each battery connector to the electrical control unit.

06. Fit the battery pack clamping plate across the top of the battery pack and screw the wing nuts onto the J-bolts until the battery pack is sufficiently clamped and secure.

CONTROLS & OPERATING

REMOTE CONTROL

The IP65 robust remote control comes equipped with built-in low battery detection and is provided with a rechargeable battery, battery charger, battery adaptor case for 3 AA size alkaline batteries, and a carry-case with accompanying lanyard.

EMERGENCY STOP

The large, red 'emergency stop' button on the top of the remote is linked to the red 'emergency stop' button on the control box in the skip. When pushed on the remote control, stops all function of the BulkX skip and powers down the remote control. Once the remote control is powered back on, the skip is ready to restart normal operation.

DIAGNOSTIC LED

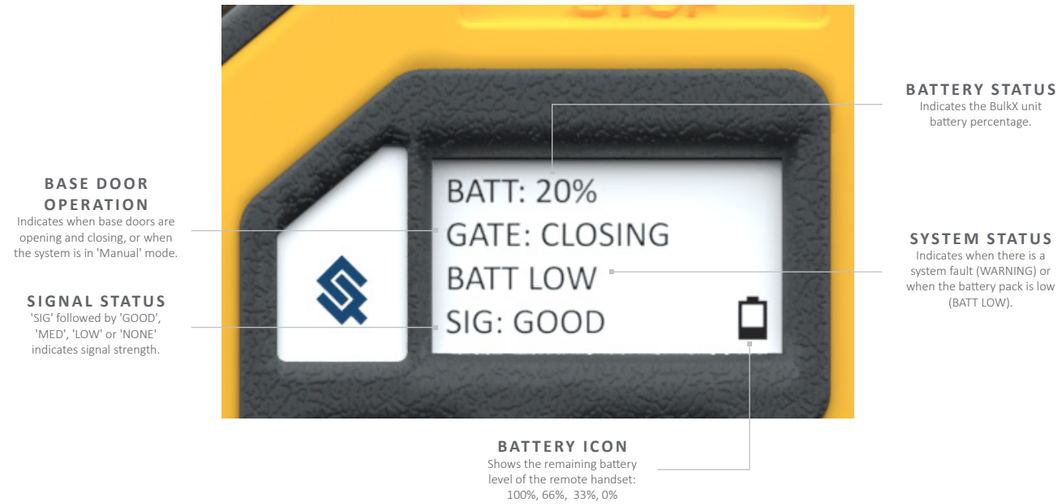
The diagnostic LED in the centre of remote control has the following definitions:

- Green (flashing)- Transmitting signal, normal operation
- Red (flashing)- Transmitting STOP signal, emergency stop is pressed

- Red (steady)- Remote low battery
- Red/Green (slow pulsing)- Configuration Mode
- Red/Green (flashing)- Invalid memory key, contact Conquip support.

REMOTE DISPLAY INFORMATION

When a fault occurs on the Smart-Release BulkX the remote control LCD display will display the text 'WARNING'. If the BulkX is still operational in this instance, then the remote control should be used to close the base doors immediately and land the skip in in a safe location to inspect the warning/fault.



LOW BATTERY

When the BulkX battery pack charge percentage reaches 20%, the text 'BATT LOW' will display on the screen. The BulkX door control is limited to only allow the doors to be closed; the 'OPEN' button will not function. This is to preserve enough battery charge to ensure the skip's doors can close, so the BulkX can be safely landed and the battery pack can be recharged or replaced.

SIGNAL STATUS

If the signal is lost at anytime between the Smart-Release BulkX and the remote control, then the remote control must be powered off and on to re-connect the it to the skip before operation can continue.

NO SIGNAL

If the remote control signal cannot be reconnected, or has become defective, it is recommended that the remote control and receiver on the BulkX skip are both replaced with a new paired set. Contact Conquip for a replacement remote control and receiver.

ELECTRICAL CONTROL UNIT

Use of the Electrical Control Unit should be limited to turning the isolator switch 'ON' to power on the Smart-Release BulkX ready for operation and 'OFF' when it is no longer needed.

However, it can also be ulitised to view diagnostics and identify faults, set parameters that can be modified on the electronic display and to bypass the remote control and actuate the hydraulics. If the remote control has 'WARNING' on the display indicating a potential fault, the menu in the control unit can be navigated to identify it.

⚠ Only approved and trained personnel should modify set parameters or conduct any maintenance on the control unit.

HMI DISPLAY
Features the status and parameters of the hydraulic system

RADIO RECEIVER
Receives transmissions from the remote control.

