WILL-BURT

DEFENSE ELEVATION AND INTEGRATION SOLUTIONS

MIL - STD 810 CERTIFIED

AMERICAS

INNOVATION ELEVATED®

The Will–Burt Company offers a broad selection of mobile telescopic masts, lattice towers, pan and tilt positioners and accessories to elevate a variety of mission critical payloads. Each family of elevation solutions is designed and manufactured with a unique set of characteristics tuned to optimize payload performance and meet the most stringent performance criteria. High performance tactical trailers round out the military offerings of The Will–Burt Company.

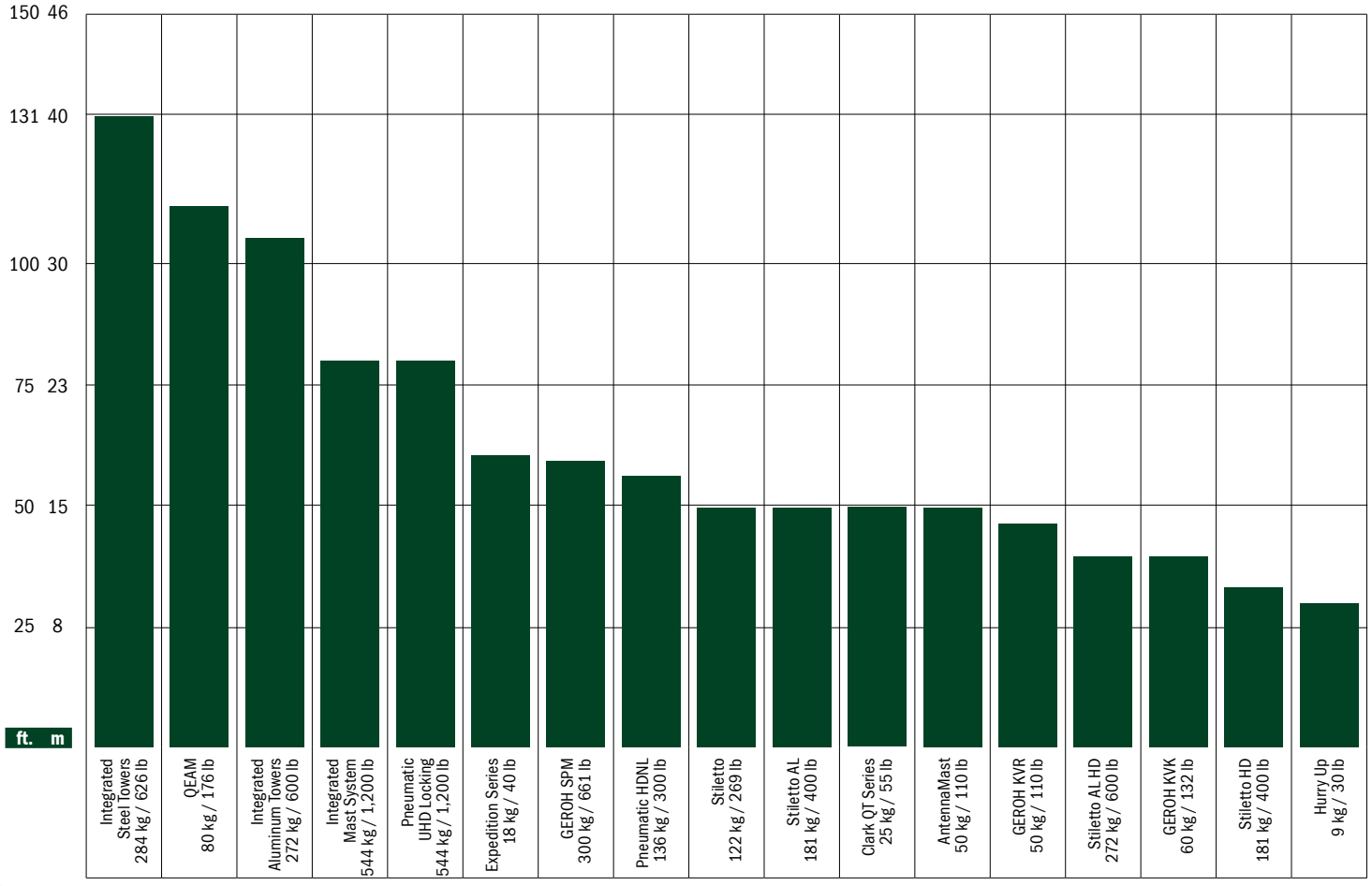
The ability of Will–Burt to deliver superior elevation solutions is attributed to its worldwide leadership in the industry for over 70 years. Teams of experienced research and development engineers, design engineers and ISO 9001:2015 quality systems certified manufacturing experts are backed by a sales and marketing support structure focused on delivering the correct customer solution on time, every time.

Whether your program requires a commercial off–the–shelf solution or a highly engineered customized product, The Will–Burt Company has the experience, design know–how and manufacturing capabilities to meet your unique requirements.

The Advantages of The Will–Burt Company

- Worldwide elevation leader since 1946
- Wide array of elevation products designed for specific missions
- MIL–STD 810 Certified Products
- ISO 9001:2015 quality certified manufacturing
- Innovative custom solutions designed by experienced engineers
- Superior customer support

Portable Telescopic Masts and Towers Height and Payload Capabilities



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Specifications are subject to change. Consult factory for latest information.

STILETTO® ELECTRO-MECHANICAL MASTS

Extended Heights up to 49.2 ft. | Payload Capacity up to 270 lb

High performance composite telescoping mast
The revolutionary Will-Burt Stiletto carbon fiber composite, electro-mechanical mast features the best combination of high strength, low weight and great stability in the industry. With its low nested height and small space claim, Stiletto is the lightweight mobile solution for applications requiring rapid automatic deployment, maximum reliability and high directional pointing accuracy.

- High pointing accuracy and low wind deflection
  - Internal keys and rigid design maintain azimuth and eliminate the need for guylines
- High weight lifting capacity
  - Greater safety and payload accommodations
- Higher strength for lighter weight
  - Lightweight carbon fiber construction driven by stainless steel electro-mechanical drive screw
- Advanced safety
  - Automatic sectional locking assures personnel and payload safety
- Low maintenance costs
  - Easy, routine field and depot maintenance
- Use in harsh environments including ice and high wind
  - Positive retraction

Stiletto®	3.0m	4.0m	6.0m	10.0m	15.0m
Extended Height (+4 in. / -0 in.) (ft. / m)	9.8 / 3.0	13.5 / 4.1	19.0 / 5.79	32.5 / 9.9	49.2 / 15.0
Nested Height (+1 in. / -0 in.) (ft. / m)	3.3 / 1.0	3.3 / 1.0	3.8 / 1.17	5.6 / 1.7	7.9 / 2.4
Payload Capacity (lb / kg)	270 / 122	250 / 113	250 / 113	250 / 113	200 / 91
Weight (Including Control Box and Cables) (lb / kg)	176 / 80	196 / 89	209 / 95	267 / 121	320 / 145
Number of Sections	5	9	9	9	9
Tube Diameter (in. / cm)	10.3 to 7.3 / 26.2 to 8.5	10.31 to 4.31 / 26.2 to 11	10.31 to 4.31 / 26.2 to 11	10.31 to 4.31 / 26.2 to 11	10.31 to 4.31 / 26.2 to 11
Survival Wind Speed (mph / km/h)	–	110 / 177	100 / 160	80 / 129	65 / 105
Deployment Wind Speed (mph / km/h)	–	50 / 80	40 / 60	34 / 55	33 / 53
Erection Time with Power (seconds)	45	60	90	162	240
Rotation Accuracy (Twist)	+/-1°	+/-1°	+/-1°	+/-1°	+/-1°
Voltage (MIL-STD 1275) (VDC)	28	28	28	28	28
Footprint (in. / cm)	11.25 x 17.63 / 28.6 x 44.8		17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5
*Typical Payload Sail Area ($ft.^2$ / m^2)	8 / .74 CD=1.5	8 / .74 CD=1.5	8 / .74 CD=1.5	8 / .74 CD=1.5	8 / .74 CD=1.5

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

Stiletto® MIL-STD-810F Qualifications	
Altitude	Sea level to 15,000 feet per MIL-STD-810F, Method 500.4
Transportation Altitude	Sea level to 15,000 feet (unpressurized) MIL-STD-810F, Method 500.4
Operating Temperature Ranges	-40°C to +55°C, MIL-STD-810F, Method 501.4 and 502.4
Storage Temperature Ranges	-40°C to +71°C, MIL-STD-810F, Method 501.4 and 500.4
Solar Radiation	Per MIL-STD-810F, Method 505.4
Rain	Per MIL-STD-810F, Method 506.4
Humidity	Per MIL-STD-810F, Method 507.4
Fungus	Per MIL-STD-810F, Method 508.4
Salt Fog	Per MIL-STD-810F, Method 509.4
Sand and Dust	Per MIL-STD-810F, Method 510.4
Icing / Freezing Rain	Per MIL-STD-810F, Method 521.2
Vibration and Shock	Per MIL-STD-810F, Method 514.5 and 516.5 (nested position)
MIL-STD-461E	CS101, CS114, CS115, CS116, RS103

STILETTO® HD ELECTRO-MECHANICAL MASTS

Extended Heights up to 32.9 ft. | Payload Capacity up to 40 lb.

