



MOBILE ELEVATION SYSTEMS

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MOBILE ELEVATION SYSTEMS

Will-Burt's mobile elevation systems are specifically designed for the complex missions facing today's defense organizations. Our elevation products, platforms, and systems are designed to Maintain the Advantage in Strategic Competition. All Will-Burt products are MIL-STD 810 certified and capable of overcoming the environmental challenges that exist today and new ones that will arise tomorrow.

The ability of Will-Burt to deliver superior elevation solutions is attributed to its worldwide leadership in the industry for over 75 years. Teams of experienced engineers, design new products to fit today's requirements. We also offer custom designed solutions to meet program specifications. Our vertically integrated manufacturing systems are backed by an ISO 9001:2015 quality management system. Finally, all of this is backed by a worldwide sales, marketing, and service support structure focused on delivering the correct customer solution on time, every time.

Flexibility and superior performance are two keys for mission success. Will-Burt's Compact Elevation Systems (CES) for pickup trucks and small trailers and the Rapid Deployment Elevation System (RDES) for large trailers deliver fast and precise elevation for a variety of sensors. These systems are designed for easy operation with little training and most importantly can have a sensor deployed in as little as 30 seconds. Available heights range from 13.1 ft. / 4m to 120 ft. / 36.5 m. Will-Burt's powerful telescopic masts with automatic locks can lift the payloads into place – no need for an auxiliary crane to place the payload on top like some systems. Payload capabilities range from 400 lb. / 181 kg to 1,200 lb. / 544 kg.

The world headquarters of Will-Burt is in Orrville, Ohio USA and the company is classified as a small business and is 100% employee-owned.



COMPACT ELEVATION SYSTEM^{TRK}



COMPACT ELEVATION SYSTEM^{TLR}

RAPID DEPLOYMENT ELEVATION SYSTEM



MOBILE ELEVATION SYSTEMS

COMPACT ELEVATION SYSTEM ^{TRK}

Will-Burt's truck based Compact Elevation System with integrated CAN-bus controls and cable management is a rugged and precise mobile elevation platform that provides rapid deployment of a wide variety of sensors from a compact position in a standard 2.4m pickup truck bed. The compact design provides up to .7 m³ for the sensor payload with the tailgate in the closed position. Available with an electro-mechanical or pneumatic elevation system at 4- or 6-meter heights with a payload capacity of 241 kg, payload stability is assured with section keys and keyways that minimize rotational movement.



COMPACT ELEVATION SYSTEM ^{TLR}

Will-Burt's medium trailer based Compact Elevation System with integrated CAN-bus controls and cable management is a rugged and precise mobile elevation platform that provides rapid deployment of sensors in as little as 30 seconds. The compact design allows significant room for the sensor payload and auxiliary equipment. Available with an electro-mechanical or pneumatic elevation system at 4-to-8.5-meter heights with a payload capacity of 241 kg, payload stability is assured with section keys and keyways that minimize rotational movement. This trailer-based system is customizable and can accommodate a variety of power systems as specified by the customer.

RAPID DEPLOYMENT ELEVATION SYSTEM

Will-Burt's Rapid Deployment Elevation System (RDES) with fully integrated CAN-bus controls is designed for expeditious deployment when significant heights are required for sensors and antennas. The RDES includes a mast tilt system that delivers a compact transport envelope. The system is available in heights of 24m or 36m. The powerful telescopic mast can elevate a 544kg payload - no need for crane assistance. An automatic lock system maintains a consistent height for extended periods of deployment - even with the loss of power. Payload stability and pointing accuracy is assured with section keys and keyways that minimize rotational movement. Full deployment of the 24m system can be achieved in 8 minutes.



COVERT POWER SYSTEM ^{for CES TRK}

This Covert Power System is designed to deliver power to the CES Truck system and payloads while the vehicle is off. This automatic system recharges when the vehicle is on and can provide up to **3 hours of continuous power** without vehicle power enabling **virtually silent persistent surveillance**.

- Delivers virtually silent persistent surveillance
- Up to 3 hours run time
- Automatic power and engine control
- Self-monitoring
- Active system climate control
- Reduces fuel use and increases overall mission time
- Extends life of vehicle
- Small space claim in vehicle

COMPACT ELEVATION SYSTEM ^{TRK}

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COMPACT ELEVATION SYSTEM TRUCK

Will-Burt's Compact Elevation System is a rugged and precise mobile elevation platform that provides rapid deployment of a wide variety of sensors from a compact position in a standard 8' pickup truck bed. The compact design provides up to 24.7 ft³ / .7 m³ for the sensor payload with the tailgate in the closed position. Available with an electro-mechanical or pneumatic elevation system, payload stability is assured with section keys and keyways that minimize rotational movement.

Designed and Manufactured in the USA by The Will-Burt Company, the Compact Elevation System will optimize the performance of sensors resulting in mission success.



COMPACT ELEVATION SYSTEM ^{TRK}

ESSENTIAL FEATURES

- **Covert**
 - Elevation system and payload hidden within pickup bed envelope
 - Designed for transport while in horizontal or vertical positions
 - Under 30 second tilt time
- **Compact**
 - Up to 24.7 ft³ / .7 m³ available space for the sensor payload
- **Minimized mast twist**
 - Full-length mast section keys
- **Strong and Robust**
 - No need for guying with field-proven rugged telescoping mast design
- **Flexible Installation**
 - Skid design allows for installation on a variety of platforms
 - Available with mechanical or pneumatic elevation system
 - Cable management system
- **Integrated Controls**
 - Fully integrated control system
 - PC control capable
 - CAN-bus J1939
 - RS485 Serial



COMPACT ELEVATION SYSTEM ^{TRK}

CES-TRK-SAL	4m	6m
Stowed Dimensions (Lx W x H) (in. / mm)	53.4 x 41.8 x 21.8 / 1356 x 1062 x 555	61.2 x 41.8 x 21.8 / 1555 1062 x 555
Available Area for Concealed Sensor Payload (8 ft. bed) (in. ³ & in. ² / m ³ & m ²)	42157.090 & 1983.900 / 0.691 & 1.280	40203.363 & 1875.316 / 0.659 & 1.210
Extended Height (ft. / m)	13.1 / 4	19.6 / 6
Payload Capacity (lb. / kg)	400 / 181	
Telescopic Mast Type	Aluminum Mechanical Screw-Drive with Automatic Locks	
Survival Wind Speed (mph / km/h)	81 / 130	
Deployment Wind Speed (mph / km/h)	35 / 56	
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Total Cycle Time / Approximate - Payload Dependent (seconds)	30 / 35 / 35 / 30 / 130	30 / 60 / 60 / 30 / 180
Rotation Accuracy (Twist)	+/-1°	
Voltage (MIL-STD 1275)	28 VDC	
*Typical Payload Sail Area (ft. ² / m ²)	12 / 1.1 CD=1.5	
System Weight CES & Payload (lb. / kg)	1440 / 653	1495 / 678
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable	

*Consult factory for larger sail area as payload and wind capacities may be reduced. Specifications subject to change.