ISOLATOR SWITCH
Used to connect or isolate the battery supply from the electrical control unit.

OPEN BUTTON
Press continuously to open the base doors. [Only operational in 'Manual' mode]

CLOSE BUTTON
Press continuously to close the base doors. [Only operational in 'Manual' mode]

MODE SWITCH
Enables the operator to change between Remote and Manual modes.

FAULT RESET
Press to reset any latched fault from the remote control and control unit displays.

EMERGENCY STOP
Stops all transmitted signals and powers off the remote.

BATTERY CONNECTORS
Connects the control unit to the 12V batteries.

MODE SELECTOR SWITCH

The Electrical Control Unit has two main operating modes, 'Remote' and 'Manual'.

In 'Remote' mode, the operation of the skip is controlled by the remote control. During operational use, the control unit should always be set to 'Remote' mode.

'Manual' mode allows the skip to be operated using the push buttons on the control unit, this should only be performed during maintenance & servicing by approved personnel.

⚠ In manual mode the remote will display only the text "MANUAL". The buttons on the remote, including emergency stop button, will not control or stop the equipment.

OPERATIONAL PROCEDURES

TROUBLESHOOTING

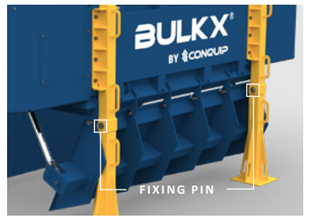
In the event the display on the remote control reads 'WARNING', this indicates a fault with the system. In this instance, follow the steps below:

01. If the Smart-Release BulkX is still operational, use the remote control to close the base doors and land the skip in a safe location ready for inspection.

02. If the BulkX is not operational using the remote control and the base doors are in the 'open' position, then the crane should safely lower the skip, so that the service posts supplied with the unit can be fixed onto the sides of the BulkX. To do this, follow these steps:

Lower the skip so the side panels are accessible and the doors are off the ground.

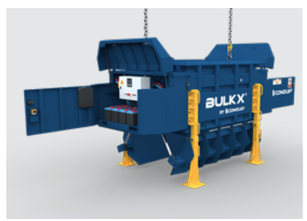
Position the bottom section of the posts under the skip and attach the top sections to the sides.



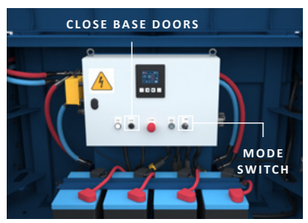
Lower the skip further, so the top sections slot into the bottom sections. Secure with fixing pin.

03. Once the BulkX is secure, if necessary, the crane hook can now be detached from the BulkX.
⚠ Do not detach the crane hook or rest the BulkX skip on the ground with the doors open.

04. If the base doors were unable to be closed using the remote control, then follow the steps below.



Open the access doors and roof hatch to operate the control unit.



On the control unit, switch to 'Manual' mode. Press and hold the 'Close' button to bypass the remote control and close the base doors.

Once the base doors are closed, remove the service posts and lower the skip to the ground for a full inspection.

05. Conquip recommends that any maintenance and servicing is best carried out with the BulkX skip placed flat on the ground. However the service posts can be used to allow the doors to be cycled open and closed, as required.

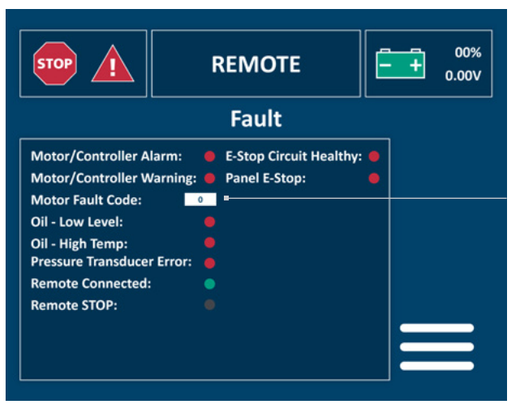
06. The Smart-Release BulkX is now ready for inspection.

IDENTIFYING A FAULT

01. There are four square buttons directly underneath the HMI display on the front of the control unit. These buttons are used to navigate the menu.

02. On the control unit display, the ‘Home’ window can be used as the first stage of diagnosing a fault with the BulkX system.

03. Navigate to the 'Menu' button in the bottom right of the display and select 'Faults' from the menu options.



FAULT TYPES

MOTOR/CONTROLLER ALARM

A critical fault with the BulkX motor or motor controller, the BulkX motor will be disabled preventing any operation of the Smart-Release BulkX hydraulic system.