MIL - STD 810 CERTIFIED

High performance composite telescoping mast
The Will-Burt Stiletto® HD offers additional benefits over the standard Stiletto® design

- Greater pointing accuracy
  - Greater strength and rigidity, lower wind deflection
- 48% lower linear deflection
- Greater lifting capacity
  - Higher load drive system capacity for heavier payloads
- Increased stability
  - Due to additional tube overlap
- Increased safety
  - Three locks on heavy-duty collars
- On-The-Move**
  - Persistent surveillance

Stiletto® HD	4.0m	6.0m	8.6m	10.0m
Extended Height (+4 in. / -0 in.) (ft. / m)	12.5 / 3.8	19.7 / 6.0	28.2 / 8.6	32.9 / 10.0
Nested Height (+1 in. / -0 in.) (ft. / m)	3.3 / 1.1	4.9 / 1.5	6.4 / 1.95	6.6 / 2.0
Payload Capacity (lb / kg)	350 / 158	400 / 181	400 / 181	400 / 181
*On-The-Move Capability		x		
Weight (Including Control Box and Cables) (lb / kg)	265 / 120	340 / 154	384 / 175	395 / 180
Number of Sections	7	9	8	9
Tube Diameter (in. / cm)	9.56 to 5.06 / 24.3 to 12.9	11.06 to 5.06 / 28.1 to 12.9	11.06 to 5.81 / 28.1 to 14.8	11.06 to 5.06 / 28.1 to 12.9
Survival Wind Speed (mph / km/h)	100 / 160	100 / 160	90 / 144	80 / 129
Deployment Wind Speed (mph / km/h)	40 / 64	40 / 64	40 / 64	40 / 64
Erection Time with Power (seconds)	20	35	50	60
Rotation Accuracy (Twist)	+/-1°	+/-1°	+/-1°	+/-1°
Voltage (MIL-STD 1275) (VDC)	28	28	28	28
Footprint (in. / cm)	15.59 x 9.71 / 39.6 x 24.7	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5
**Typical Payload Sail Area ($ft.^2$ / m^2)	11 / 1 CD=1.5	11 / 1 CD=1.5	8 / .74 CD=1.5	8 / .74 CD=1.5

*Consult factory for OTM payload capacity - 6 m HD model only.
**Consult factory for larger sail area as payload and wind capacities may be reduced.

Stiletto® HD MIL-STD-810F Qualifications	
*Altitude	Sea level to 15,000 feet per MIL-STD-810F, Method 500.4
*Transportation Altitude	Sea level to 15,000 feet (unpressurized) MIL-STD-810F, Method 500.4
Operating Temperature Ranges	40°C to +55°C, MIL-STD-810F, Method 501.4 and 502.4
Storage Temperature Ranges	-40°C to +71°C, MIL-STD-810F, Method 501.4 and 500.4
*Solar Radiation	Per MIL-STD-810F, Method 505.4
*Rain	Per MIL-STD-810F, Method 506.4
*Humidity	Per MIL-STD-810F, Method 507.4
Fungus	Per MIL-STD-810F, Method 508.4
*Salt Fog	Per MIL-STD-810F, Method 509.4
*Sand and Dust	Per MIL-STD-810F, Method 510.4
Icing / Freezing Rain	Per MIL-STD-810F, Method 521.2
MIL-STD-461E	461E, CS101, CS114, CS115, CS116, RS103, (CE102, RE102, RS101 with optional equipment)
MIL-STD-461E	CS101, CS114, CS115, CS116, RS103

*The Stiletto HD design was qualified by similarity to the standard Stiletto design

STILETTO® AL ELECTRO-MECHANICAL MAST

Extended Heights up to 49.2 ft. | Payload Capacity up to 400 lb

High accuracy electro-mechanical telescoping mast

The Stiletto® AL delivers an extremely stable and compact elevation platform for sensors and antennas that require a high degree of pointing accuracy. This high strength aluminum alloy electro-mechanical telescoping mast with patented automatic locks does not require guying and safely deploys payloads at any height. The Stiletto AL is a cost-effective elevation platform designed to meet today's stringent program requirements.

- No guying required, self-supporting mast
- Minimal mast twist
  - Energized keyway guides in accessory-ready collars
- Low wind deflection
  - Mast sections are held tight by constricting wear bands
- Quiet Operation
  - Due to additional tube overlap
- Increased safety
  - Direct-drive system powered by environmentally sealed 600 watt DC motor with manual over ride
  - Patented Quiet Locks designed for heavy payloads
- Reduced maintenance
  - Clean air filter system prevents dirt from entering the mast
  - Integrated dirt / dust wipers and ice-breakers built into collars
- Four accessory contact points on each collar
- High strength alloy construction
- Integrated PC control
- Support bracket and Universal control box included
- MIL-STD 810G certified

High Strength Alloy Construction

Quiet Locks Designed for Heavy Payloads

Energized Keyway Guides Reduce Mast Twist

Integrated Dust Wipers and Ice-Breakers

Quiet Sealed Direct-Drive System

Stiletto® AL	4.2-13	5.5-20	6.2-28	7-32	9-50
Extended Height (+4 in. / -0 in.) (ft. / m)	13.1 / 4.0	19.6 / 6.0	28.0 / 8.54	32.8 / 10.0	49.2 / 15.0
Nested Height (+1 in. / -0 in.) (ft. / m)	4.2 / 1.28	5.2 / 1.58	6.2 / 1.88	6.9 / 2.10	8.7 / 2.65
Payload Capacity (lb / kg)	400 / 181	400 / 181	400 / 181	400 / 181	350 / 158
Weight (Including Control Box and Cables) (lb / kg)	265 / 120	314 / 143	364 / 165	395 / 179	350 / 158
Number of Sections	5	6	7	7	8
Tube Diameter (in. / cm)	9.85 to 6.7 / 25 to 17	9.85 to 5.91 / 25 to 15	9.85 to 5.12 / 25 to 13	9.85 to 5.12 / 25 to 13	9.85 to 4.33 / 25 to 11
Survival Wind Speed (mph / km/h)	130 / 209	115 / 185	80 / 129	80 / 129	62 / 100
Deployment Wind Speed (mph / km/h)	40 / 64	40 / 64	35 / 56	35 / 56	30 / 48
Erection Time with Power (seconds)	Less than 35	Less than 60	Less than 100	Less than 100	Less than 150
Rotation Accuracy (Twist)	+/-1°	+/-1°	+/-1°	+/-1°	+/-1°
Voltage (MIL-STD 1275) (VDC)	28	28	28	28	28
Footprint (in. / cm)	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5	17.56 x 11.19 / 44.6 x 28.5
**Typical Payload Sail Area ($ft.^2$ / m^2)	17 / 1.58 CD=1.5	12 / 1.11 CD=1.5	11 / 1.02 CD=1.5	11 / 1.02 CD=1.5	8 / 0.74 CD=1.5

Paint option only available for base tube, all other tubes will be black anodize.
**Consult factory for larger sail area as payload and wind capacities may be reduced.

Multi–Spindle Design

Digital Control with LED Display

Internal Collars with Built–in Dust and Ice Scrapers

Direct Drive Power

STILETTO® AL HD ELECTRO–MECHANICAL MAST

Extended Heights up to 39.3 ft. | Payload Capacity up to 600 lb

The Stiletto® AL HD is designed to successfully manage the forces that today's sophisticated radar and video systems can exert on a mobile elevation system and deliver the required stability and accuracy needed for optimized data delivery. The Stiletto AL HD's multi–spindle design and internal key minimizes mast twist.

Stiletto AL HD is designed to meet the most demanding program requirements.

