



Accurately Weighing Africa



# WB 120T 50T AXLE WEIGHING

(WB-UL)

Ultra Mining Weighing Ready

WBUL-25-01

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**SASCO** WEIGHING SYSTEMS

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## WB 120T 50T AXLE LOADING (WB-UL)

Discover Explore Sasco's exceptional range of truck weighing solutions, from multi-deck systems to single deck and weigh-in-motion products.

Selecting the ideal truck weighing solution involves considering various factors such as budget, the need for axle and total weight measurement, available space, truck length, daily weight volume, maximum axle load requirements, deck strength, automation levels, and the potential for unmanned operation.

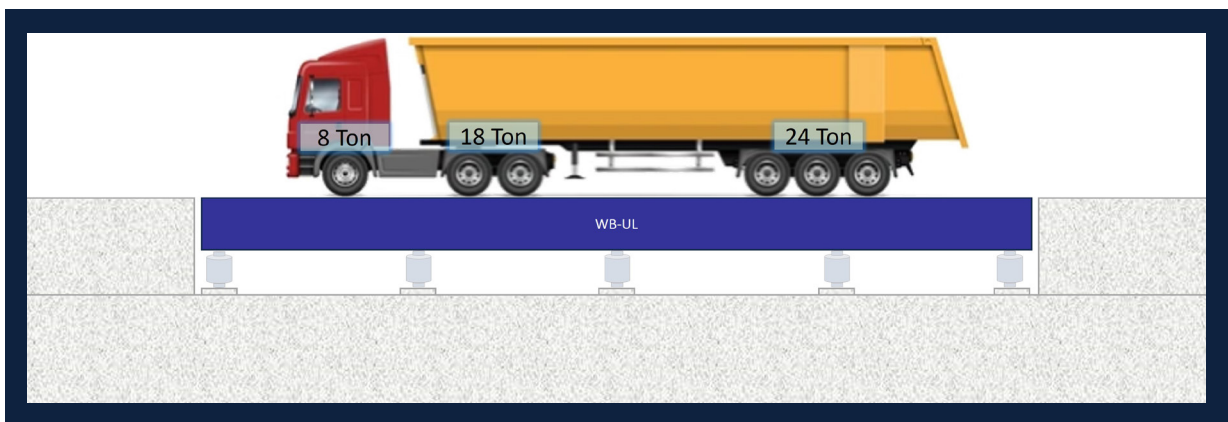
Sasco offers an extensive lineup of solutions, all powered by European-manufactured weighing indicators, ensuring seamless alignment with diverse requirements. For single deck weighbridge solutions, Sasco provides seven tailored options to meet your needs.

	WB-SB	WB-LP	WB-AW	WB-PT	<b>WB-AC</b>	WB-HD	WB-UL
<b>Total Accuracy</b>	±99.95%	±99.95%	±99.98%	±99.98%	±99.98%	±99.98%	<b>±99.98%</b>
<b>Deck Type</b>	WB80 LP	WB 80 LP	WB80 T	SPT Portable	Concrete	WB 120 T	<b>WB 120T AL</b>
<b>Lengths</b>	6, 12, 18, 24m	6, 12, 18, 24, 30m	6, 12, 18, 24m	12, 18, 21m	6, 12, 18, 24m	6, 12, 18, 24m	<b>24m</b>
<b>Width</b>	3m	3m	3m	3m	3m	3m	<b>4.5m</b>
<b>Deck Construction</b>	Steel	Steel	Steel	Steel	Concrete	Steel	<b>Steel</b>
<b>Deck Plate Thickness</b>	8mm	8mm	10mm	10mm	n/a	12mm	<b>12mm</b>
<b>Total Capacity</b>	80T	80T	80T	50T, 60T, 80T	80T	120T	<b>120T</b>
<b>Axle Loadings</b>	9T	9T	18T	10T	25T	25T	<b>50T</b>
<b>Colour</b>	Yellow	Yellow	Lego Blue	Red	n/a	Green	<b>Blue</b>
<b>Volume Daily Weighing's</b>	<=60 p.d.	<=60 p.d.	<=120 p.d.	<=120 p.d.	No limit	No limit	<b>No limit</b>
<b>Indicator</b>	DD700	DD1015	DD1015	DD1015	DD1015	DD1015	<b>DD1015</b>
<b>Load Cells</b>	Sasco S16	Sasco S16	CPD or S500	CPD	CPD or S500	CPD	<b>CPD</b>
<b>System</b>	Analogue	Digitised	Digital	Digital	Digital	Digital	<b>Digital</b>
<b>Software</b>	SasPro	ProWeigh	ProWeigh	ProWeigh	ProWeigh	ProWeigh	<b>ProWeigh</b>
<b>Axle Weighing Functionality</b>	No	Yes	Yes	No	Yes	Yes	<b>Yes</b>
<b>Lightning &amp; Surge Protection</b>	No	Yes	Yes	No	Yes	Yes	<b>Yes</b>
<b>Installation</b>	Pit or above ground	Pit or above ground	Pit or above ground	Portable	Pit	Pit or above ground	<b>Pit or above ground</b>