The operator should stop all operation of the Smart-Release BulkX, note down the Motor Fault Code at time of fault and contact Conquip Engineering Group.

MOTOR/CONTROLLER WARNING

A warning of a non-critical issue with the BulkX motor or motor controller, the BulkX motor & hydraulic system functions will still be operational.

The operator should close the discharge gates immediately, position the BulkX in a safe location in a stable fashion, detach from the crane hook, note down the Motor Fault Code at time of fault & contact Conquip Engineering Group.

OIL – LOW LEVEL

This is an indicator that the hydraulic oil within the BulkX reservoir is low and requires topping up, the Smart-Release BulkX hydraulic system function will still be operational.

The operator should close the discharge gates, position the BulkX in a safe location in a stable fashion. Consult the Smart-Release BulkX Service Manual document and follow the procedure for topping up th BulkX oil reservoir.

Once the hydraulic oil reservoir is finished topping up, the operator should press the ‘Fault Reset’ on the control unit enclosure. If the oil is suitably topped up then the fault warning will be reset and no longer indicate on the remote control or control unit display. The Smart-Release BulkX is now once again ready for operational use.

OIL – HIGH TEMPERATURE

This is an indicator that the hydraulic reservoir oil is at a temperature above the system working limit, the Smart-Release BulkX hydraulic system function will still be operational.

The operator should close the discharge gates, position the BulkX in a safe location in a stable fashion. The BulkX should be powered off and the hydraulic oil given time for the temperature to return to within the working limits of the BulkX.

After the cool down time, the operator should power on the BulkX and press the ‘Fault Reset; on the control unit enclosure. If the oil temperature has suitable reduced then the fault warning will be reset and no longer indicate on the remote control or control unit display. The Smart-Release BulkX is now once again ready for operational use.

PRESSURE TRANSDUCER ERROR

This is an indicator that the pressure transducer located on the HPU is not functioning correctly, the Smart-Release BulkX hydraulic system function will still be operational.

The operator should close the discharge gates, position the BulkX in a safe location in a stable fashion. Consult the Smart-Release BulkX Service Manual document and follow the procedure for replacing the pressure transducer.

REMOTE STOP

This is an indicator that the remote control emergency stop button has been activated, immediately stopping all function of the Smart-Release BulkX.

After the emergency situation has been safely resolved and it is safe to operate the Smart-Release BulkX, the operator should restart power on the remote control. This will allow the operator to resume normal operation of the BulkX and the fault warning will no longer indicate on the remote control or control unit display.

PANEL EMERGENCY STOP

This is an indicator that the control unit panel emergency stop button has been activated, immediately stopping all function of the Smart-Release BulkX.

After the emergency situation has been safely resolved and it is safe to operate the Smart-Release BulkX, the operator should physically deactivate the emergency stop on the control unit panel emergency stop button. This will allow the operator to resume normal operation of the BulkX and the fault warning will no longer indicate on the control unit display.

EMERGENCY STOP CIRCUIT HEALTHY

This indicates that either the emergency stop on the control unit or remote control has been pressed, the remote control is powered off in 'REMOTE' mode, or that there is a critical fault with the emergency stop circuit.

When this fault is present, the motor will be disabled preventing any operation of the Smart-Release BulkX hydraulic system.

When any emergency situation has been resolved and the Smart-Release BulkX is safe to use again, the emergency stop buttons should be reset or the remote control turned on. If the fault persists then the operator should stop all operation of the Smart-Release BulkX and contact Conquip.

CLEANING & STORAGE

Proper storage and cleaning of the Smart-Release BulkX is essential to maintaining its integrity and functionality. The equipment consists of hydraulic and electrical components, batteries, steel parts, chains, shackles, bolts and nuts.

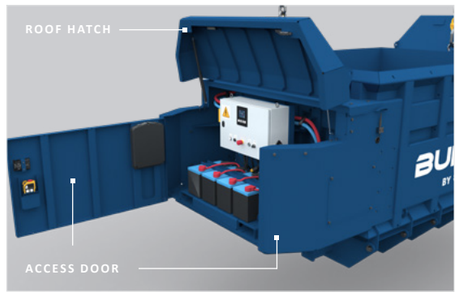
Follow these storage guidelines to ensure optimum preservation and performance of the Smart-Release BulkX.

CLEANING

After use, the main internal area of the Smart-Release BulkX that holds the earth (muck) and the outside of the skip should be thoroughly cleaned to prevent any build-up of earth (muck) that could potentially inhibit the function of the system. It is the site's responsibility to ensure the skip is well maintained for optimium operational use.