- Powerful lifting capacity
  - Up to 600 pounds / 272 kg
- Automatic locking at any height
  - Secure and safe
- Maximum strength deployment and retraction
  - All mast sections extend and retract in unison
- Minimal mast twist – optimized for radars
  - ±0.7°
- Low–nested height
  - Internal collars with built–in dust and ice scrapers
- Precise positioning at any height
  - Digitally controlled brushless DC motor
- Minimal maintenance
  - No belts or chains – Direct drive power
  - Ultra long–life – Multi–spindle system
  - Full tube seals prevent water intrusion
- High strength alloy construction
- No guy wires required
- Digital control with LED display
  - Accurate height readout even with loss of power
- MIL–STD 810H design

NEW

Stiletto® AL HD	4.0m	6.0m	8.54m	10.0m	12.0m
Extended Height ±50 mm / ±1.97 in. (ft. / m)	13.7 / 4.1	19.6 / 6.0	28.0 / 8.54	32.8 / 10.0	39.3 / 12.0
Nested Height ±0.6 mm / ±0.236 in. (ft. / m)	4.02 / 1.28	5.18 / 1.58	6.54 / 2.0	7.48 / 2.28	8.46 / 2.58
Payload Capacity (lb / kg)	600 / 272	600 / 272	600 / 272	600 / 272	600 / 272
Mast Weight (lb / kg)	335 / 152	391 / 178	464 / 210	490 / 222	573 / 260
Number of Sections	6	6	6	6	6
Tube Diameter Range: Base Tube – Top Tube (in. / mm)	9.85 – 5.9 / 250 – 150	9.85 – 5.9 / 250 – 150	9.85 – 5.9 / 250 – 150	9.85 – 5.9 / 250 – 150	9.85 – 5.9 / 250 – 150
*Survival Wind Speed (mph / km/h)	130 / 209	115 / 185	95 / 153	80 / 129	62 / 100
Deployment Wind Speed (mph / km/h)	40 / 64	40 / 64	40 / 64	40 / 64	40 / 64
Approximate Extension Time with Power (seconds)	<45	<65	<90	<105	<130
Rotation Accuracy (Twist)	±0.7°	±0.7°	±0.7°	±0.7°	±0.7°
Input Voltage	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC
Running Current (Max)	40 Amps	40 Amps	40 Amps	40 Amps	40 Amps
Base Footprint (in. / cm)	17.56 x 11.22 / 44.6 x 28.5	17.56 x 11.22 / 44.6 x 28.5	17.56 x 11.22 / 44.6 x 28.5	17.56 x 11.22 / 44.6 x 28.5	17.56 x 11.22 / 44.6 x 28.5
Max Deployment Angle	10°	10°	10°	10°	5°
*Typical Payload Sail Area ($ft.^2$ / m^2)	17 / 1.58	12 / 1.11	11 / 1.02	11 / 1.02	8 / 0.74

*All survival wind load payloads assume a payload center of pressure position 1m above the top of the mast and payload drag coefficient (CD) of 1.5.

GEROH SPM SUPER HEAVY-DUTY SPINDLE DRIVE MASTS

Extended Heights up to 59.1 ft. | Payload Capacity up to 661 lb

Will-Burt Germany's Family of Telescopic Spindle Masts is used by the German Army and other international forces to enhance capabilities like communication, security, surveillance, reconnaissance and detection of targets throughout the battlefield.

The GEROH Spindle Mast Systems are developed for the highest requirements in precision and heavy payloads. The spindle drive system guarantees environmental independent operation - also in extreme inclines.

The GEROH SPM Spindle Mast is developed for the highest requirements in precision and extending the heaviest of payloads. Made of high strength aluminum, the Spindle mast maintains very close tolerances and endurance from environmental extremes making it our best telescopic mast for counter-UAS, communication, surveillance, reconnaissance and target detection.

- Best rotational accuracy (twist) of all Will-Burt masts
- Designed for heavy payloads with large windsail areas
- Precision tolerances maintain azimuth and minimize deflection
- Precise pointing accuracy excellently suited for optical electronic intelligence, monitoring, and target recognition
- Designed for inside and outside vehicle installation
- Electronic and Manual Operation
- MIL-STD 810-F certified

GEROH Standard SPM	180-2 SPM 2	230-3 SPM 5	230-6 SPM 5	260-8 SPM 6	260-10 SPM 6	260-12 SPM 6	300-15 SPM 6	360-18 SPM 6
Extended Height (ft. / m)	6.9 / 2.1	9.9 / 3.0	19.7 / 6.0	26.2 / 8.0	32.8 / 10.0	39.4 / 12.0	49.2 / 15.0	59.1 / 18.0
Nested Height (ft. / m)	4.0 / 1.2	3.5 / 1.1	5.5 / 1.7	5.9 / 1.8	7.1 / 2.2	8.1 / 2.5	11.2 / 3.4	12.8 / 3.9
Payload Capacity (lb / kg)	220 / 100	661 / 300	551 / 250	55 / 250	551 / 250	551 / 250	551 / 250	551 / 250
Rotation Accuracy (Twist)	+/- 0.1°	+/- 0.4°	+/- 0.4°	+/- 0.5°	+/- 0.5°	+/- 0.5°	+/- 0.5°	+/- 0.5°
Approximate Mast Weight (lb / kg)	163 / 74	212 / 96	309 / 140	573 / 260	639 / 290	672 / 305	1,323 / 600	1,488 / 675
Base Tube Diameter (in. / cm)	7.1 / 18	9.1 / 23	9.1 / 23	10.2 / 26	10.2 / 26	10.2 / 26	14.2 / 36	14.2 / 36
Number of Sections	2	5	5	6	6	6	6	6

GEROH Low Profile SPM	280-2.5 SPM 7	280-3 SPM 7	280-4 SPM 7	280-6 SPM 7	280-8 SPM 7	280-10 SPM 7
Extended Height (ft. / m)	8.2 / 2.5	9.8 / 3.0	13.1 / 4.0	19.7 / 6.0	26.2 / 8.0	32.8 / 10.0
Nested Height (ft. / m)	2.3 / 0.70	2.5 / 0.78	3.0 / 0.92	3.9 / 1.2	4.9 / 1.49	5.8 / 1.78
Payload Capacity (lb / kg)	309 / 140	287 / 130	265 / 120	220 / 100	176 / 80	132 / 60
Rotation Accuracy (Twist)	+/- 0.6°	+/- 0.6°	+/- 0.6°	+/- 0.6°	+/- 0.6°	+/- 0.6°
Approximate Mast Weight (lb / kg)	265 / 120	353 / 160	419 / 190	485 / 220	540 / 245	639 / 290
Base Tube Diameter (in. / cm)	11.0 / 28	11.0 / 28	11.0 / 28	11.0 / 28	11.0 / 28	11.0 / 28
Number of Sections	7	7	7	7	7	7

Additional heights and payload capacities available.

HEAVY-DUTY & SUPER HEAVY-DUTY NON-LOCKING PNEUMATIC MASTS

Extended Heights up to 56.1 ft. | Payload Capacity up to 300 lb

The Will-Burt Pneumatic Heavy-Duty Non-Locking (HDNL) and Super Heavy-Duty Non-Locking (SHDNL) Masts offer a light-weight solution with a high payload lifting capacity. Our Pneumatic Non-Locking Masts also feature high pointing accuracy and long mast life for high performance and dependability. The pneumatic heavy-duty design makes it inherently safe - the payload sits on a "cushion of air" enabling it to better absorb shocks for on-the-move applications*. What's more, the Pneumatic Non-Locking Masts have controlled exhausting of air for smooth and safe retraction. Locking models are available for extended deployments.