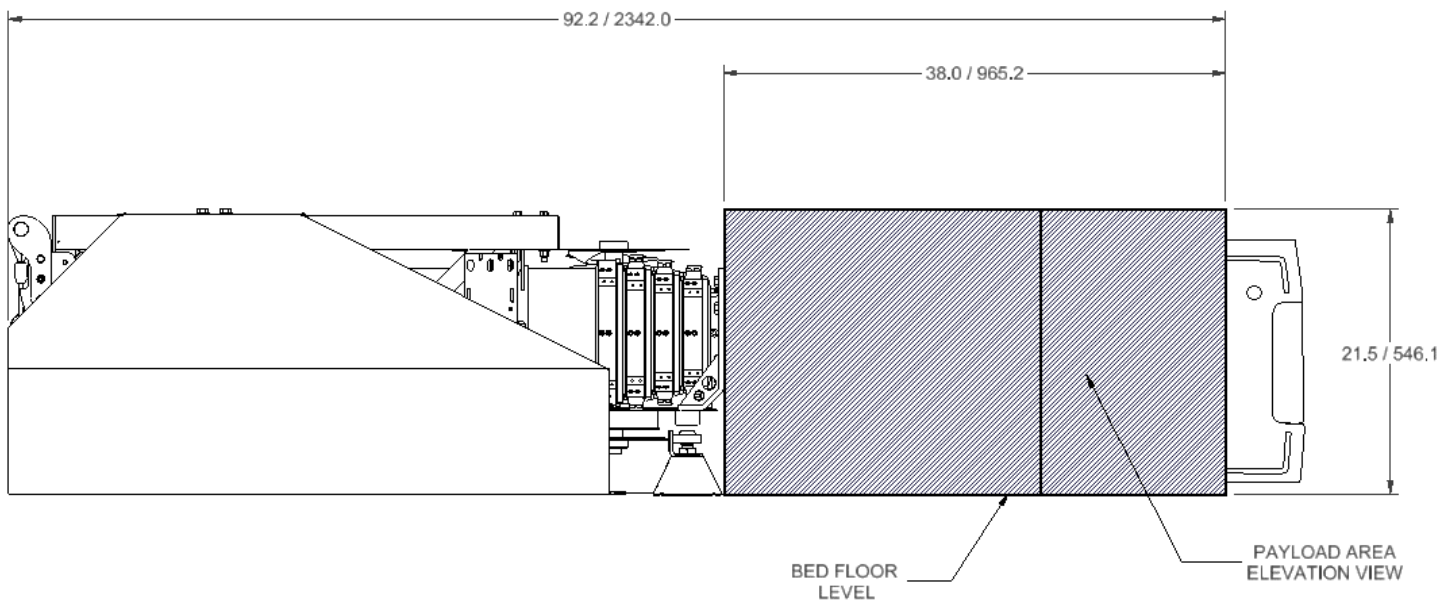
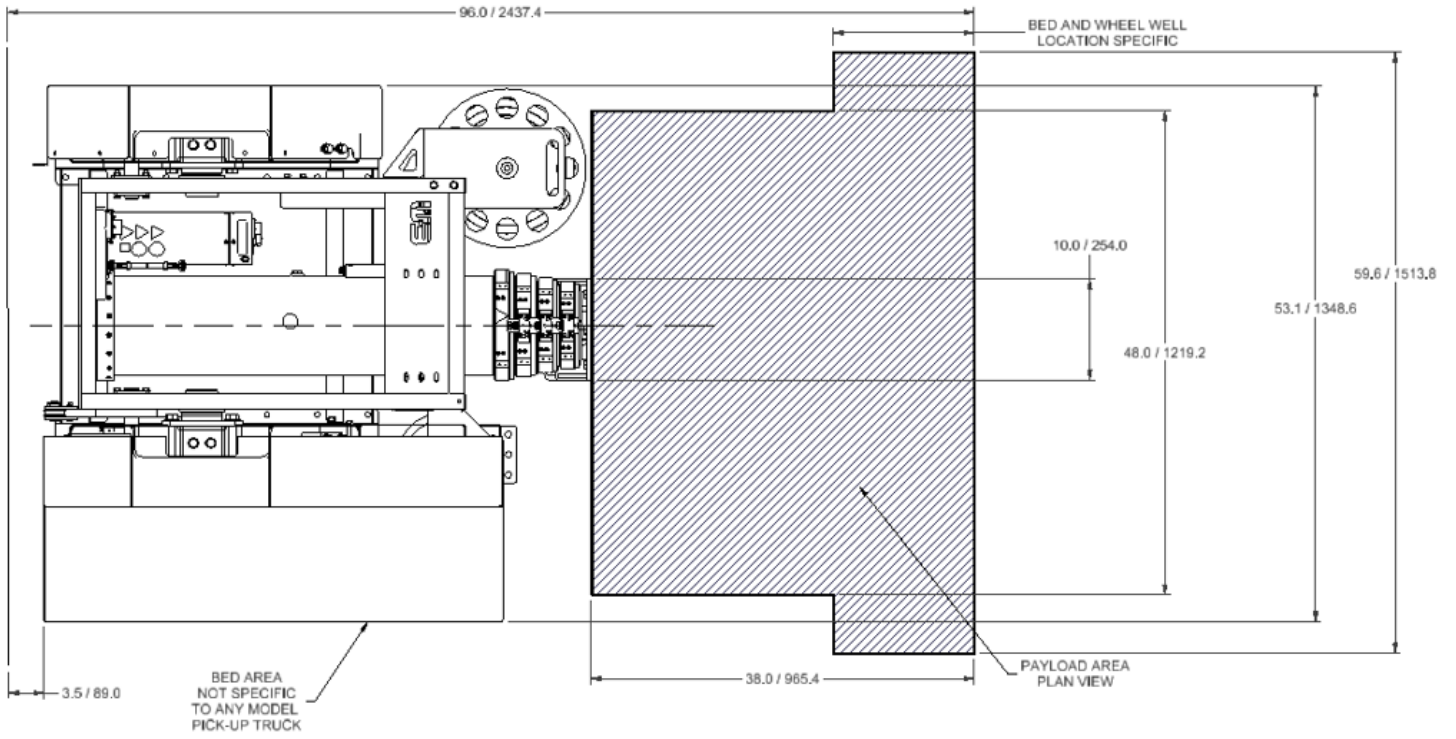


CES-TRK-SHDNL	4m	6m
Stowed Dimensions (Lx W x H) (in. / mm)	56.7 x 41.8 x 21.8 / 1440 x 1062 x 555	66.6 x 41.8 x 21.8 / 1692 x 1062 x 555
Available Area for Concealed Sensor Payload (8 ft. bed) (in. ³ & in. ² / m ³ & m ²)	41316.195 & 1937.140 / 0.677 & 1.250	38836.011 & 1799.352 / 0.637 & 1.161
Extended Height (ft. / m)	13.1 / 4	19.6 / 6
Payload Capacity (lb. / kg)	530 / 241	
Telescopic Mast Type	Aluminum Pneumatic	
Survival Wind Speed (mph / km/h)	81 / 130	
Survival Wind Speed (mph / km/h)	35 / 56	
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Approximate - Payload Dependent (seconds)	30 / Deploy and Retract times are high variable / 30 seconds	
Rotation Accuracy (Twist)	+/-1°	
Voltage (MIL-STD 1275)	28 VDC	
*Typical Payload Sail Area (ft. ² / m ²)	12 / 1.1 CD=1.5	
System Weight CES & Payload	1535 / 696	1579 / 716
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable	

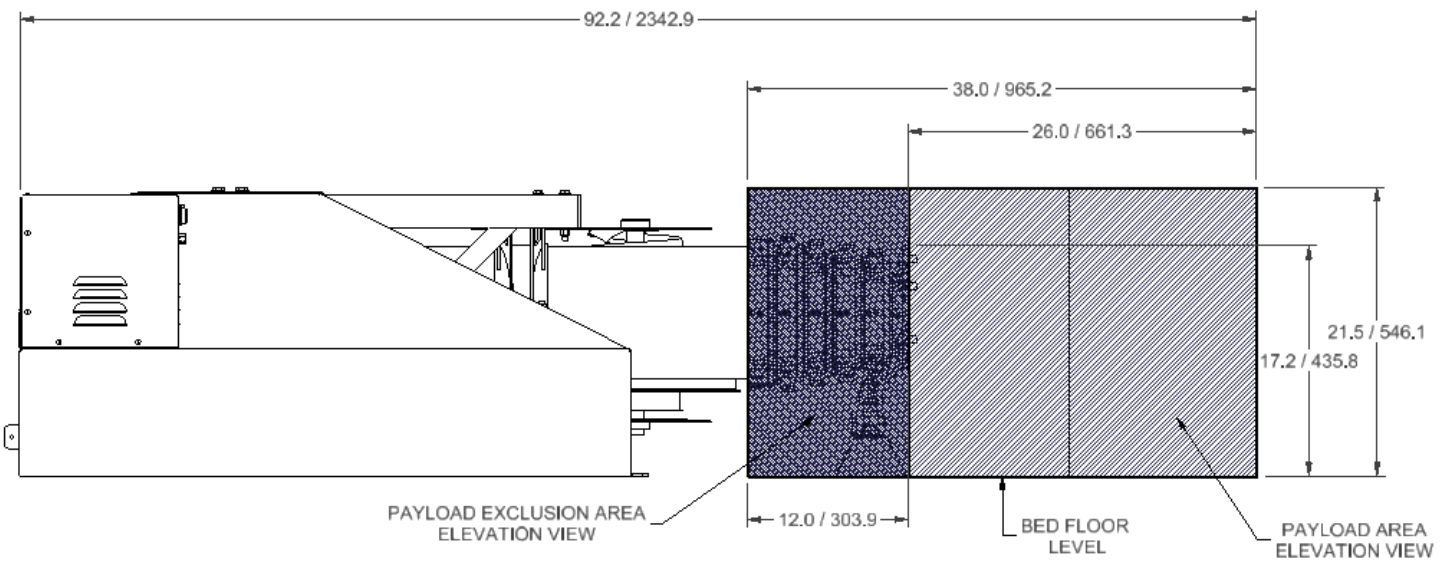
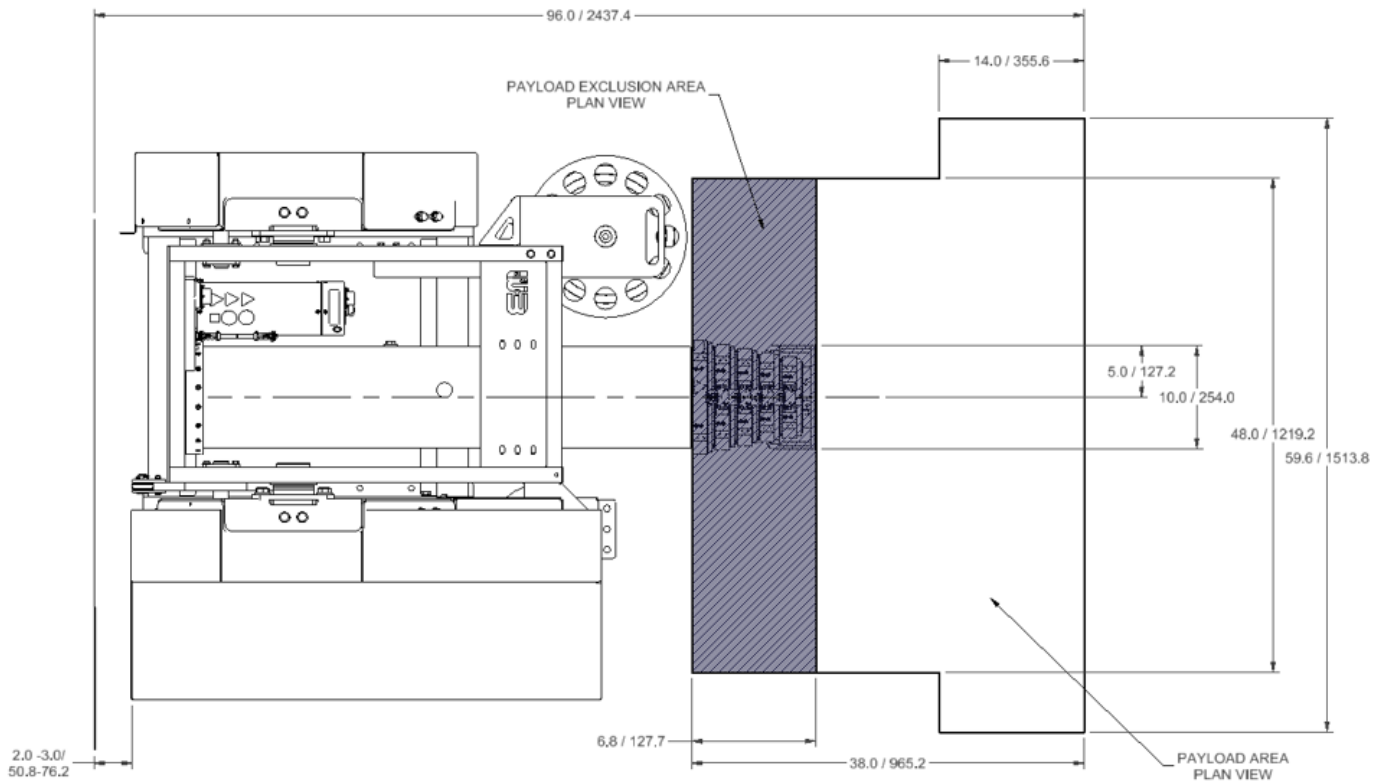
*Consult factory for larger sail area as payload and wind capacities may be reduced. Specifications subject to change.