⚠ Never pressure wash or clean any BulkX electrical components with water and never direct a pressure wash stream:

- On the inside of the BulkX end access doors and roof hatches.
- At the receiver antenna extension, disassemble and plug the routing hole in the BulkX end panel prior to any pressure washing.



BATTERY PACK STORAGE

To obtain optimum performance from the battery packs, Conquip recommend following the steps below:

- Store batteries in a cool, dry, and well-ventilated place. This is crucial for both active batteries on the BulkX and for spare batteries stored away from the BulkX in order to prevent damage and maintain battery charge.
- Batteries should always be charged before storage. This particularly important before putting batteries into long-term storage, where periodical recharging is always advised to prevent sulfation.
- During storage the battery voltages should be checked to ensure it remains at a sufficient level and should be recharged as needed.

HYDRAULIC SYSTEM COMPONENTS

If the Smart-Release BulkX is expected to be stored and not operated for an extensive time period, then after 12 months the BulkX hydraulic system should be powered on and operated to lubricate the system with oil.

Any components due for service checks and replacements should also be serviced as required; consult the Smart-Release BulkX Service Manual for details.

GENERAL INFORMATION ON USING REMOTE CONTROLS

DETERMINING THE RANGE

There are four factors that determine the range of your remote control:

01. Power of the transmitter.
02. Sensitivity of the receiver.
03. The antenna gain factor.
04. Weakening of the radio signal.

Below are some tips on how to enhance the range of your remote control.

AVOID DAMPING

The type of material determines how the radio waves are affected. Damping can vary greatly depending on the material.

For example, plastic housing or control boxes have a very limited impact on any signals so the antenna can even be mounted inside the cabinet.

However, a reinforced concrete wall, 20cm thick, does not transmit any Radio Frequency (RF) signals. The most challenging obstacle for radio signals is metal as it reflects them and does not let any through.

CONSIDER REFLECTIONS

The signal from the transmitter is reflected from the ground and to the antenna. The signal also reflects through the facades between buildings. The signal can reach the receiver through reflections on surrounding structures, even if there is a building or steel wall between them.

FACTORS THAT INFLUENCE RADIO WAVES

Environmental variables can negatively affect the strength of the signal and range of RF systems including: walls, trees, hills, fences, humidity, rain/snow, electric fields, or other RF systems.

HOW TO GET THE BEST RESULTS

- Ensure a clear line of sight between the remote and the device you want to control.
- Remove any physical obstructions that may hinder the signal, where possible.
- Replace the batteries in your remote control regularly, as weak batteries can limit the range.
- Avoid interference from other electronic devices, as they can disrupt the signal.

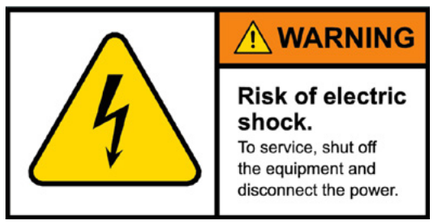
MAINTENANCE & INSPECTION

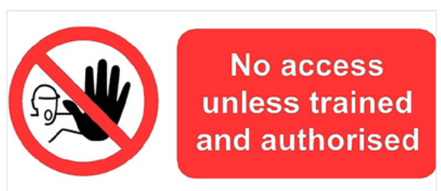
MAINTENANCE REGIME

- It is mandatory that the equipment is thoroughly examined regularly, by a qualified engineer, to ensure compliance with relevant regulations. Conquip recommends to carry out a thorough examination every six months.
- This product may incorporate various loose and detachable items of lifting gear. Refer to the separate requirements for the safe use of those items.
- When not being used, store the unit in a clean, upright condition and in a safe place where it will be protected from thieves and unauthorised users.
- This equipment must be inspected by the responsible person before each use and then regularly, as determined by your risk assessment or working practice. If you have any concerns about the skip's condition or suitability, do not use it.

SAFETY DECALS:

These are the safety decals featured on the Smart-Release BulkX Skip. When carrying out the visual inspection of the skip, please ensure all decals are present before checking this item off the list.