# WB-UL Product Overview

The WB-UL, crafted by Sasco, is a cutting-edge weighbridge tailored for the unique demands of the African mining sector. Designed to address dual trade weighing requirements, it excels in two critical functions:

- 1. Weighing large trucks** that transport cargo onto national roads, ensuring compliance with stringent overloading regulations for total mass and axle load limits.
- 2. Weighing ultra-heavy mining trucks** that remain off public roads but still require precise trade-accurate measurements.

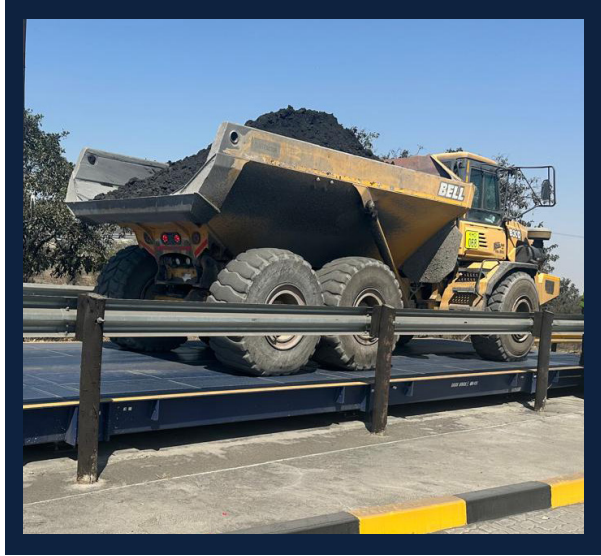


Engineered to exceed expectations, the WB-UL features a standard 24m length combined with an impressive 4.5m width. Its exceptional deck strength is built to handle total loads of up to 120T, with individual axle capacities of 50T, making it the ultimate solution for robust and reliable heavy-duty weighing.

Choose the WB-UL for unparalleled precision, durability, and performance in meeting the weighing needs of Africa's mining giants.



The WB-UL is installed in exactly the same way as a standard weighbridge and can accommodate the same Sasco automation options.



The WB-UL is capable of accommodating a wide range of mining vehicles.

## Sasco DD1015 Indicator



- Diagnostic system.
- Automation device management.
- Dual core 1GHZ
- 512 Mbyte RAM and 1 GByte Flash
- Ethernet 10/100MBps
- 4 USB Ports
- 3 x RS232/RS422
- 2 x RS232/RS422 Optio Isolated
- Connect to 12 analogue load cells
- Connect to 16 digital load cells
- OIML and NTEP Approved

The DD1015 weighing indicator, designed and manufactured in Europe, boasts not only OIML approval but also multiple additional European certifications.