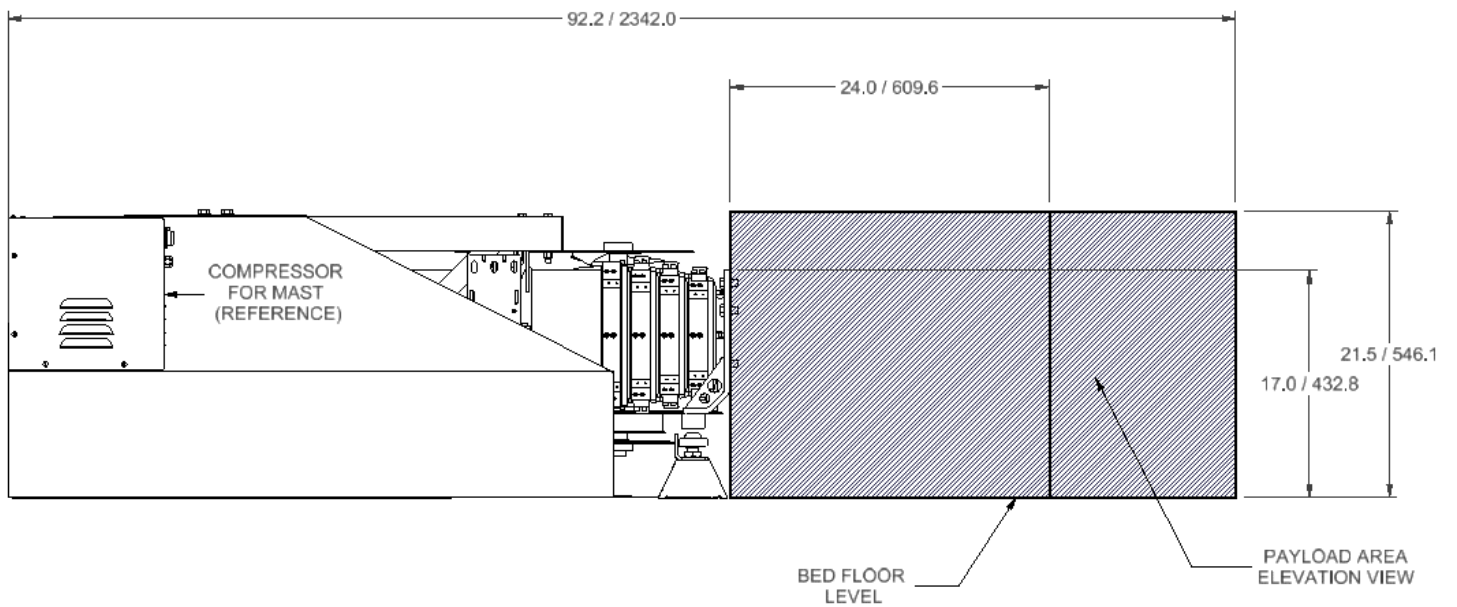
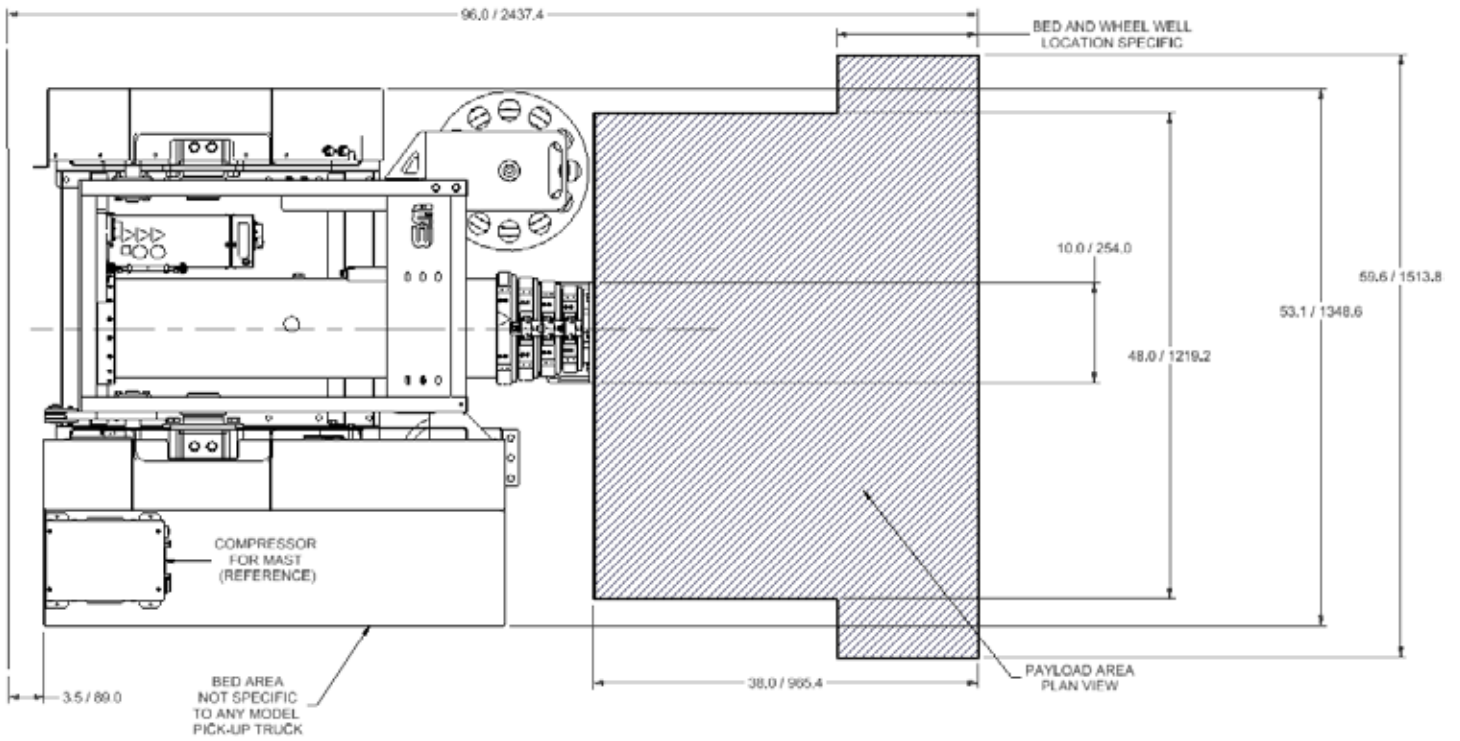
4m CES-TRK-SAL