VISUAL INSPECTION CHECKLIST

	INSPECTION ITEMS	RESULTS		COMMENTS
		PASS	FAIL	
GENERAL	Serial Number			CQ.....
	Product Code			
	Working Load Limit (Kg)			
	Tare Mass (Kg)			
	Conforms to user guide specification			
BULKX SKIP	Skip Body			
	Skip Lifting Points			
	Gate Body			
	Gate Hinges			
	Access Door and Hinges			
	Access Hatch and Hinges			
LIFTING	Lifting Slings/Chains			
	Lifting Attachments			
	Spreader Beam Body (if applicable)			
ELECTRONICS	Batteries			
	Electrical Enclosures			
	Electric Motor			
	Additional Electrical Components			
	Electrical Wiring and Connectors			
	Battery Charging Unit			
HYDRAULICS	Hydraulic Power Unit Tank Body			
	Hydraulic Flexible Hosing			
	Additional Hydraulic Components			
MISCELLANEOUS	Screws, Bolts, Washers, Nuts, etc			
	Surface Finish			
	Safety Decals			
	Notices			
	Logbook			
	General Condition			

SIGNATURE			
Name	Position	Qualification	Signature & Date

GENERAL SAFETY INSTRUCTIONS

The Smart-Release BulkX should be properly operated and maintained to keep it in a safe, efficient operating condition. Be sure that all controls are free of mud, grease, or other matter that might cause slips hazardous to the operator, serviceman, or other personnel or equipment. Report all malfunctions to those responsible for maintenance, and do not operate the equipment until corrected. Normal service or maintenance performed as required can prevent unexpected and unnecessary downtime.

This operations manual describes general inspections, servicing and operation with the normal safety precautions required for normal servicing and operating conditions. It is not a guide however, for other than normal conditions or situations, and therefore, servicemen and operators must be safety conscious and alert to recognise potential servicing or operating safety hazards at all times, and take necessary precautions to assure safe servicing and operation of the machine.

M002
Refer to instructions manual/booklet

M004
Wear eye protection

M008
Wear safety footwear

M009
Wear protective gloves

M010
Wear protective clothing

M014
Wear head protection

M015
Wear high-visibility clothing

P012
No heavy load

GENERAL NOTES:

- Read this operations manual and learn the operating characteristics and limitations of the Smart-Release BulkX. Know what operating clearances the machine requires.
- Read and understand all the safety signs prior to operation.
- If the safety signs are obstructed by dirt or debris, clean them using mild soap and water prior to operation.
- Be aware of operating hazards that weather changes can create on the job. Know proper procedures to follow when a severe rain or electrical storm strikes.
- Never attempt to operate or work on a Smart-Release BulkX when not feeling physically fit.
- Know what safety equipment is required and use it. Such equipment may be: hard hat, safety glasses, reflector type vests, respirators, and ear plugs.
- Never wear loose clothing, rings, watches, heavy gloves etc., that might catch levers and controls and cause loss of control.
- Keep hands and controls free from water, grease, and mud to assure nonslip control.
- If the safety signs are damaged or illegible, replace them immediately, prior to operation.
- All routine service, maintenance and repair work, whether it be hydraulic, mechanical functions or electrical, should only be undertaken by qualified and competent personnel that are completely familiar with the function and operation of the Smart-Release BulkX hydraulic system (including the associated control system). These persons will be knowledgeable of the risks involved.
- Do not carry out maintenance work on any system unless a risk assessment has been carried out by a competent person and you are fully aware of all inherent dangers.

GENERAL FIRE PRECAUTIONS

- Make sure the site has a fire extinguisher and that it is accessible and fully charged. (Not furnished with the Smart-Release BulkX.)
- In the event on an oil or electrical fire, do not use a heavy water stream to extinguish. The suitable extinguishaing substances include: dry chemical, CO_2, dry sand, and alcohol-resistant foam.

ELECTRICAL HAZARD PRECAUTIONS

- Never smoke or allow open flames or sparks within the vicinity of the batteries.
- Provide adequate ventilation and leave the batteries uncovered when charging.
- Always disconnect the battery pack before conducting any welding on the machine.
- Never check battery charge by placing metal objects across the battery terminals, to avoid generating sparks.
- The control unit electrical system should always be isolated when not in use or prior to carrying out any inspections, maintenance or replacement/removal on any components that are part of the Smart-Release BulkX system.
- Always disconnect the battery pack from the control unit before repairing the electrical system to avoid danger and the risk of sparks. The battery should be disconnected first and reconnected last.

HYDRAULIC HAZARD PRECAUTIONS

- All lifting, installation, flushing and commissioning work should only be undertaken by qualified and competent personnel.
- Familiarise yourself with the hydraulic fluid in use and its safety datasheet. Never mix hydraulic fluid types or viscosity grades. The fluid specification is: Morris Triad 32 Hydraulic Oil.
- Avoid extended periods of contact with hydraulic fluids. Always use protective barrier cream. Where skin contact is unavoidable, extremely high standards of personal hygiene are required.
- Ensure the overalls and protective clothing are regularly laundered to reduce long periods of skin contact.
- Use appropriate cleansers after completing your work around hydraulic fluids.
- Never use parts of your body to check for high pressure leaks, due to the risk of fluid injection injuries. In the event of a fluid injection injury seek urgent medical attention.
- Do not work underneath any loads supported by hydraulics, additional mechanical supports need to be used.
- Prior to carrying out hydraulic maintenance, ensure the necessary procedures have been followed to isolate power (hydraulic or electric) from the system.
- Prior to the removal of any hydraulic components, ensure that the hydraulic system has been depressurised.
- Always prevent and contain any hydraulic fluid spillages.