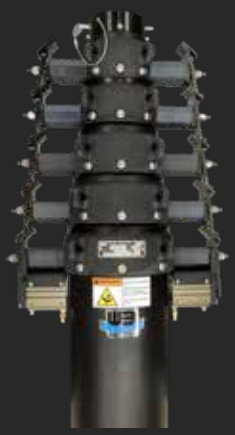
- Two full-length external keys on mast sections
  - Keys and collars maintains directional azimuth
- Low friction synthetic bearings
  - Protects mast sections and collars for smooth operation and long life
- Black Hardcoat anodized and sealed aluminum surfaces
  - Meets MIL-A-8625 Type III, Class II
  - Extends life of mast and protects against salt fog corrosion
- External Wipers
  - Protects against sand and dust
- Optional rotatable base for heavy-duty models
  - Manual directional control

Heavy-Duty	7.5m	10.0m	12.5m	15.0m	17.0m
Extended Height (ft. / m)	25.0 / 7.6	32.8 / 10.0	41.2 / 12.5	48.6 / 14.8	56.1 / 17.1
Nested Height (ft. / m)	6.0 / 1.8	6.7 / 2.0	7.3 / 2.1	8.7 / 2.7	9.6 / 2.9
Payload Capacity (lb / kg)*	200 / 91	300 / 136	200 / 91	300 / 136	300 / 136
Approximate Mast Weight (lb / kg)	110 / 50	200 / 91	235 / 107	275 / 125	296 / 135
Tube Diameter (in. / cm)	6.75 – 3.00 / 171 – 76	9.00 – 3.75 / 229 – 95	9.00 – 3.00 / 229 – 76	9.00 – 3.75 / 229 – 95	9.00 – 3.75 / 229 – 95
Maximum Operating Pressure	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)

Super Heavy-Duty	10.0m	12.0m
Extended Height (ft. / m)	32.8 / 10.0	39.4 / 12.0
Nested Height (ft. / m)	8.0 / 2.5	9.3 / 2.8
Payload Capacity (lb / kg)*	980 / 445	680 / 308
Approximate Mast Weight (lb / kg)	375 / 170	430 / 195
Tube Diameter (in. / cm)	11.25 – 6.75 / 285 – 171	11.25 – 6.00 / 285 – 152
Maximum Operating Pressure	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)

SURVEILLANCE | COMMUNICATIONS

Available with
Remote locking collars –
Improve safety for higher mast heights



HEAVY–DUTY & SUPER HEAVY–DUTY LOCKING PNEUMATIC MASTS

Extended Heights up to 98.4 ft. / Payload Capacity up to 530 lb

Will Burt's locking pneumatic masts are ideal for military communications, elevated testing and mobile radar applications. When a mast deployment is needed for extended periods, locking collars allow the mast to remain extended indefinitely without air pressure. Guying is optional on Vehicle–mounted heavy–duty locking (HDL) models up to 60 ft. / 18.0 Commercial–off–the–shelf (COTS) heavy–duty models are available. Super heavy–duty locking (SHDL) and ultra heavy–duty locking (UHDL) models feature greater unguyed heights and larger payload capacities. Standard models are shown below. Custom height and payload capacities are available upon request.

- Two full–length external keys on mast sections
  - Keys and collars maintain directional azimuth
- Low friction synthetic bearings
  - Protects mast sections and collars for smooth operation and long life
- Mechanical locking collars
  - Supports high guying forces
- Black Hardcoat anodized and sealed aluminum surfaces
  - Meets MIL–A–8625 Type III, Class II
  - Extends life of mast and protects against salt fog corrosion
- External Wipers
  - Protects against sand and dust
- Ruggedized Options
  - Optional finishes and features for military applications
- Optional Reversible Lock Mechanism
  - Easily convert a locking mast to function as a non–locking mast and back again. Must be requested at time of mast build.

Heavy-Duty	10.0m	12.5m	15.0m	18.0m
Extended Height (ft. / m)	32.8 / 10.0	41.0 / 12.5	49.2 / 15.0	59.1 / 18.0
Nested Height (ft. / m)	7.5 / 2.3	7.5 / 2.3	8.0 / 2.5	10.4 / 3.2
Payload Capacity (lb / kg)*	200 / 91	200 / 91	200 / 91	300 / 136
Approximate Mast Weight (lb / kg)	125 / 57	235 / 107	240 / 109	330 / 150
Tube Diameter (in. / cm)	6.75–3.00 / 171–76	9.00–3.00 / 229–76	9.00–3.00 / 229–76	9.00–3.75 / 229–95
Maximum Operating Pressure	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)

Heavy-Duty	15.0m	18.0m	23.0m	30.0m
Extended Height (ft. / m)	49.2 / 15.0	59.1 / 18.0	76.0 / 23.2	98.4 / 30.0
Nested Height (ft. / m)	9.2 / 2.8	10.5 / 3.2	11.1 / 3.4	15.4 / 4.7
Payload Capacity (lb / kg)*	530 / 240	530 / 240	300 / 136	530 / 240
Approximate Mast Weight (lb / kg)	450 / 205	500 / 227	549 / 249	790 / 361
Tube Diameter (in. / cm)	11.25–5.25 / 288–135	11.25–5.25 / 288–135	11.25–3.75 / 288–96	11.25 – 5.25 / 288–135
Maximum Operating Pressure	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)

Pneumatic HD Locking Mast Qualifications	
Solar Radiation	Per MIL-STD-810E, Method 505.3
Rain	Per MIL-STD-810E, Method 506.3
Humidity	Per MIL-STD-810E, Method 507.3
Salt Fog	Per MIL-STD-810E, Method 509.3
Sand and Dust	Per MIL-STD-810E, Method 510.3

The Pneumatic SHD and Pneumatic Non-Locking HD and SHD masts are qualified by similarity to the Pneumatic HD locking mast design.

ULTRA HEAVY-DUTY LOCKING PNEUMATIC MASTS

Extended Heights up to 80 ft. | Payload Capacity up to 1,200 lb

Higher payload capacity with shorter nested height.

The Ultra Heavy-Duty Pneumatic Mast with Locking Collars delivers an unparalleled combination of strength and rigidity in a design that delivers the performance of a hydraulic mast at less weight and without the need for environmentally dangerous fluids.

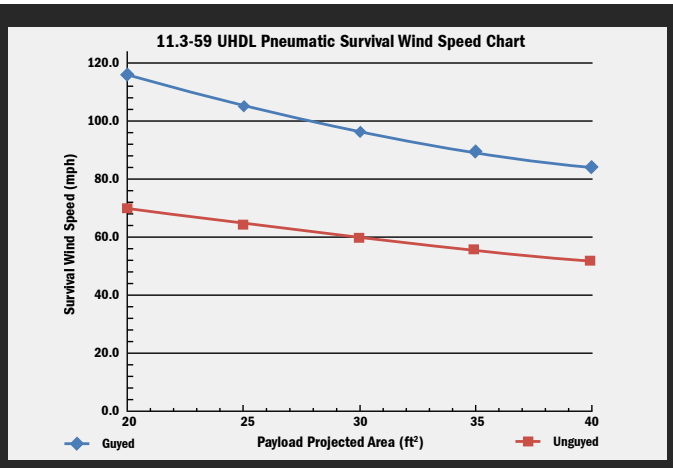
The Ultra Heavy-Duty mast was specifically designed for mobile communications providing better unguyed performance at lower nested heights - eliminating the need for an expensive tilt system.

- Strong
  - Elevates heavier loads with greater wind sail area
  - Greater unguyed performance
- Fast & Efficient
  - Lower nested height eliminates the need for costly and complicated tilt systems
  - Easier to deploy in urban areas
  - Safe long-term deployment with easy to operate positive locking pins
- Reliable
  - 5 year manufacturer warranty
  - No maintenance required
  - No hydraulic fluid concerns

Ultra Heavy-Duty	8-39	11.3-59	9.8-65.6	13-70	14.4-80
Extended Height (ft. / m)	39.3 / 12.0	59.1 / 18.0	65.6 / 20.0	69.9 / 21.3	79.7 / 24.3
Nested Height (ft. / m)	7.8 / 2.4	11.3 / 3.4	9.8 / 3.0	13.1 / 4.0	14.4 / 4.4
Payload Capacity (lb / kg)*	980 / 444	1,200 / 544	530 / 240	1,200 / 544	1,200 / 544
Approx. Mast Weight (lb / kg)	607 / 275	814 / 369	852 / 387	920 / 417	1,078 / 489
Number of Sections	8	7	10	7	7
Tube Diameter (in. / cm)	13.50-6.75 / 34.29-17.15	13.50-7.50 / 34.29-19.05	13.50-5.25 / 34.29-13.34	13.50-7.50 / 34.29-19.05	13.50-7.50 / 34.29-19.05
Collar Type	Locking with Super Pins				
Max. Operating Pressure	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)	35 PSIG (2.4 bar)

*Capacity will be affected by wind sail area. Consult factory.

Available with Remote Locking Collars – Improve safety for higher mast heights



Locks and Controls Included

Unlocked Pneumatic Actuator

Optional Handheld Controller

Locked Pneumatic Actuator

Control Box Included

REMOTE LOCKING SYSTEM

Available for Locking Pneumatic Mast Systems up to 80 ft. / 24m

Will–Burt's Remote Locking System for locking pneumatic masts allows an operator to lock and unlock the mast from an assured distance. No manual interaction is required to raise or lower the mast. Operation of the system is intuitive, requiring less training and reducing the risk of operator error. The Remote Locking System is available on any Heavy–Duty locking mast system or larger up to 24m / 80 ft.

System includes locks and control system. Available for mast tube sizes from 13.5 in. (343 mm) to 3 in. (76 mm).