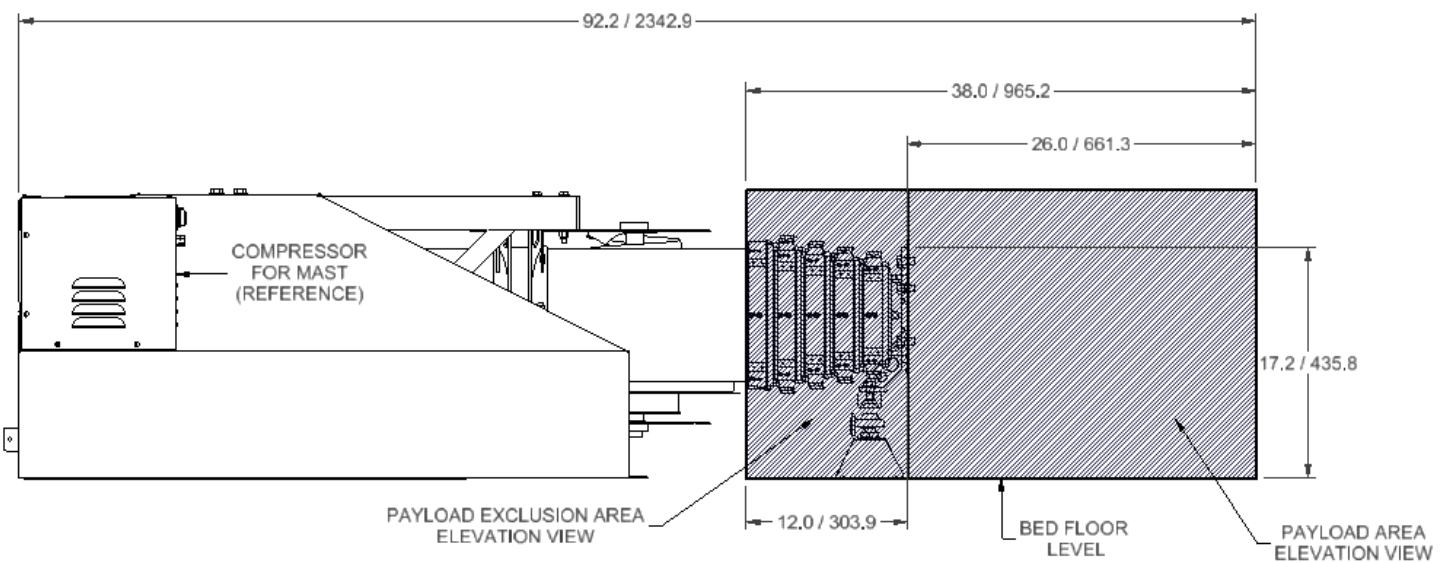
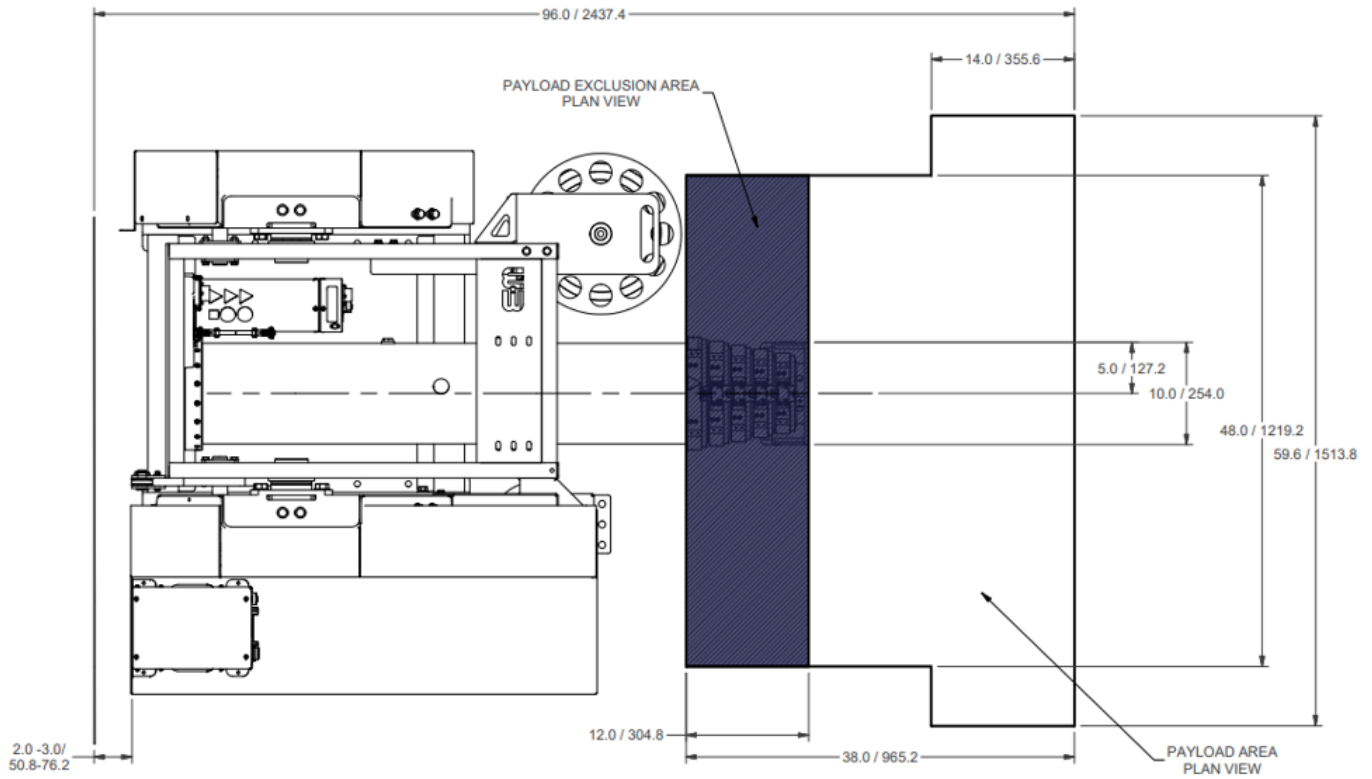
6m CES-TRK-SAL



4m CES-TRK-SHDNL



6m CES-TRK-SHDNL



COMPACT ELEVATION SYSTEM^{TLR}

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COMPACT ELEVATION SYSTEM TRAILER

Will-Burt's Compact Elevation System TLR is a rugged and precise mobile elevation platform that provides rapid deployment of sensors in as little as 30 seconds from a trailer platform. The compact design allows significant room for the sensor payload and auxiliary equipment. Available with an electro-mechanical or pneumatic elevation system, payload stability is assured with section keys and keyways that minimize rotational movement.

The Compact Elevation System TLR is customizable and can accommodate a variety of power systems as specified by the customer.



COMPACT ELEVATION SYSTEM^{TLR}

ESSENTIAL FEATURES

- **Rapid Deployment of Sensors - 30 seconds**
- **Heights from 13 ft. / 4m to 28 ft. / 8.5m**
- **Payload up to 530 lb. / 241kg**
- **Minimized mast twist**
 - Full-length mast section keys
- **Strong and Robust**
 - No need for guying with field-proven rugged telescoping mast design
- **Flexible Installation**
 - Skid design allows for installation on a variety of platforms
 - Available with mechanical or pneumatic elevation system
 - Cable management system
- **Integrated Controls**
 - Fully integrated control system
 - PC control capable
 - CAN-bus J1939
 - RS485 Serial



COMPACT ELEVATION SYSTEM ^{TLR}

CES-TLR-SAL	6m	8.5m
Stowed Dimensions (in. / mm) (Lx W x H)	174.6 x 98.8 x 65.4 / 4435 x 2510 x 1662	
Extended Height (AGL) (ft. / m)	23.4 / 7.1	31.7 / 9.7
Payload Capacity (lb. / kg)	400 / 181	265 / 120
Telescopic Mast Type	Aluminum, Electromechanical	
Survival Wind Speed (mph / km/h)	81 / 130	
Deployment Wind Speed (mph / km/h)	35 / 56	
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Total Cycle Time / Approximate - Payload Dependent (seconds)	30 / 60 / 60 / 30 / 180	30 / 100 / 100 / 30 / 260
Rotation Accuracy (Twist)	+/-1°	
Voltage (MIL-STD 1275)	28 VDC	
*Typical Payload Sail Area (ft. ² / m ²)	12 / 1.1 CD=1.5	
System Weight CES & Payload (lb. / kg)	1052 / 477	1151 / 522
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable	