BATTERY AND CHARGER PRECAUTIONS

- Only use the provided battery charging unit and batteries on the Smart-Release BulkX.
- Inspect both the battery pack and charging unit are free from damage prior to any use.
- Do not expose the batteries or charging unit to extreme temperatures or moisture.
- No charging should take place if ambient temperatures are below temperatures are below 0°C or higher than 40°C.
- Do not attempt to open or tamper with either the batteries or the charging unit.
- For charging, the AC supply must be capable of 100-240V, 50/60Hz, 1140W.
- Do not expose the battery or charger to extreme temperatures or moisture.
- No charging should take place if ambient temperatures are below 0 degrees centigrade or higher than 45 degrees centigrade.
- Do not attempt to open or tamper with the battery or charger.
- For charging, the AC supply must be capable of 100-240V, 50/60Hz, 1140W.

IN CASE OF TROUBLE

If trouble develops on-site, move the Smart-Release BulkX off the site at the first safe instance, shut off the power, isolate the battery pack and disconnect the battery connectors. Carefully note down as many of the symptoms of the trouble as possible, such as, overheating, loss of hydraulic control, fault warnings, etc.

If the area of the site requires the Smart-Release BulkX be left unattended while the trouble is reported, shut off the power, isolate the battery pack, disconnect the battery connectors and apply security locks before leaving the unit. Make sure that the Smart-Release BulkX is also disconnected from the crane.

Report the following data as soon as possible.

01. Exact location.
02. Destination.
03. The nature of the trouble (with as many details as possible) and the time and conditions under which it happened.
04. The telephone number at which the Smart-Release BulkX operator can be reached.

NOTICE:
Do not attempt to restart or operate the Smart-Release BulkX unless instructed to do so.

TERMS & CONDITIONS

CONQUIP ENGINEERING GROUP STANDARD PRODUCT WARRANTY

01. COMMENCEMENT

1.1 This Warranty shall commence on the Commencement Date and shall continue until the earlier of:

(a) the Expiry Date; or

(b) the date on which it may be voided in accordance with clause 4.1(b)

when it shall terminate automatically without notice.

02. DUTY OF GOOD FAITH

2.1 The Purchaser shall in the exercise of its rights under this Warranty and in the compliance with its obligations under this Warranty be subject to and shall in all respects owe and comply with a duty of good faith to the Warrantor.

03. NATURE AND EXTENT OF COVER

3.1 Subject to clause 3.2 the Warrantor agrees and undertakes to the Purchaser that it shall be liable to the Purchaser under and in accordance with the terms of this Warranty in the event that:

(a) prior to the Expiry Date the Purchaser shall notify a Warranty Claim to the Warrantor; and

(b) the Equipment or any relevant part of the Equipment shall have become unusable as the result of defective material or defective workmanship prior to the Expiry Date.

3.2 The Warrantor's obligation under clause 3.1 shall be expressly subject to the provisions of clauses 4, 5 and 6 and conditional upon the Purchaser's compliance in full with the provisions of clause 7.

04. RESTRICTIONS

4.1 The following restrictions apply to this Warranty:

(a) This Warranty is personal to the Purchaser and neither the legal benefit nor legal burden of this warranty may be assigned or novated or otherwise transferred by the

Purchaser to any other party. Any purported assignment, novation or transfer shall not be binding upon the Warrantor.

(b) This Warranty shall be void in the event that the Purchaser:

(i) cannot provide authentic and original documentary evidence that the Purchaser has during the period between the Commencement Date and the Expiry Date complied with the Maintenance and Servicing Requirements; and/or

(ii) has, during the period between the Commencement Date and the Expiry Date, exceeded the Purchaser's Usage Cycle Parameters; and/or

(iii) has, during the period between the Commencement Date and the Expiry Date, exceeded the Purchaser's Use Parameters; and/or

(iv) has carried out, or procured the carrying out by any third party of, any repair to the Equipment or any part of the Equipment which is not an Authorised Repair; and/or

(v) has operated the Equipment after having replaced any part of the Equipment with a part which has not been supplied and fitted by the Warrantor; and/or

(vi) has modified the Equipment in any way prior to use.