- Ability to stand clear from payload during deployment and retraction
- Easy to understand and operate control
- Super pins for longer lock life and increased wind survival speed in guyed applications
- Close azimuth design and two full–length keys on every mast section reduces mast movement and twist
- No routine maintenance required
- Pneumatic operation requires no fluids
- Control Box included
- Optional Handheld Controller

Safety

Provides a hands-free elevation system to ensure heavy payloads can be raised safely.

Efficiency

Designed for longer deployments, mast can be extended indefinitely without air pressure.

Accuracy

Full-length mast key design reduces mast movement and twist for pinpoint accuracy.

Convenience

With hands-off control, the mast can be operated from a distance. No manual interaction needed.

As the need to safely elevate heavy payloads remains steady and the demand to save time is never-ending, the Remote Locking System for Pneumatic Masts has become a much-needed solution for short-term and extended applications.

PNEUMATIC SYSTEMS

Will–Burt offers a variety of low–maintenance pneumatic systems and hand pumps, all specifically designed for optimal performance for use with Will–Burt Telescoping Masts.

Each system is shipped completely assembled, tested and factory preset.

AC Models

AC Models

Optional HandHeld Remote

WB 135 AC/DC Models

WB 280 AC/DC Models

AC Models	WB135	WB135	WB280	WB280			
Part Number	**5766701**	**5857701**	**5802201 / 5766301**	**5802301**	**902404**	**903193**	**912361**
Mast Application	Standard Duty		Heavy / Super / Ultra Duty				
Voltage	110VAC 60Hz	220VAC 50Hz	110VAC 60Hz	220VAC 50Hz	110VAC / 60Hz	220VAC 50Hz	220VAC 60Hz
CFM	4.7	4.7	9.8	9.8	4.4	2.01	4.4
Ltr / Min	135	135	280	280	125	57	101
Operating Temperature (°F / °C)	14 to 131 / –10 to 55	14 to 131 / –10 to 55	14 to 131 / –10 to 55	14 to 131 / –10 to 55	50 to 104 / 10 to 40	–4 to 131 / –20 to 55	50 to 104 / 10 to 40
Protective Enclosure	x	x	x	x			
Cooling Fan					x	x	x
Air Hose with Fittings	x	x	x	x	x	x	x
Pressure Gauge	x	x	x	x	x	x	x
Pressure Switch	20 ±2 psi	20 ±2 psi	35 ±2 psi	35 ±2 psi	32 ±2 psi	32 ±2 psi	32 ±2 psi
Current Draw	7 amps	3.5 amps	14 amps	7 amps	10.6 amps	4.1 amps	5.3 amps
Weight (lb / kg)	55 / 25	55 / 25	62 / 28	62 / 28	45 / 20	55 / 25	45 / 20
Dimensions (L x W x H) (in. / mm)	15.2 x 10.1 x 15 / 385 x 255 x 380		16.6 x 11.7 x 15.1 / 420 x 295 x 380		18.33 x 11.61 x 8.91 / 466 x 295 x 227	16.4 x 12.6 x 9.0 / 417 x 320 x 229	18.33 x 11.61 x 8.91 / 466 x 295 x 227

DC Models	WB135	WB135	WB135	WB135
Part Number	**5857801**	**5857901**	**5766801**	**5766901**
Mast Application	Standard Duty		Heavy / Super / Ultra Duty	
Voltage	12	24	12	24
CFM	4.7	4.7	4.7	4.7
Ltr / Min	135	135	135	135
Operating Temperature (°F / °C)	14 to 131 / –10 to 55	14 to 131 / –10 to 55	14 to 131 / –10 to 55	14 to 131 / –10 to 55
Protective Enclosure	x	x	x	x
Cooling Fan				
Air Hose with Fittings	x	x	x	x
Pressure Gauge	x	x	x	x
Pressure Switch	20 ±2 psi	20 ±2 psi	35 ±2 psi	35 ±2 psi
Current Draw	65 amps	32 amps	65 amps	32 amps
Weight (lb / kg)	55 / 25	55 / 25	55 / 25	55 / 25
Dimensions (L x W x H) (in. / mm)	15.2 x 10.1 x 15.2 / 385 x 255 x 385	15.2 x 10.1 x 15.2 / 385 x 255 x 385	15.2 x 10.1 x 15.2 / 385 x 255 x 385	15.2 x 10.1 x 15.2 / 385 x 255 x 385

NYCOIL® COILED CONDUIT

Will–Burt Cable Management accessories keep cables in place to protect data and power cables.

NYCOIL® is a coiled conduit used to house wiring, antenna coax and positioner cable that is too large to fit inside a non–locking mast. NYCOIL® easily fits around the mast and extends neatly and compactly retracts when the mast is nested.

A variety of sizes is available from 0.5 in. / 1.27 cm to 1.25 in. / 3.2 cm in diameter with lengths available up to 100 ft. / 30m.

- Compactly retracts when mast is stowed
- Easily fits around non–locking collar telescoping mast
- Extends neatly with mast

CABLE MANAGEMENT

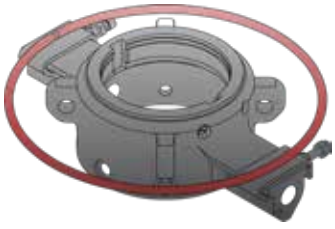
Nycoil Coiled Conduit | Cable Guide Rings

CABLE GUIDE RINGS

Will–Burt offers Cable Guide Ring Kits for locking pneumatic masts to keep power and data cables in place. Full Circle Kits are recommended for masts with trip lines and Half Circle kits are recommended for masts with yokes & t–handles.

Will–Burt also offers design solutions for standard off the shelf, custom mounting, and integration hardware.

Unhinged Full Circle Cable Ring



Full Circle Cable Ring

Half Circle Cable Ring

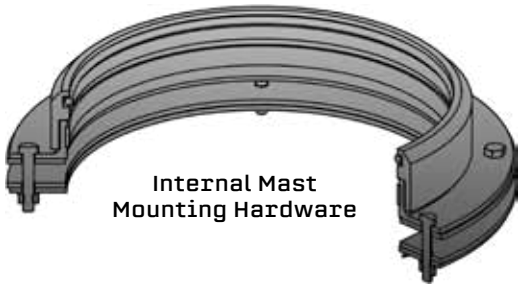
SUPPORT BRACKETS

Will–Burt provides standard internal mounting and optional external mounting for pneumatic telescoping masts.

Internal Mounting Hardware: Mounting through the vehicle's roof.

External Mounting Hardware: Mounting to the outside of a vehicle.

Will–burt also offers standard off the shelf and custom mounting and integration hardware and design solutions.



Internal Mast Mounting Hardware

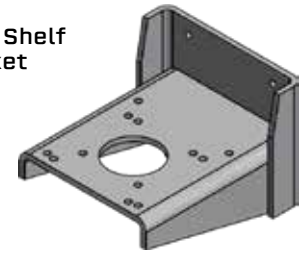
External Mast Mounting Hardware

MOUNTING HARDWARE

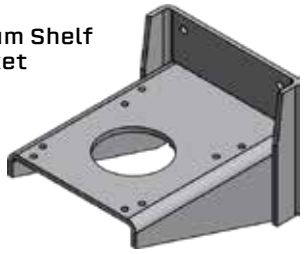
Support Brackets | Shelf Brackets | Base Plates

SHELF BRACKETS

Small Shelf Bracket



Medium Shelf Bracket



BASE PLATES (Required for all pneumatic masts)

11.25" Rotatable Base Plate

Turning Handle

Rotatable Base Plate

Non–Rotatable Base Plate

PAYLOAD ADAPTERS

6" Square – 4 Hole
Platform for 3" Tube

8" x 4½"
Square Platform

13" x 4½"
Round Platform

Payload Adapter on RLS Mast

Guying Platform for
Remote Locking System

6" Square Platform
for 3" Tube

3" Antenna Stub for Heavy Duty Mast

MOUNTING HARDWARE

Payload Adapters | Guy Kits

GUY KITS (for locking masts only)

Kevlar
Guy Kit

Stainless Steel
Guy Kit

Screw
Anchor

GEROH KVK NON–LOCKING HEAVY–DUTY CABLE–DRIVE MASTS

Extended Heights up to 39 ft. | Payload Capacity up to 132 lb

The GEROH KVK Non–locking mast is a lightweight and robust mobile elevation solution, ensuring superior stability, reliability, and longevity. The KVK is available with manual crank deployment or motorized operation. The GEROH KVK is in use in defense applications such as communications, surveillance, and missile defense systems. Designed for deployment on vehicles, trailers, and shelters, they feature precision–engineered mast profiles for accurate positioning.