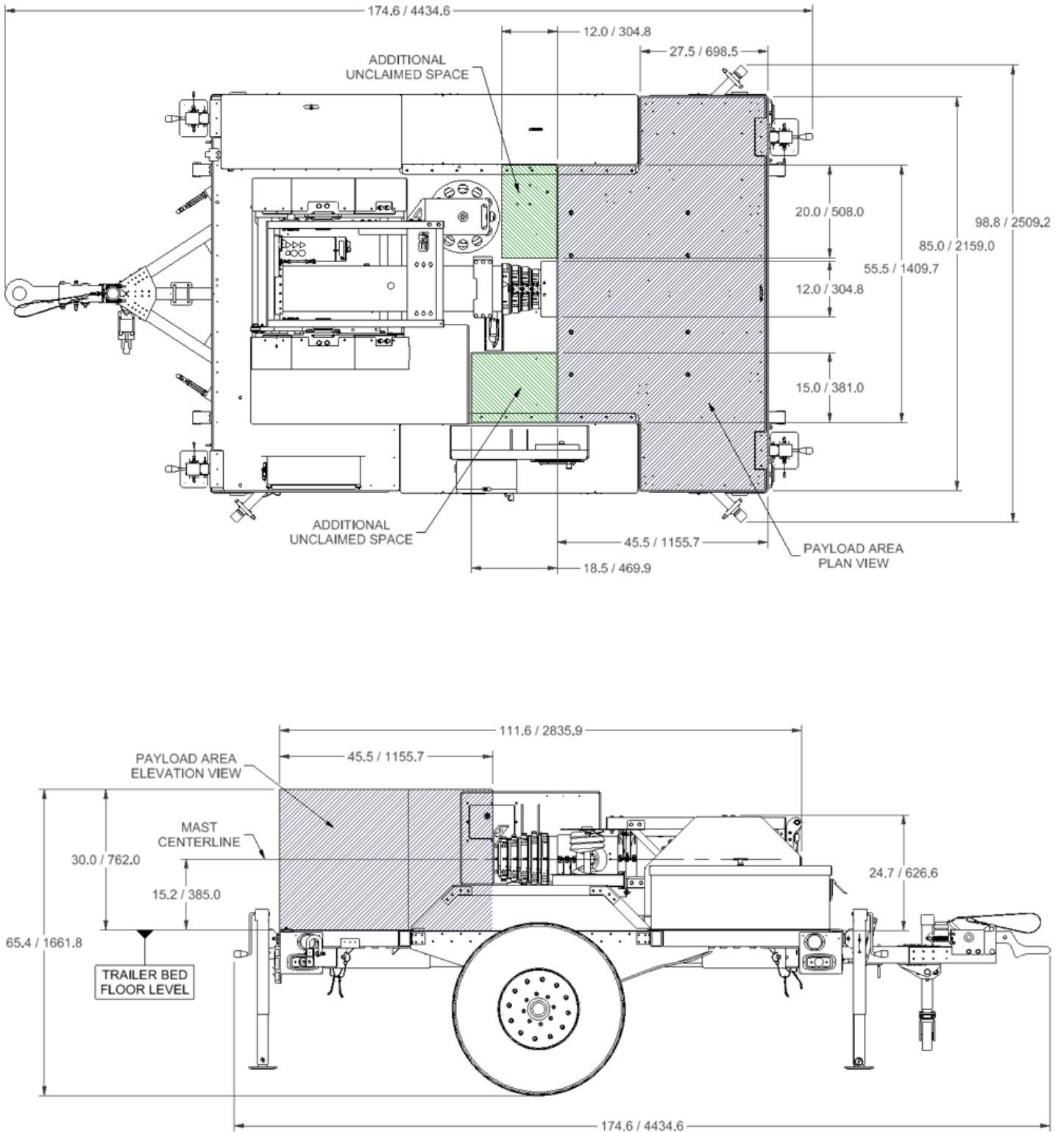
*Consult factory for larger sail area as payload and wind capacities may be reduced. Specifications subject to change.

CES-TLR-SHDNL	4m	6m
Stowed Dimensions (Lx W x H) (in. / mm)	56.7 x 41.8 x 21.8 / 1440 x 1062 x 555	66.6 x 41.8 x 21.8 / 1692 x 1062 x 555
Available Area for Concealed Sensor Payload (8 ft. bed) (in. ³ & in. ² / m ³ & m ²)	41316.195 & 1937.140 / 0.677 & 1.250	38836.011 & 1799.352 / 0.637 & 1.161
Extended Height (ft. / m)	13.1 / 4	19.6 / 6
Payload Capacity (lb. / kg)	530 / 241	
Telescopic Mast Type	Aluminum Pneumatic	
Survival Wind Speed (mph / km/h)	81 / 130	
Deployment Wind Speed (mph / km/h)	35 / 56	
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Approximate - Payload Dependent (seconds)	30 / Deploy and Retract times are high variable / 30	
Rotation Accuracy (Twist)	+/-1°	
Voltage (MIL-STD 1275)	28 VDC	
*Typical Payload Sail Area (ft. ² / m ²)	12 / 1.1 CD=1.5	
System Weight CES & Payload (lb. / kg)	1535 / 696	1579 / 716
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable	

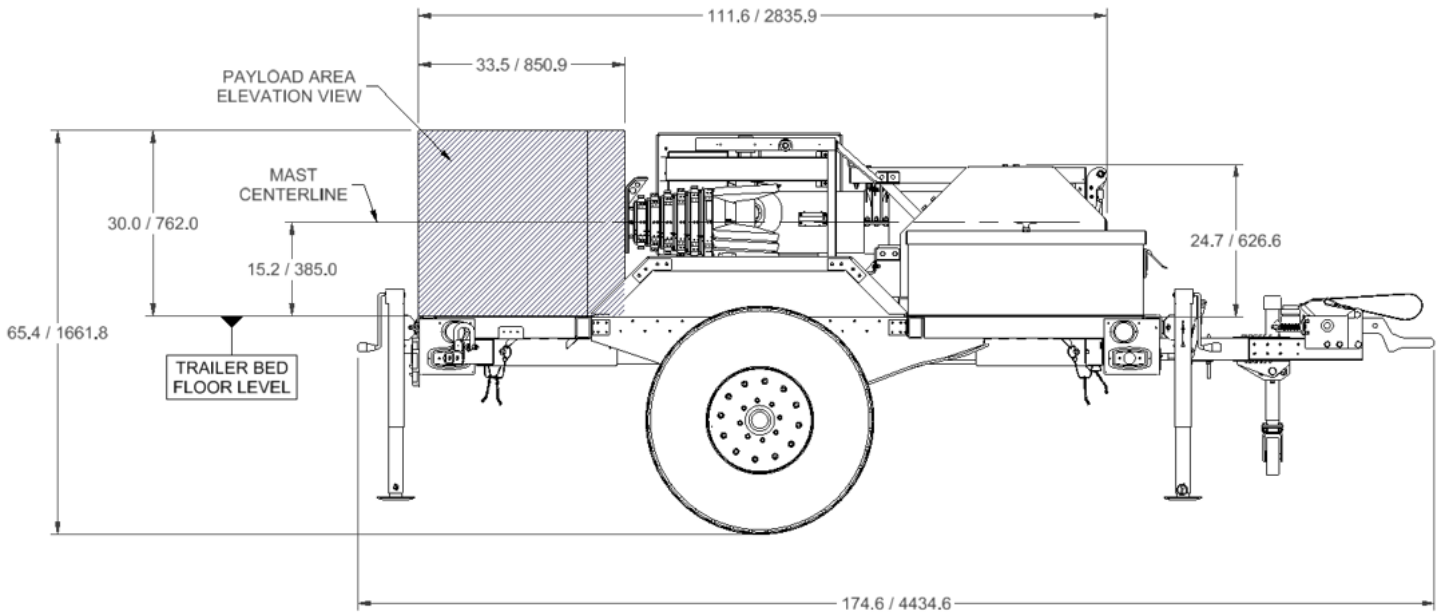
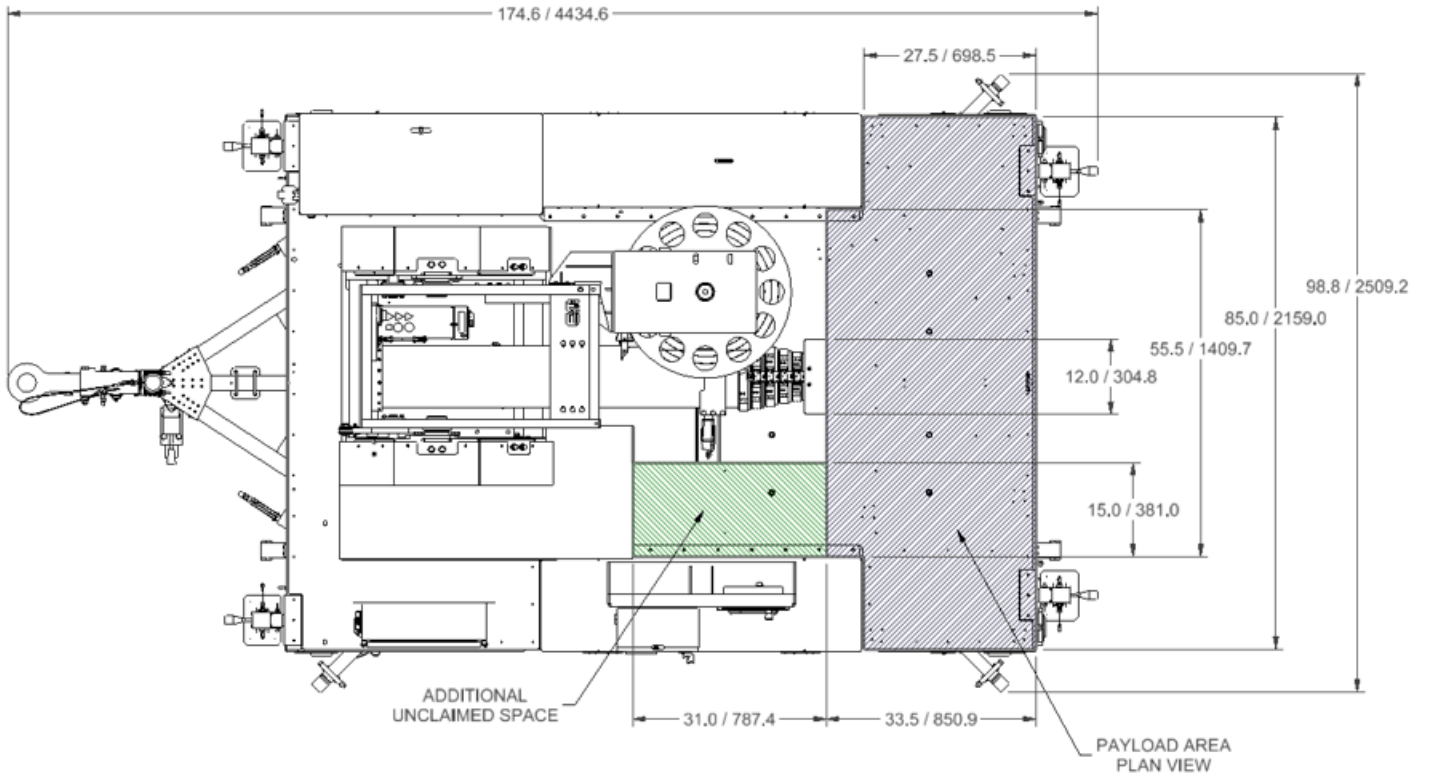
*Consult factory for larger sail area as payload and wind capacities may be reduced. Specifications subject to change.