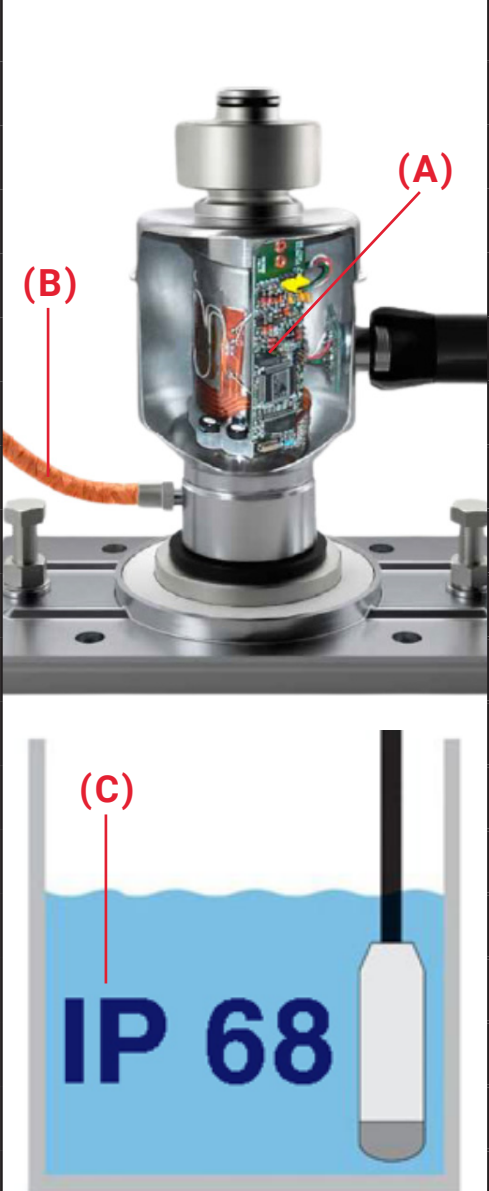
Setting it apart from other solutions on the market and proving pivotal for weighing applications in Africa, this indicator is equipped with comprehensive temperature compensation, ensuring the system maintains its accuracy even amidst significant temperature fluctuations.

# Sasco CPD Load Cells

The Bilanciai CPD load cell has earned a reputation as one of the premier weighbridge load cells globally, owing to its unique and unparalleled features. Notably, it boasts the capability to be submerged, withstand side loads and inclinations without sustaining damage, and incorporates rodent protection cabling.

Crafted with A17-4PH Stainless Steel casing, it ensures durability and resilience. Additionally, the load cell is equipped with built-in lightning protection, continuous diagnostics, and the innovative ability to have calibration settings reverse-calibrated, minimizing downtime.

These distinctive attributes collectively make the Bilanciai CPD load cell exceptionally reliable, robust, and precise, setting a standard for excellence in load cell technology.

The CPD load cells are characterized by the following specifications:		
	Accuracy Class	C3 (OIML R60)
	Rated Capacity	20t, 35t, 50t
	OIML R60 intervals	Max 6000
	Safe Overload	150% F.S.
	Safe Side Load	10%
	Ultimate Overload	200% F.S.
	Op. Temperature	-10~40 °C
	Ability To Incline	Yes to 5 degrees
	Transmission Protocol	RS485
	Supply Voltage	7~15 VDC
	Housing Material	A17-4PH Stainless Steel
	Rating	IP 68/ 69K
	Type	Digital
	Continuous Diagnostics	(A) Yes
In built lightning protection	(A) Yes	
Radio Interference Protection	(A) Yes	
Reverse calibration	(A) Yes	
Rodent protection cables	(B) Yes	
Submersible	(C) Yes	

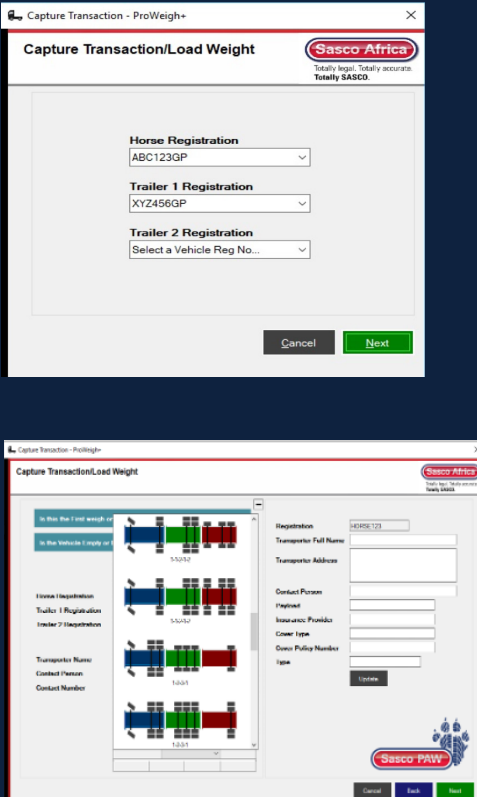
## Sasco Proweigh Software

Launched in September 2009, ProWeigh+ V1.0 aimed to provide a cost-effective off-the-shelf software solution, utilising a modular building block approach for seamless functionality expansion. Since its inception, ProWeigh+ has undergone substantial developments, enhancing its functionality while maintaining its simplicity.