Equipped with two strong internal cables, powered by either a manual winch or an electric motor, these masts are protected from environmental elements. They can operate seamlessly in extreme temperatures ranging from –25°F / –32°C to +111°F / +44°C, ensuring reliable performance even in harsh conditions.

- Payloads up to 132 lb (60 kg)
- Heights up to 39 ft. (12m)
- Deploy to any height.
- Precision machined sections and collars
  - Maintain accurate pointing
- Powerful dual internal cable drive system
  - Powered deployment and retraction in extreme environments
- Available as manual crank, analog motor, or digital motor
- Designed for trailer, shelter, or vehicle deployment.
- MIL–STD 810 – F / G qualified

KVK (Non-locking)	120 – 2.5 KVK 3	120 – 4 KVK 4	145 – 6 KVK 4	145 – 8 KVK 5	170 – 10 KVK 5	170 – 12 KVK 6
Extended Height (ft. / m)	8.2 / 2.5	13.1 / 4	19.7 / 6	26.2 / 8	32.8 / 10	39.3 / 12
Nested Height (ft. / m)	3.5 / 1.14	4.3 / 1.34	6.3 / 1.9	6.9 / 2.1	8.2 / 2.5	8.2 / 2.5
Payload Capacity (lb / kg)	132 / 60	99 / 45	132 / 60	99 / 45	110 / 50	88 / 40
Approximate Mast Weight (lb / kg)	62 / 28	78 / 35	122 / 55	139 / 63	183 / 83	194 / 88
Number of Sections	3	4	4	5	5	6

GEROH KVK MIL-STD-810F Qualifications	
High Temperature Operation (+44° C)	MIL-STD-810G, Method 501.5, Procedure II
Low Temperature Operation (-32° C)	MIL-STD-810G, Method 502.5, Procedure II
High Temperature Storage (+63° C)	MIL-STD-810G, Method 501.5, Procedure I
Low Temperature Storage (-51° C)	MIL-STD-810G, Method 502.5, Procedure II
Humidity	MIL-STD-810G, Method 507.5, Procedure II (Aggravated cycle Figure 507.5-7, %95 uncondensed humidity)
Vibration	MIL-STD-810G, Method 507.5, Procedure II (Aggravated cycle Figure 507.5-7, %95 uncondensed humidity)
	MIL-STD-810G, Method 514.6, Procedure I, Category 20, Table 514.6C-VI, Figure 514.6C-3 (composite wheeled vehicle)
	MIL-STD-810G, Method 514.6, Procedure I, Category 8 (Aircraft-Propeller), Figure 514.6C-7
Shock	MIL-STD-810G, Method 516.6, Procedure I – Functional Shock, according to Table 516.6-II, 20g 11ms sawtooth (terminal)
Low Pressure	MIL-STD-810G, Method 500.5, Procedure II (3000m,-4.5° and 4572 m), Rapid decompression Procedure III
Solar Radiation	MIL-STD-810G, Method 505.5, Procedure II
Sand/Dust	MIL-STD-810G Method 510.5, Procedure I & II
Icing	MIL-STD-810G, Method 521.3, Procedure I (Ice thickness: 13mm)
EMI	MIL-STD 461F: CS101, CS114, CS115, CS116, RS103
Hazardous Chemicals	MIL STD 810 F Method 504.1
Salt Fog	MIL-STD 810F Method 509.4
Rain	MIL-STD-810G, Method 506.5, Procedure I

Additional sizes available. Specifications are for reference only and are subject to change. Please contact Will-Burt for current and exact specifications. In addition to its masts, Will-Burt Germany also engineers and manufactures its own line of specialty single and double-axle military trailers, designed for maximum mobility with high payload capability and low curb weight.

GEROH KVR LOCKING HEAVY-DUTY CABLE-DRIVE MASTS

Extended Heights up to 45.0 ft. | Payload Capacity up to 110 lb

The GEROH KVR locking mast is a lightweight and robust mobile elevation solution, ensuring superior stability, reliability, and longevity. The KVR is available with manual crank deployment or motorized operation. The GEROH KVR is in use in defense applications such as communications, surveillance, and missile defense systems. Designed for deployment on vehicles, trailers, and shelters, they feature precision-engineered mast profiles for accurate positioning.

The internal, sectional locks maintain height regardless of the elements and allows for the mast to be guyed.

Equipped with two strong internal cables, powered by either a manual winch or an electric motor, these masts are protected from environmental elements. They can operate seamlessly in extreme temperatures ranging from -25°F / -32°C to +111°F / +44°C, ensuring reliable performance even in harsh conditions.

- Payloads up to 110 lb (50 kg)
- Heights up to 45 ft. (14m)
- Deploy to any height.
- Automatic internal sectional locks engage when section is fully deployed
  - Long-term deployment and guy line capable
- Precision machined sections and collars
  - Maintain accurate pointing
- Powerful dual internal cable drive system
  - Powered deployment and retraction in extreme environments
- Available as manual crank, analog motor, or digital motor
- Designed for trailer, shelter, or vehicle deployment
- MIL-STD 810 - F / G qualified

Photo: Diehl Defense GMBH & CO. KG

KVR (Locking)	145 – 8 KVR 5	145 – 10 KVR 5	145 – 12 KVR 5	170 – 8 KVR 5	170 – 10 KVR 5
Extended Height (ft. / m)	26 / 8	32 / 10	39 / 12	26 / 8	32 / 10
Nested Height (ft. / m)	7.2 / 2.2	8.5 / 2.6	9.9 / 3.0	7.2 / 2.2	8.5 / 2.6
Payload Capacity (lb / kg)	110 / 50	99 / 45	88 / 40	110 / 50	110 / 50
Approximate Mast Weight (lb / kg)	148 / 67	163 / 74	176 / 80	181 / 82	201 / 91
Number of Sections	5	5	5	5	5

KVR (Locking) (cont.)	170 – 12 KVR 5	170 – 14 KVR 5	170 – 8 KVR 6	170 – 10 KVR 6	170 – 12 KVR 6	170 – 14 KVR 6
Extended Height (ft. / m)	39 / 12	45 / 14	26 / 8	32 / 10	39 / 12	45 / 14
Nested Height (ft. / m)	9.9 / 3.0	11.2 / 3.4	6.6 / 2.0	7.6 / 2.3	8.9 / 2.7	9.9 / 3.0
Payload Capacity (lb / kg)	99 / 45	88 / 40	110 / 50	99 / 45	88 / 40	88 / 40
Approximate Mast Weight (lb / kg)	220 / 100	240 / 109	176 / 80	194 / 88	212 / 96	229 / 104
Number of Sections	5	5	6	6	6	6

Additional sizes available. Specifications are for reference only and are subject to change. Please contact Will-Burt for current and exact specifications. In addition to its masts, Will-Burt Germany also engineers and manufactures its own line of specialty single and double-axle military trailers, designed for maximum mobility with high payload capability and low curb weight.

CONTINUOUS ROTATION POSITIONIT®

PI-35 CR

PI-75 CR

PI-150 CR

POSITIONIT CONTINUOUS ROTATION PAN AND TILT POSITIONERS

for Mobile Applications

The PositionIt range of pan and tilt positioners are now available with **Continuous Rotation** panning operation. All PositionIt models include improved, next-generation control electronics and software while retaining the rugged reliability of the original PositionIt range. The updated PositionIt series is fully backwards compatible regarding connection points, electronics, and software with the previous generation. Improved motor control is assured with higher resolution speed control, slower minimum speeds, and user adjustable minimum speeds and speed ramps. The GUI for configuring and commissioning allows users to set and adjust many features that were originally factory set only. It also boasts many features such as the ability to receive positional feedback, set home position and limit stops and fault diagnostics.