05. EXCLUSIONS

5.1 The following are excluded from the scope of this Warranty:

(a) Loss of and/ or damage to the Equipment or any part of it resulting from any collision between the Equipment and any other fixed or stationary or mobile object whatsoever, irrespective of whether that collision was or was not caused by the Purchaser; and/or

(b) Loss of and/or damage to any personal property and/or possessions or other equipment not forming part of the Equipment but which is present in or about the Equipment; and/or

(c) loss and/or damage which is covered by any other insurance policy taken out and maintained by the Purchaser or in respect of which the Purchaser has a contractual obligation to do so; and/or

(d) loss and/or damage to the equipment which is consistent with the use by the Purchaser of the Equipment:

(i) in compliance with the Maintenance and Servicing Requirements; and

(ii) in compliance with the Usage Cycle Parameters; and

(iii) in compliance with the Use Parameters; and

(iv) having only carried out Authorised Repairs to the Equipment; and

(v) having all and any replacement parts fitted by the Warrantor; and

(vi) in unmodified form.

06. LIMITATION OF LIABILITY

6.1 The Warrantor's liability to the Purchaser shall be limited as follows:

(a) The Warrantor shall not in any circumstances be liable to the Purchaser for indirect and/or consequential and/or economic loss suffered and/or incurred as the case may be by the Purchaser; and

(b) The Warrantor shall only be liable to the Purchaser for the reasonable and proper costs reasonably and properly incurred by the Purchaser directly in connection with the repair and/or replacement (at the Warrantor's absolute discretion) of the Equipment or any part of the Equipment; and

(c) The Warrantor's liability to the Purchaser shall notwithstanding any other provision of this Warranty, not in any circumstances exceed the Purchase Price of the Equipment.

07. WARRANTY CLAIMS

7.1 The Purchaser shall in respect of any claim against the Warrantor under this Warranty and within 24 hours of the occurrence of the subject matter of the Warranty Claim:

(a) Complete in full and submit to the Warrantor a Warranty Claim in the form annexed to Schedule 4;

(b) Provide date stamped or date identifiable photographs evidencing the claim; and

(c) Make the Equipment or the relevant part of the Equipment available to the Warrantor for inspection within 48 hours of notification of the relevant Warranty Claim.

08. ENTIRE AGREEMENT

8.1 This Warranty constitutes the entire agreement between the parties and supersedes and extinguishes all previous promises, assurances, warranties, representations and understandings between them, whether written or oral, relating to its subject matter.

8.2 Each party agrees that it shall have no remedies in respect of any statement, representation, assurance or warranty (whether made innocently or negligently) that is not set out in this Warranty. Each party agrees that it shall have no claim for innocent or negligent misrepresentation or negligent misstatement based on any statement in this Warranty.

No variation of this Warranty shall be effective unless it is in writing and signed by the parties (or their authorised representatives).

09. WAIVER

No failure or delay by a party to exercise any right or remedy provided under this Warranty or by law shall constitute a waiver of that or any other right or remedy, nor shall it prevent or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall prevent or restrict the further exercise of that or any other right or remedy.

10. SEVERANCE

10.1 If any provision or part-provision of this Warranty is or becomes invalid, illegal or unenforceable, it shall be deemed deleted, but that shall not affect the validity and enforceability of the rest of this Warranty.

10.2 If any provision or part-provision of this Warranty is deemed deleted under clause 10.1 the parties shall negotiate in good faith to agree a replacement provision that, to the greatest extent possible, achieves the intended commercial result of the original provision.

11. THIRD PARTY RIGHTS

11.1 This Warranty does not give rise to any rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this Warranty.

12. GOVERNING LAW

12.1 This Warranty and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with it or its subject matter or formation shall be governed by and construed in accordance with the law of England and Wales.

13. JURISDICTION

13.1 Each party irrevocably agrees that the courts of England and Wales shall have exclusive jurisdiction to settle any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with this Warranty or its subject matter or formation.

SCHEDULE 01

Interpretation and Definitions

01. INTERPRETATION

The following definitions and rules of interpretation apply in this Warranty.

02. DEFINITIONS:

Business Day: a day, other than a Saturday, Sunday or public holiday in England, when banks in London are open for business.

Commencement Date: shall be the date of completion of the purchase of the Equipment by the Purchaser.

Equipment: the equipment purchased by the Purchaser from the Warrantor as is more particularly described in Schedule 1.

Expiry Date: shall be the date occurring 12 calendar months after the Commencement Date.

Maintenance and Servicing Requirements: the Purchaser's maintenance and servicing requirements for the Equipment as are set out in more detail in Schedule 3.