The latest iteration, ProWeigh V5.0, stands as a testament to this evolution. It meets the diverse needs of customers and even surprises those initially considering bespoke solutions with its flexibility and functionality.

ProWeigh V5.0 is a proven and stable software solution developed incrementally over a decade from the original platform. This is underscored by the widespread adoption of licenses across key sectors of the African economy, reflecting its reliability and performance.

A practical weighing solution is one that weighbridge operators find easy to use, and ProWeigh+ epitomises this concept.



- Wide range of definable fields.
- Purchasing and Product module.
- Fleet database module.
- Ticket emailing module.
- Axle weighing reporting module.
- Country specific overloading setup.
- SOLAS container module.
- Definable overloading % tolerances.
- Specific definable User rights.
- Full audit trail.
- Microsoft Sequel database.
- Online Accredited Operator Training.
- Option of ERP or Cloud interfacing.
- Option of adding automation hardware management module.
- Developed and supported by Sasco.

With over 1000 installations across multiple African countries, Sasco ProWeigh+ has established itself as arguably Africa's most popular weighing software today. Its widespread use across diverse industries underscores its reputation for reliability, user-friendly operation, and adaptability to evolving weighing needs.

# The Weighing Ticket

THIS DOCUMENTATION IS COMPLIANT WITH THE NATIONAL ROAD TRAFFIC AMENDMENT ACT, 64 OF 2008

Version 4.6.2

**WEIGHBRIDGE TICKET SLIP**

<b>Horse Registration</b>	VEHICLE
<b>Weighbridge Name</b>	Road train weighbridge2
<b>Company Name</b>	Assmang Blackrock Mine Operation
<b>Site Name</b>	****
<b>Product</b>	****

\*\*\* COPY \*\*\*

<b>TICKET NUMBER</b>	SMS00000019	<b>TICKET DATE</b>	2022/09/02 13:47		
<b>VEHICLE DETAILS</b>					
<b>Registration Number</b>	VEHICLE	TRAILER123	TRAILER456		
<b>Type</b>	****	****	****		
<b>Operator</b>	Private	****	****		
<b>Contact Person</b>	****	****	****		
<b>Insurance Provider</b>	****	****	****		
<b>Cover Type</b>	****	****	****		
<b>Policy Number</b>	****	****	****		
<b>TRADE WEIGHING DETAILS</b>					
<u>First Weigh Details</u>		<u>Second Weigh Details</u>		<u>Weigh Calculations</u>	
<b>Weight (kg)</b>	21,000	<b>Weight (kg)</b>	56,000	<b>NETT Weight (kg)</b>	35,000
<b>Date Time</b>	2022/09/02 13:43	<b>Date Time</b>	2022/09/02 13:46	<b>Product NETT (kg)</b>	35,000
<b>Operator</b>	sa	<b>Operator</b>	sa	<b>Total Difference</b>	35,000
				<b>Total Cost</b>	0.00
<b>LOADING DETAILS</b>					
<b>Axle Groups</b>		<b>Actual (kg)</b>	<b>Permissible (kg)</b>	<b>Difference (kg)</b>	
Group	1	7,600	7,700	-100	
Group	2	16,000	18,000	-2,000	
Group	3	16,000	18,000	-2,000	
Group	4	16,400	18,000	-1,600	
<b>TOTALS</b>		<b>56,000</b>	<b>61,700</b>	<b>-5,700</b>	<b>Speed 0.00 km/h</b>
<b>CONSIGNEE DETAILS</b>					
<b>Consignee Code</b>			<b>Address</b>		
<b>Consignee Name</b>					
<b>Document Number</b>	ROA0000000002				
<b>Document Type</b>	Sales	<b>Contact Name</b>		****	
<b>Document Weight</b>	0	<b>Contact Number</b>		****	
<b>CONSIGNOR DETAILS</b>					
<b>Consignor Name</b>	Assmang Blackrock Mine Operation		<b>Contact Name</b>		****
<b>Address</b>	****		<b>Contact Number</b>		****