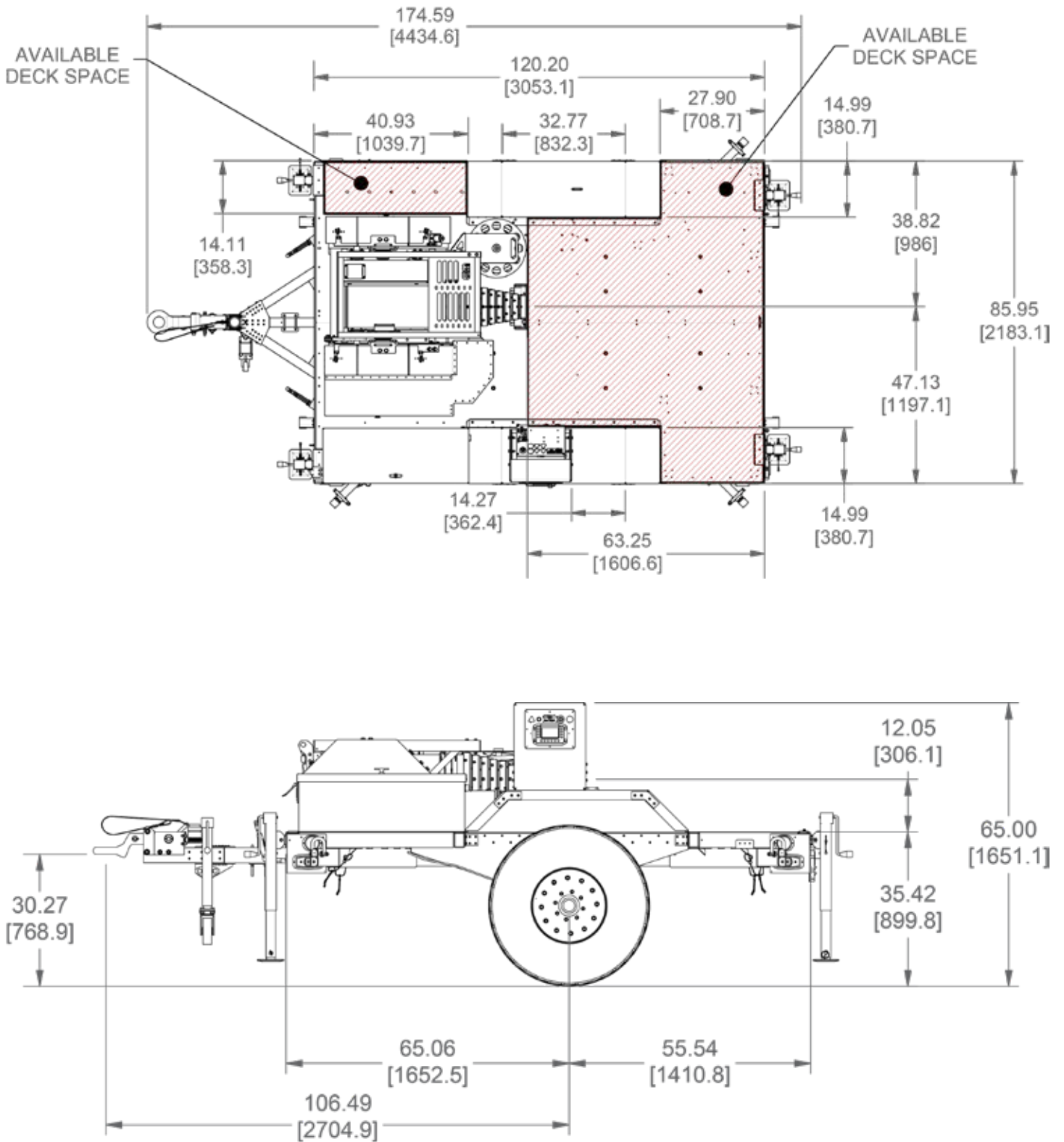
6m CES-TLR-SAL



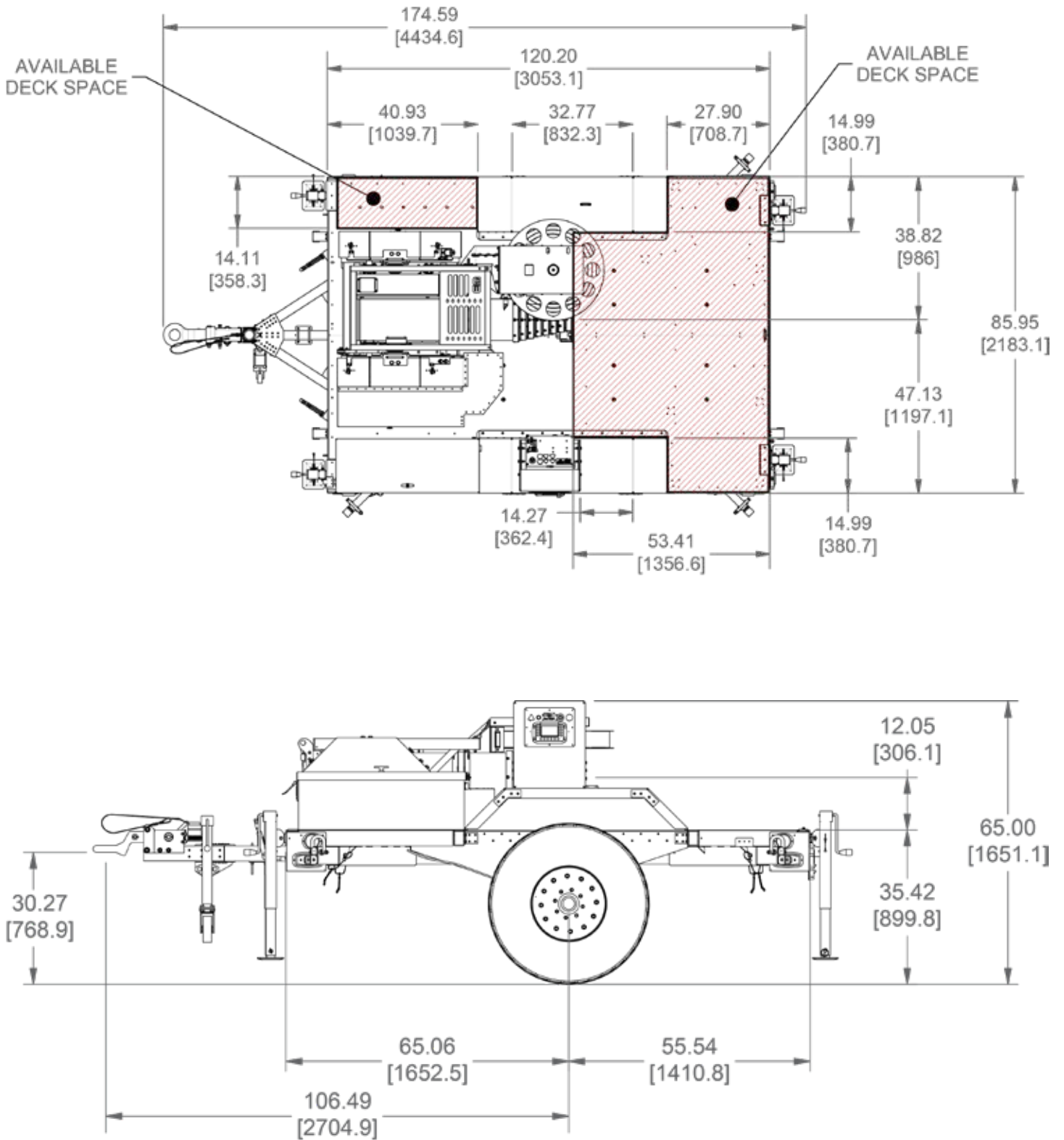
8.5m CES-TLR-SAL



4m CES-TLR-SHDNL



6m CES-TLR-SHDNL



RAPID DEPLOYMENT ELEVATION SYSTEM

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RAPID DEPLOYMENT ELEVATION SYSTEM

Will-Burt's Rapid Deployment Elevation System (RDES) is designed for expeditious deployment when significant heights are required for sensors and antennas. The RDES includes a mast tilt system that delivers a compact transport envelope. The system is available in heights of 80 ft. / 24m or 120 ft. / 36m. The powerful telescopic mast can elevate a 1,200 lb. / 544kg payload - no need for crane assistance. An automatic lock system maintains a consistent height for extended periods of deployment - even with the loss of power. Payload stability and pointing accuracy is assured with section keys and keyways that minimize rotational movement. Full deployment of the 80 ft. / 24m system can be achieved in 8 minutes.

RDES is customizable and can accommodate a variety of power systems as specified by the customer.