- Designed, manufactured, and tested to excel in mobile applications
  - Hardened metal gears
  - MIL-STD 810 certified by independent laboratory
- Strong, lightweight construction
  - Die-cast aluminum housing
  - Stainless steel fasteners
- Regenerative Braking
  - On motor shaft
- New Graphical User Interface (GUI)
  - Greater level of control with user set features
  - Faster set-up
  - Positional feedback
- More precise than ever
  - Higher level of motor control
  - Greater positional accuracy
- Flexible Connection
  - Bottom or side
- Universal mounting plate
  - Suitable for most common payloads
- Pelco-D over RS-485 Communications
- Weather-proof
  - IP 68 Rated
- Long Operational Life
- Backwards compatible
- 2 Year warranty

POSITIONIT®

PI-12

PI-35

PI-75

PI-150

POSITIONIT PAN AND TILT POSITIONERS

for Mobile Applications

MIL - STD 810 CERTIFIED

PositionIt	PI-12	PI-35	PI-75	PI-150
Payload Capacity* (ft lb / Nm)	12 / 6	35 / 47	75 / 101	150 / 202
Overall Height (in. / mm)	8.9 / 225	9.7 / 246	11.32 / 287.7	11.32 / 287.7
Overall Width (in. / mm)	9.9 / 252	10.8 / 273	9.21 / 234	12.4 / 314
Overall Depth (in. / mm)	3.9 / 100	5.7 / 144	6.8 / 171	6.8 / 171
Weight (lb. / kg)	10 / 5	20 / 9	35 / 16	37 / 17
Operating Temperature (°F / °C)	-40 to 140 / -40 to 60	-40 to 140 / -40 to 60	-40 to 140 / -40 to 60	-40 to 140 / -40 to 60
IP Rating	IP68 – Waterproof	IP68 – Waterproof	IP68 – Waterproof	IP68 – Waterproof
Pan Axis	400° (± 200°)	400° (± 200°)	400° (± 200°)	400° (± 200°)
Pan Speed (proportional) (per second)	1 to 6°	1° to 12°	0.02° to 6.5°	0.02° to 6.5°
Tilt Axis	180° (± 90°)	180° (± 90°)	180° (± 90°)	180° (± 90°)
Tilt Speed (proportional) (per second)	1 to 6°	1° to 12°	0.02 to 5.5°	0.02 to 5.5°
Backlash	≤ 0.15°	≤ 0.15°	≤ 0.15°	≤ 0.15°
Repeatability	≤ 0.3°	≤ 0.3°	≤ 0.3°	≤ 0.3°
Maximum Continuous Power	44 W	44 W	44 W	44 W
Maximum Running Current	1.85 amps	1.85 amps	1.85 amps	1.85 amps
Input Voltage	24 VDC – Converters available for 12 VDC and AC power sources			

PositionIt Continuous Rotation	PI-35 CR	PI-75 CR	PI-150 CR
Payload Capacity* (ft lb / Nm)	35 / 47.45	75 / 101.68	150 / 203.37
Overall Height (in. / mm)	13.4 / 341	15.1 / 383.1	15.2 / 385.1
Overall Width (in. / mm)	10.7 / 273	11.3 / 287.02	14.6 / 370.84
Overall Depth (in. / mm)	6.1 / 154.9	7.19 / 182.67	7.19 / 182.67
Weight (lb. / kg)	25.57 / 11.6	41.45 / 18.8	46.52 / 21.1
Operating Temperature (°F / °C)	-40 to 140 / -40 to 60	-40 to 140 / -40 to 60	-40 to 140 / -40 to 60
Pan Degrees of Rotation (Continuous)	0° to 360°	0° to 360°	0° to 360°
Tilt Degrees of Rotation	+90° / -90°	+90° / -90°	+90° / -90°
Pan Speed (Proportional) (per second)	12°	6.5°	6.5°
Tilt Speed (Proportional) (per second)	12°	5.5°	5.5°
Backlash	≤ 0.15°	≤ 0.15°	≤ 0.15°
Repeatability	≤ 0.3°	≤ 0.3°	≤ 0.3°
Maximum Continuous Power	44 W	44 W	44 W
Maximum Continuous Current	1.85 amps	1.85 amps	1.85 amps
Input Voltage	24 VDC	24 VDC	24 VDC
Protocol	Pelco D used (Pelco P available)		
Ingress Protection Rating	IP68	IP68	IP68
Baud Rate	2,400 bps (Other Baud Rates Available)		

*Capacity measured at 12 inches or less from the tilt axis.
Dimensions and weights are for reference only and are subject to change. Contact Will-Burt for current engineering specifications.

Pin-Out & Flying Lead Assignment

Pin No.	Wire Identification / Color	Assignment	Maximum Current
A	N/A	N/A	N/A
B	Red	+ ve	3 A
C	Black	- ve	3 A
D	Green	Ground	1 A (24 AWG)
E	White/Brown	AUX Data	1 A (24 AWG)
F	Brown	AUX Data	1 A (24 AWG)
G	White/Yellow	Data B	N/A
H	Yellow	Data A	N/A
J	White/Blue	AUX Data	1 A (24 AWG)
K	N/A	N/A	N/A
L	COAX (RG179)	COAX (RG179-75 Ohm)	N/A
M	Blue	AUX Data	1 A (24 AWG)

Cable Assembly Specification

Connector Type	Circular Connector, 12 Way
Cable Type	10 Core Composite Cable
Voltage Rating	24v
Max Current Rating	3A
Temperature Range (°F / °C)	-40 to +80
Ingress Protection	IP68 Connector

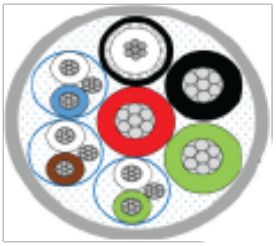
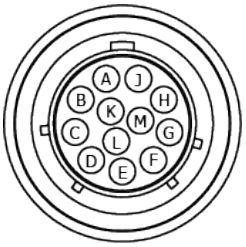


Image to show twisted pair data cables for clarity with pin-out table



Connector Face

HANDHELD CONTROLLER

The Pelco-D compatible handheld controller with LED screen has all of the features necessary to optimize the performance of the PositionIt positioner. The precision 4D joystick controller flawlessly controls the pan and tilt functions. Includes LED screen, keyboard and programmable presets that simplify operation. The positioner handheld controller can also be optionally used in conjunction with the pan and tilt positioner controller.

Input Voltage	12V DC
Communication Interface	RS485
Operating Temperature (°F / °C)	15 – 131 / 0 – 55
Dimensions (L x W x H) (in. / mm)	6.2 x 5.9 x 4.2 / 458 x 150 x 107

POSITIONIT CONTROLLERS

Handheld Controller | Rack Mount Controller

RACK MOUNT CONTROLLER

The 19-inch (2U) Rack Mount Positioner Controller from Will-Burt is loaded with new features. You will always know the status of the positioner with real-time positional, speed, and status feedback. Control multiple positioners and third-party equipment with a single controller. This controller is optimized for positioners with stow and deploy buttons located on the front panel.

The latest Positioner Controller from Will-Burt will simplify deployment and operation of communications and video equipment.

- LCD Home Screen displays real-time positioner information
- LCD Selector Menu provides additional control functionality
- Control third-party equipment through (7) digital discrete outputs with USB and RS-485 inputs
- Control multiple positioners in single system through address selection
- Positioner control with front panel directional push buttons and configurable 'Stow' & 'Unstow' presets
- Pelco-D over RS-485 half-duplex output to positioner
- 100-240VAC input voltage with 24VDC output voltage to positioner

Input Voltage	100-240VAC
Output Voltage	24VDC
Communication Interface	Pelco-D over RS-485 half-duplex at 2400 bps
Operating Temperature (°F / °C	32 to 122 / 0 to 50
Dimensions (in. / cm)	19 x 3.5 x 11.7 / 48.26 x 8.81 x 29
Weight (lb. / kg)	6.6 / 3

STRAP DRIVE

The Strap Driven QEAM uses an internal strap wound between tube sections for mast elevation. Designed for manual operation, The Strap Drive QEAM has heavier payload weight-lifting capability, and is available in 21, 25, 30 and 34 meter heights.

- Maintains azimuth – minimal twist deflection
  - Reliable full-length external keyways
- Positions payload at any height
  - Automatic locking collars – patented latch system
- Manual mechanical drive
  - Reliable deployment without power
- Automatic locking collars
  - Locks at any desired height with patented latch mechanism
- Mechanical stops
- Prevents over-extension
- Full length keys on sections
  - Prevents twist
- Maintenance free
  - Polymer drive nuts require no greasing
- Built in cable management
  - Cable loops added at collars
- Corrosion resistant
  - All parts are anodized aluminum & stainless steel
  - Drive crank is a completely sealed mechanism

QUICK ERECTING ANTENNA MAST (QEAM)

Extended Heights up to 112 ft. | Payload Capacity up to 180 lb

SCREW DRIVE

Designed for manual or motorized operation, Will-Burt's QEAM (Quick Erecting Antenna Mast) Family of lightweight composite or aluminum masts elevate light payloads for ground-mounted or vehicle, trailer and shelter deployment.

Will-Burt's Screw Drive QEAM is a lightweight, high strength telescopic mast that offers a rigid, stable platform for elevating critical payloads.