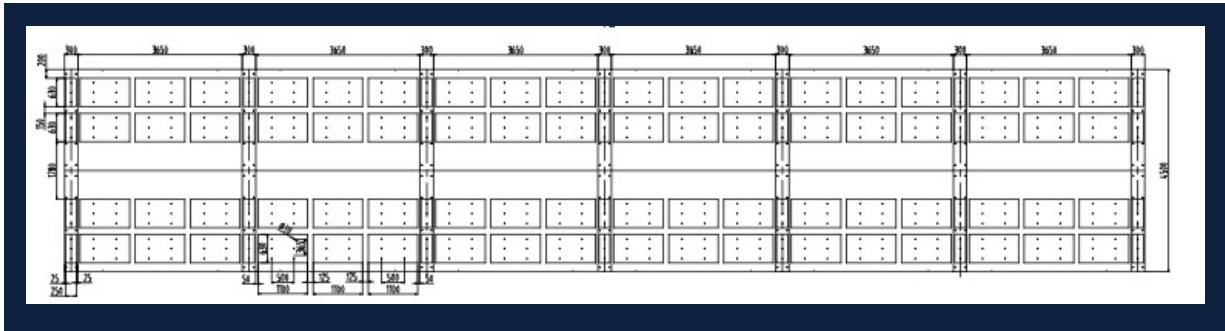
The system requirements for ProWeigh+ are:

- CPU : Intel Core i5 (8th generation or newer)
- RAM : 8GB or Higher
- Storage: 500GB or more
- Network: Ethernet and WiFi
- Operating System: Windows 10 or 11
- Printer: A4 printer

## Civil Works

If installed above ground a 10m level approach must be constructed as indicated below for the weighbridge to generate accurate axle weights.

### TOP DOWN - CIVIL DRAWING ON THE LEVEL APPROACH RAMP FOR ABOVE GROUND WEIGHBRIDGE



### TOP DOWN - CIVIL DRAWING ON THE LEVEL APPROACH RAMP FOR ABOVE GROUND WEIGHBRIDGE



## Application Example

**Company A**, a leading copper mining group in Africa, faced a dual weighing requirement essential for their operations:

### 1. Weighing Standard Tri-Axle Road Trucks:

- These trucks transport copper ore from the mine to export facilities via national roads.
- Strict national regulations on axle loads and total vehicle mass require precise, compliant weighing to avoid fines and ensure road safety.

### 2. Weighing Ultra-Heavy Mining Trucks:

- The mining operation faces a unique challenge in weighing these ultra-heavy trucks, which exceed the size and weight of standard vehicles.
- While these trucks remain on-site and do not use public roads, precise trade weighing is crucial for accurate inventory management, operational transparency, and reporting.
- The specifications of the dump trucks are as follows: Highest total (gross weight) 74400kg, Highest Individual Axle Weight: 26000kg, Highest Group Axle Weight: 50000kg.



Additionally, the mining group required:(a) A durable solution capable of withstanding harsh mining environments (b) Seamless integration with existing operational workflows and (c) High throughput to handle significant daily weighing volumes.

## **The Solution: WB-UL Weighbridge**

The WB-UL, designed by Sasco for the African market, addresses these challenges with unparalleled precision and versatility.