RAPID DEPLOYMENT ELEVATION SYSTEM

ESSENTIAL FEATURES

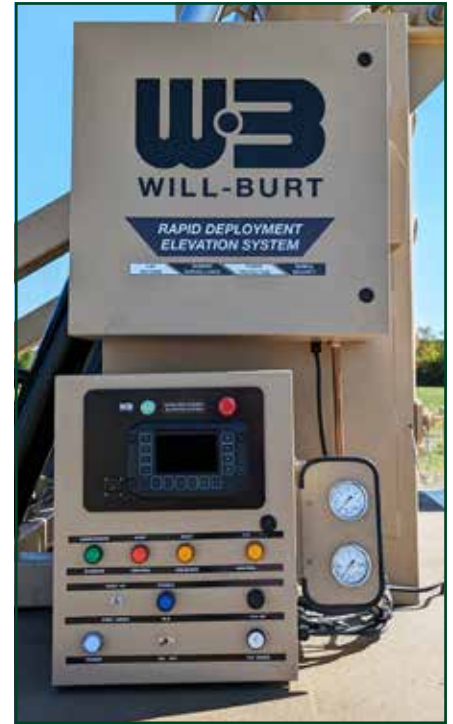
- **Rapid deployment of sensors and antennas to significant heights - 8 minutes to 80 ft. / 24m**
- **Payload up to 1,200 lb. / 544 kg**
 - Available in 80 ft. / 24m and 120 ft. / 36m heights
- **Telescopic Mast Lifts the Payload – No cranes required**
- **Powerful Automatic Locking System – maintains height indefinitely – even without power**
- **Minimized mast twist with Full-length mast section keys**
- **Integrated Controls**
 - Fully integrated control system
 - PC control capable
 - CAN-bus J1939
 - RS485 Serial



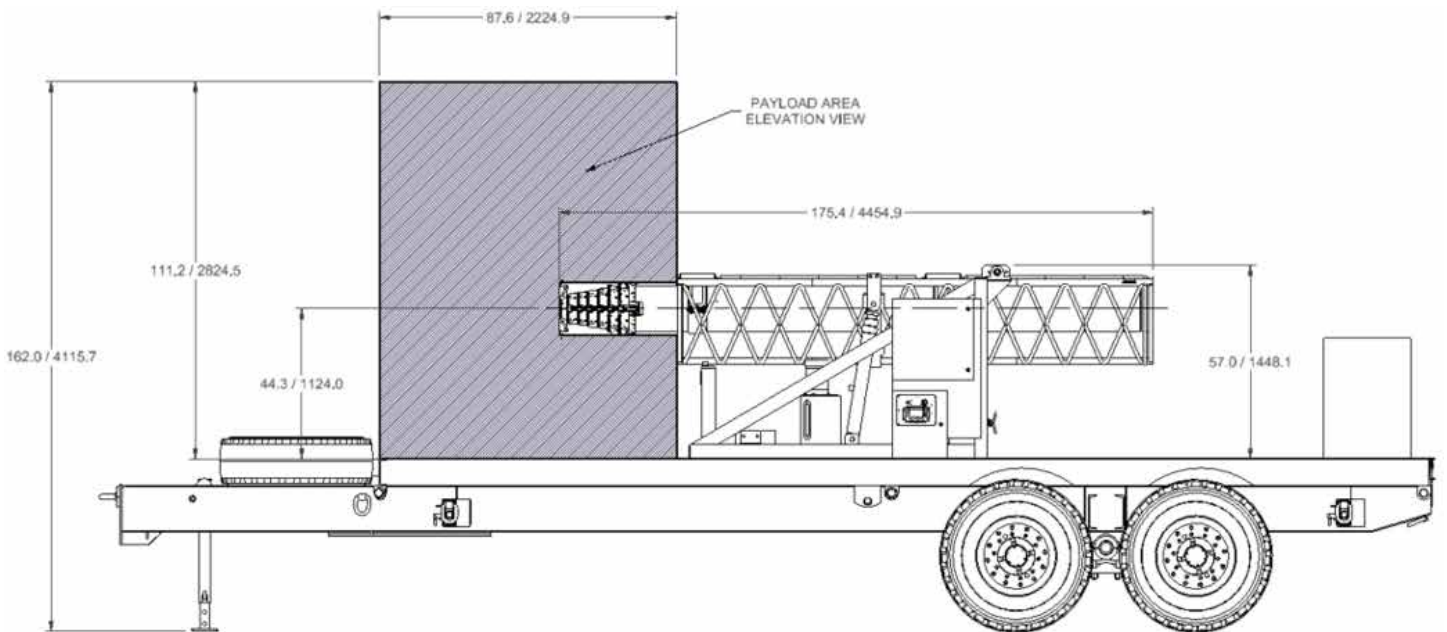
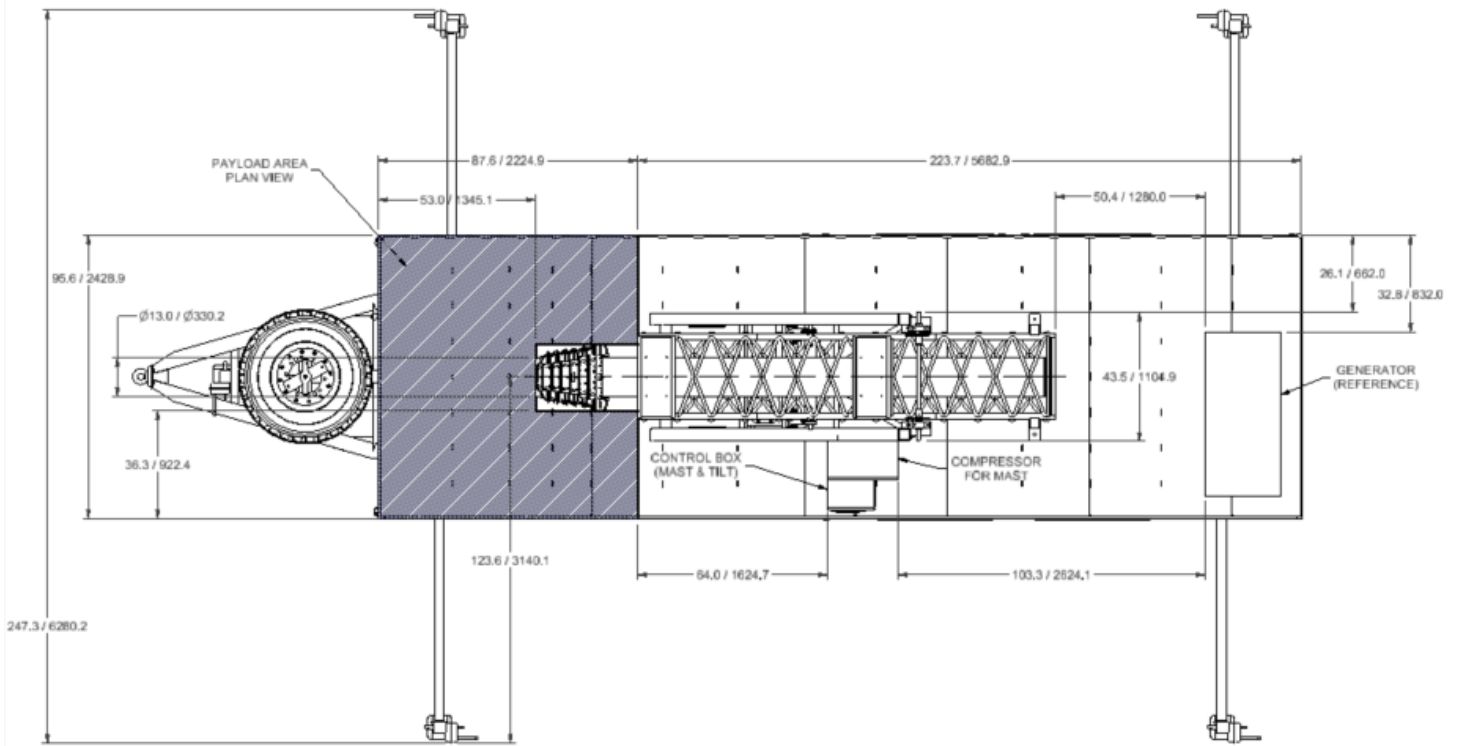
RAPID DEPLOYMENT ELEVATION SYSTEM

RDES-UHDL	24m	36m
Stowed Dimensions (Lx W x H) (in. / mm)	175.4 x 57.0 x 43.5 / 4455 x 1448 x 1105	221.0 x 57.0 x 43.5 / 5612 x 1448 x 1105
Available Area for Sensor Payload (in ³ & in ² / m ³ & m ²)	931251 & 8374 / 15.3 & 5.4	1250172 & 11243 / 20.5 & 7.3
Extended Height (ft. / m)	80 / 24.4	120 / 36.6
Payload Capacity (lb. / kg)	1200 / 544	980 / 445
Telescopic Mast Type	Aluminum Pneumatic with Automatic Locks	
Survival Wind Speed (mph / km/h)	81 / 130	
Deployment Wind Speed (mph / km/h)	35 / 56	
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Approximate - Payload Dependent (seconds)	3 minutes / Deploy and Retract times are highly variable / 3 minutes	
Rotation Accuracy (Twist)	+/-1°	
Voltage (MIL-STD 1275)	28 VDC	
*Typical Payload Sail Area (ft. ² / m ²)	18 / 1.67 CD=1.5	28 / 2.6 CD=1.5
System Weight RDES with Trailer (ft. / m)	16368 / 7425	16677 / 7565
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable	