Purchaser: means the purchaser of the Equipment from the Warrantor as more particularly described in Schedule 1.

Purchase Price: means the original purchase price of the Equipment as more particularly set out in Schedule 1.

Usage Cycle Parameters: the Purchaser's standard parameters for the number of cycles of use in any given period for the Equipment as are set out in more detail in Schedule 2.

Use Parameters: the Purchaser's standard design parameters for the safe and appropriate use of the Equipment as are set out in more detail in Schedule 2.

VAT: value added tax [or any equivalent tax] chargeable in the UK [or elsewhere].

Warrantor: means the warrantor as more particularly described in Schedule 1.

2.1 Clause, Schedule and paragraph headings shall not affect the interpretation of this Warranty.

2.2 A **person** includes a natural person, corporate or unincorporated body (whether or not having separate legal personality).

2.3 The Schedules form part of this Warranty and shall have effect as if set out in full in the body of this Warranty. Any reference to this Warranty includes the Schedules.

2.4 Unless the context otherwise requires, words in the singular shall include the plural and in the plural shall include the singular.

2.5 Unless the context otherwise requires, a reference to one gender shall include a reference to the other genders.

2.6 Any obligation on a party not to do something includes an obligation not to allow that thing to be done.

DESIGN CONFORMITY (EC & UK)

(01) This certificate meets the requirements of the Machinery Directive 2023/42/EC of the European Parliament and Council.

(02) This certificate meets the requirements of the Supply of Machinery (Safety) Regulations 2008.

DETAILS

NAME & ADDRESS OF MANUFACTURER:
Conquip Engineering Group Ltd, Unit 4, Waterbrook Estate, Alton, Hampshire. GU34 2UD

NAME & ADDRESS OF PERSON TO COMPILE TECHNICAL FILE:
Name: Daniel Critchley Address: Conquip Engineering Group, Unit 4, Waterbrook Estate, Alton, Hampshire. GU34 2UD

NAME & ADDRESS OF AUTHORISED REPRESENTATIVE IF ONE HAS BEEN MANDATED BY THE MANUFACTURER:
N/A

NAME, ADDRESS, AND IDENTIFICATION NUMBER OF THE NOTIFIED BODY (01) OR APPROVED BODY (02), WHERE APPLICABLE:
N/A

EQUIPMENT DESCRIPTION

PRODUCT CODES	GENERAL DESCRIPTION / DESIGNATION:	WORKING LOAD LIMIT:
CA550-04000	Smart-Release BulkX 4000	10,000kg
CA550-06000	Smart-Release BulkX 6000	14,000kg
CA550-08000	Smart-Release BulkX 8000	20,000kg
CA550-12000	Smart-Release BulkX 12000	28,000kg

HARMONISED STANDARDS & REGULATIONS

ITEM	CODE	DESCRIPTION
EC DIRECTIVE/ REGULATION:	2006/42/EC	New Machinery Directive.
	2011/65/EU	Ref. 2015/863/EU Restrictions of Hazardous Substances Directive.
	2014/35/EU	Low Voltage Equipment Directive.
	2014/30/EU	Electromagnetic Compatibility Directive.
HARMONISED STANDARDS:	ISO 11697:1995	Bases for design of structures. Loads due to bulk materials.
	ISO 12100:201	Safety of Machinery. General principles for design. Risk assessment and risk reduction.
	BS EN 1993-1-1 2005	Eurocode 3. Design of steel structures. General rules and rules for buildings.
	BS EN 1990:2002+A1:2005	Eurocode. Basis of structural design.
	BS EN 60204-32:2008	Safety of Machinery. Electrical equipment of machines Requirements for hoisting machines.
	BS EN 62745:2017	Safety of Machinery. Requirements for cableless control systems of machinery.
OTHER REGULATIONS:	LOLER 1998	Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
	PUWER 1998	Provision and Use of Work Equipment Regulations 1998 (PUWER)

DECLARATION

PLACE OF DECLARATION:	DATE OF DECLARATION:
Alton	June 2026

I declare that the above equipment meets the Essential Health and Safety requirements of the

(01) Machinery Directive 2023/42/EC of the European Parliament and Council.

(02) Supply of Machinery (Safety) Regulations 2008 and Section 6 of the Health and Safety at Work Etc. Act 1974.

NAME:	POSITION:	SIGNATURE:
Daniel Critchley	Chief Executive Officer	

TALKING TO US IS EASY

WE'RE HERE TO HELP

Call us on 0333 300 3470
Email us at sales@cqegroup.com
www.cqegroup.com

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