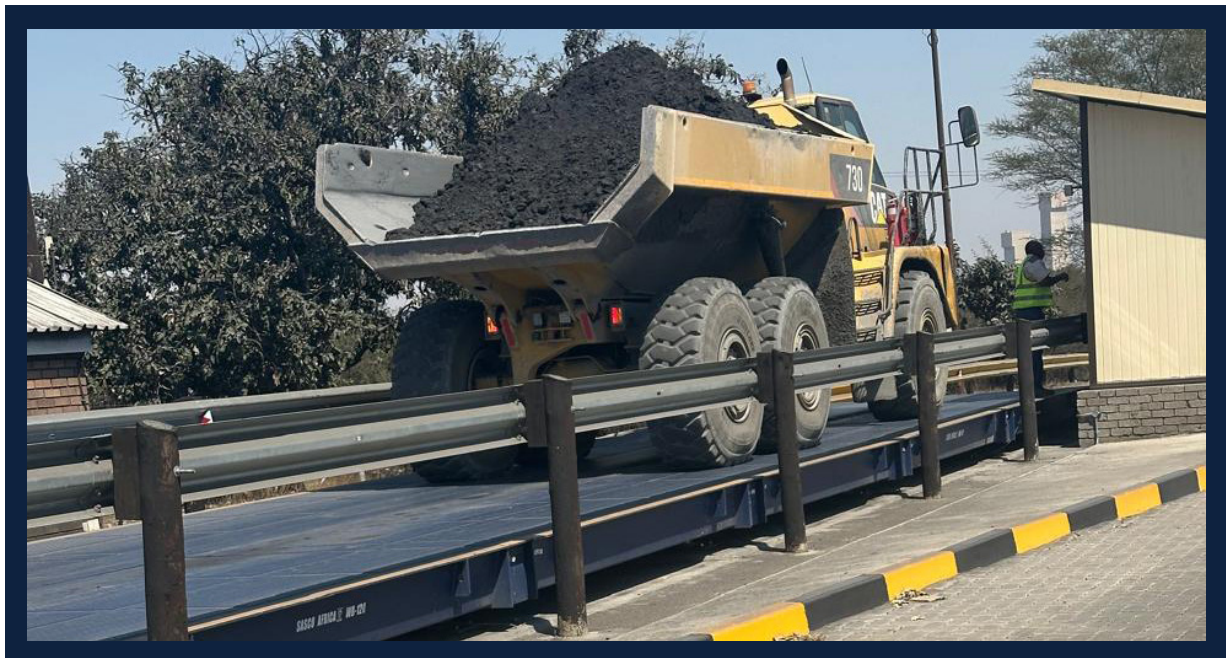
### **Why the WB-UL is the Perfect Fit:**

- **Dual Trade Weighing Capability:** Handles both tri-axle road trucks and heavy mining trucks with precision and accuracy, making it an all-in-one solution.
- **Exceptional Capacity and Strength:** Built to support up to 120T total load and 50T individual axle load, it easily accommodates the weight of ultra-heavy mining trucks while remaining compliant for road vehicles.
- **Optimised Design for Mining Operations:** The 4.5m wide deck ensures smooth loading and unloading of oversized mining vehicles. Its robust steel construction and 12mm thick deck plate withstand the abrasive and high-impact conditions of mining environments.
- **Compliance with National Regulations:** Accurately measures tri-axle trucks to meet axle load requirements, ensuring the mine complies with strict national overloading regulations.
- **Efficiency and Automation:** Integrated with Sasco's ProWeigh+ software, it offers seamless data collection, real-time reporting, and high throughput to handle hundreds of daily weighings. It supports weighing's unmanned operation, reducing labour costs and streamlining processes.
- **Long-Term Durability:** The Bilanciai CPD load cells are submersible, resistant to side loads, and equipped with lightning protection, ensuring longevity and reliability in extreme African conditions.

## Operational Impact

By installing the WB-UL, the copper mining group achieved:

- **Regulatory Compliance:** Avoids fines and ensures smooth ore transportation on public roads.
- **Accurate Inventory Management:** Precise weighing of mining trucks helps track ore production and minimise discrepancies.
- **Increased Productivity:** High-capacity throughput and automation reduce bottlenecks in truck weighing operations.
- **Cost Savings:** Reduced downtime, enhanced durability, and reliable operation with lower maintenance and operational costs over time.



# Technical Specifications

	SCPD Load Cells
Total Accuracy	+ - 99.95%
Axle Weighing Accuracy	+ - 97.50%
Installation	Above ground or pit
Deck Width	4.5m
Deck Length	24m 120T TAL
Number of Modules	One formed from 6m sections
Indicator	One - DD1015
Indicator IP Rating	IP 48
Load Cells	14 x CPD (35T)
Load Cell IP Rating	IP68
D-Link Required	No
Maximum Total Weigh	120 tons
Maximum Axle Weigh 200 W.P.D	50 tons
Reverse Calibration	Yes
Temperature Compensation	Yes
Maximum Number of Axle Groups	Unlimited
Total Weight Generated	Yes
Axle Weights Generated	Yes
RTA Compliant Ticket	Yes
SOLAS Weighing	Yes
Double or Single Weighing	Yes
Manned or Unmanned	Manned
PC Required	Yes
Option of Automation	Yes
Option of Unmanned	Yes
Option of Centralization	Yes
Direct IT Systems Interfacing Possible	Yes
Cloud Interfacing Possible	Yes

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