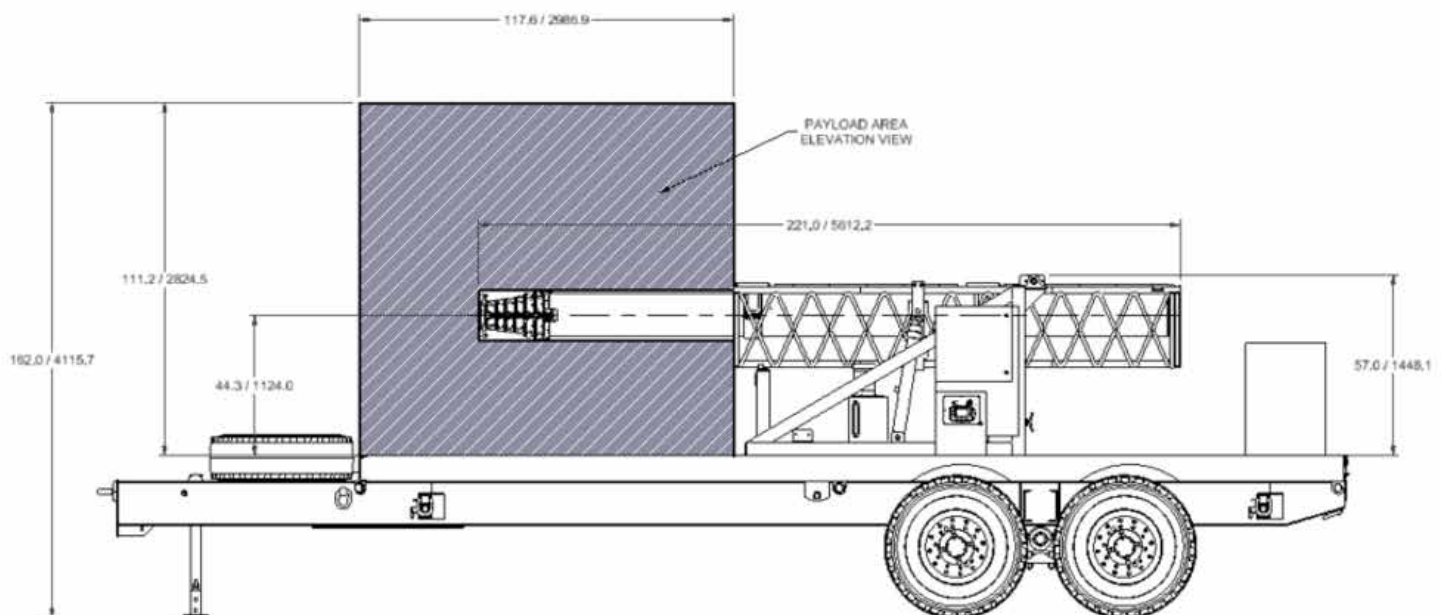
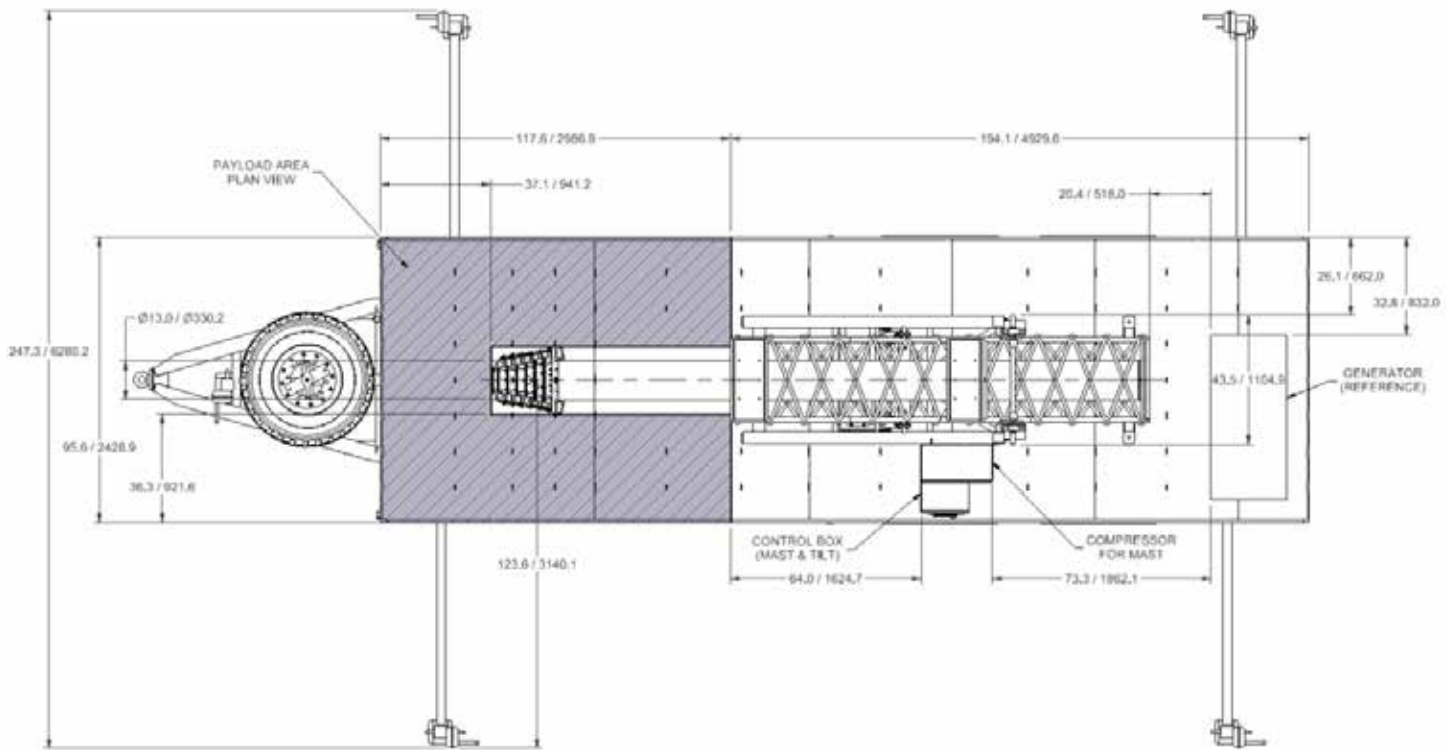
*Consult factory for larger sail area as payload and wind capacities may be reduced.



24m-RDES-UHDAL



36m-RDES-UHDAL



COVERT POWER SYSTEM for CES^{TRK}

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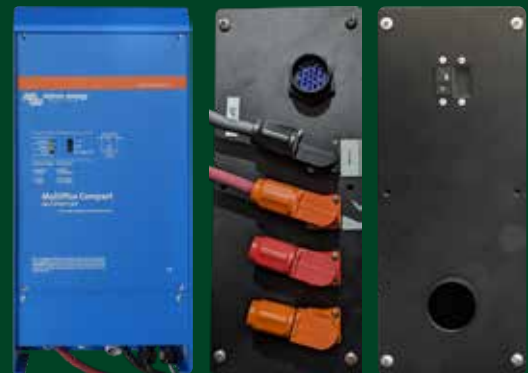
COVERT POWER SYSTEM FOR CES TRK

This Covert Power System is designed to deliver power to the CES Truck system and payloads while the vehicle is off. This automatic system recharges when the vehicle is on and can provide up to **3 hours of continuous power** without vehicle power enabling **virtually silent persistent surveillance**.



ESSENTIAL FEATURES

- Delivers virtually silent persistent surveillance
- Up to 3 hours run time
- Automatic power and engine control
- Self-monitoring
- Active system climate control
- Reduces fuel use and increases overall mission time
- Extends life of vehicle
- Small space claim in vehicle

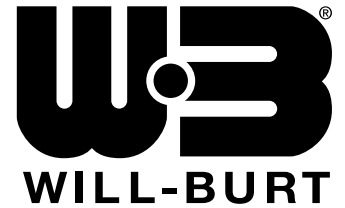


WiFi enabled controls



kWh	3.3	4.9	9.9
Approx Run Time Hrs. / 2.1 kWh load	0.5 - 1	1 - 1.5	2 - 3
Master Control Unit	x	x	x
Data Collection Module		x	x
Lithium Energy Module	x	x	x
Battery Management System (BMS)	x	x	x
Inverter	500W	1000W	3000W
120 VAC Output	x	x	x
70A Charger			x
Active Climate Control	-40° to 60°C		

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The Will-Burt Company, headquartered in Orrville, Ohio, USA, is the world's premier manufacturer of mobile telescoping masts, towers and pan and tilt positioners. We offer virtually every mobile payload elevation and integration solution for defense, government, first responders, cellular and mobile, broadcast, energy production and other markets. Will-Burt also offers contract manufacturing, metal fabrication, powder-coating, and rapid prototyping services. Will-Burt is an international company with offices and manufacturing in the USA, England, and Germany along with offices in Singapore and a joint venture in Turkey. All Will-Burt Company manufacturing locations are backed by a certified ISO 9001:2015 Quality Management System. Incorporated in 1918, Will-Burt is 100% employee-owned and is classified as a small business.