- Easy manual crank up
  - Reliable deployment without power
- Automatic locking collars
  - Locks at any desired height
  - Patented latch mechanism
- Standard ground mounting kits with guylines and transport bag included
- Optional vehicle and shelter mounting kits available

QEAM Models	TM 10 (Aluminum)	TM 21	TM 25	TM 30	TM 34
Extended Height (ft. / m)	32.8 / 10	68.9 / 21	82 / 25	98.4 / 30	112 / 34
Nested Height (ft. / m)	8 / 2.4	14.6 / 4.45	14.8 / 4.5	19.3 / 5.9	19 / 5.8
Payload Capacity (lb / kg)	15 / 7	180 / 80	150 / 68	150 / 68	110 / 50
Weight (Mast Only) (lb / kg)	42 / 19	197 / 90	220 / 100	250 / 114	265 / 121
Weight (Accessory Kit) (lb / kg)	52 / 24	245 / 111	275 / 125	275 / 125	275 / 125
Number of Sections	5	6	7	6	7
Guying	2 level / 3 way	4 level / 4 way	5 level / 4 way	5 level / 4 way	5 level / 4 way
Ice load (in. / mm)	0.5 / 12	0.5 / 12	0.5 / 12	0.5 / 12	0.5 / 12
Maximum Erection Wind* (mph / km/h)	25 / 40	25 / 40	25 / 40	25 / 40	25 / 40
Operational Wind (mph / km/h)	60 / 97	60 / 97	60 / 97	60 / 97	60 / 97
Survival Wind (mph / km/h)	80 / 128	80 / 128	80 / 128	80 / 128	80 / 128
Surface Mounting	±15° slope	±15° slope	±15° slope	±15° slope	±15° slope
Deployment Time	2 persons, 7.5 min	3 persons, 25 min	3 persons, 30 min	3 persons, 30 min	3 persons, 30 min
Drive System	Screw Drive	Strap Drive	Strap Drive	Strap Drive	Strap Drive
Maximum Sail Area ($ft.^2$ / m^2)	6 / 0.6 CD=1.5	6 / 0.6 CD=1.5	6 / 0.6 CD=1.5	6 / 0.6 CD=1.5	6 / 0.6 CD=1.5
Finish	CARC Green	MIL-A-8625 Type II, CL 2 Black	MIL-A-8625 Type II, CL 2 Black	MIL-A-8625 Type II, CL 2 Black	MIL-A-8625 Type II, CL 2 Black

Please contact Will-Burt Engineering for current and exact specifications. *Must be guyed for wind speeds over 25 mph / 40km/h

CLARK SERIES QT PNEUMATIC MASTS

Extended Heights up to 49.2 ft. | Payload Capacity up to 49.6 lb

The QT Range of lightweight telescopic pneumatic masts are designed to be portable and erected quickly where they are required. Available in a wide range of heights from 3m to 15m and in a range of sizes to suit varying payloads. It is a highly versatile system capable of being field mounted using a folding tripod stand. Equally at home when mounted to a vehicle or shelter, the QT Range is designed to be versatile. Made from high strength 16 swg aluminum tube, to save weight, the QT Range is non-keyed, allowing for easy payload pointing and each section is fitted with a locking collar. Payloads are quickly attached using the quick clamp 24mm socket with a variety of available payload adapters.

- Heights up to 49.2 ft (15m)
- Payloads up to 49.6 lb (22.5 kg)
- Aluminum alloy sections
- Handpump
- Mounting Studs M8
- Water drain plug
- Air release screw
- Section locks
- Guy collar
- Quick clamp (24mm) for payloads
- Field / Vehicle / Shelter Deployment
- Wide variety of accessories available
- Dry operating temperatures
  - -40°F to 131°F (-40°C to 55°C)

All MK VI tripods can either be stored vertically or horizontally and suitable for non-rotatable masts up to 15 meters.

Additionally, a tripod mounting bracket is available for all QT models, allowing the mast to be fixed onto a wall, vehicle, or shelter. A ground, vehicle, or shelter tripod is equipped with a locking block which enables the user to attach this tripod to the tripod mounting bracket for compact vertical storage, with or without the mast.

A full range of interchangeable accessories and payload adaptors are available for the Clark QT Series Pneumatic Mast.

Tripod Mounting Bracket

Tripod Mounting Bracket with Tripod Stand Mounted

Tripod Mounting Bracket with Tripod Stand and Mast Mounted

CLARK QT SERIES MK VI TRIPOD

Suitable for Non-rotatable Masts up to 49.2 ft.

Clark QT Series	3.5-13	5-20	6-26	7-33	9-40	9-49
Extended Height (ft. / m)	13.1 / 4.0	20.0 / 6.10	26.1 / 7.95	33.3 / 10.15	40.0 / 12.20	49.2 / 15.0
Nested Height (ft. / m)	3.5 / 1.05	4.9 / 1.50	5.9 / 1.80	7.2 / 2.20	8.7 / 2.65	9.2 / 2.80
Payload Capacity (lb. / kg)	44 / 20	44 / 20	44 / 20	40 / 18	33 / 15	22 / 10
Approximate Mast Weight (lb. / kg)	18.8 / 8.5	23.9 / 10.8	29.2 / 13.2	33.1 / 15.0	39.7 / 18.0	46.3 / 21.0
Number of Sections	6	6	6	6	6	6
Tube Diameter (in. / mm)	3.5 / 88.9	3.5 / 88.9	3.5 / 88.9	3.5 / 88.9	3.5 / 88.9	3.5 / 88.9
Collar Type	Non-Rotatable	Non-Rotatable	Non-Rotatable	Non-Rotatable	Non-Rotatable	Non-Rotatable
Time to Extend (seconds)	15	30	40	50	60	70
Time to Retract (seconds)	10	20	30	40	45	60
Finish	Natural Anodized	Natural Anodized	Natural Anodized	Natural Anodized	Natural Anodized	Natural Anodized

Clark MK VI Tripod	CM-36585	CM-36586	CM-36587	CM-36588	CM-36589	CM-36590
Extended Height (ft. / m)	13.1 / 4.0	20.0 / 6.1	26.0 / 7.9	33.3 / 10.1	40.0 / 12.2	49.2 / 15.0
Weight (lb / kg)	25.2 / 11.4	28.0 / 12.7	30.9 / 14.0	34.0 / 15.4	36.9 / 16.7	40.0 / 18.0

HURRY–UP PORTABLE PUSH UP TELESCOPING MAST

Extended Heights up to 30 ft. | Payload Capacity up to 20 lb

The Hurry–Up manual push–up mast, can be extended to a full height of 30 feet (9 m) in one minute or less. The Hurry–Up mast features quick lock/release collars. Extend the mast manually by pushing up the sections and fixing them in position. This mast is ideal for fast deployment of light–weight antennas and instruments.

- Rigid azimuth locking collars
  - Quick direction adjustments
- Black anodized finish
  - Corrosion resistant
- Simple design and operation
  - Manual push–up deployment, retraction, and locking of mast
  - Positional feedback

ACCESSORIES
(Mounting option required):

- Drive–on plate mounting
  - No guylines required
- Removable payload extension stub
  - Easy payload mounting
- External support brackets
  - Permanent vehicle mounting
- Hitch Mount
  - 2” Hitch – Removable

Hurry-Up Models	3-7	5-17	6-25	6.6-30
Extended Height (ft. / m)	6.8 / 2.1	17.3 / 5.3	24.9 / 7.6	29.5 / 9.0
Nested Height (ft. / m)	3.0 / 1.0	5.3 / 1.6	5.9 / 1.8	6.6 / 2.0
Payload Capacity (lb / kg)	20 / 9	20 / 9	20 / 9	20 / 9
Approximate Weight (lb / kg)	15 / 7	19 / 9	29 / 13	36 / 16
Number of Sections	3	4	6	6
Tube Diameter (in. / mm)	3.50-2.625 / 89-67	3.50-2.25 / 89-57	3.50-1.50 / 89-38	3.50-1.50 / 89-38
Collar Type	Friction Locking	Friction Locking	Friction Locking	Friction Locking
Finish	Black Anodize, MIL-A-8625, Type II, Class 2	Black Anodize, MIL-A-8625, Type II, Class 2	Black Anodize, MIL-A-8625, Type II, Class 2	Black Anodize, MIL-A-8625, Type II, Class 2

DEPLOYMENT OPTIONS

Hitch Mount
2" Removable Hitch

Drive-On Plate
No Guylines Required

External Mount
Shelf and Support Brackets

Center Collar Breach Load

EZ Raze™ System

Mast Tube Lift Winch

ANTENNAMAST MODEL AM2

Extended Heights up to 49.2 ft. | Payload Capacity up to 100 lb

See willburt.com for complete model range and accessories

The AntennaMast model AM2 is a rugged, lightweight, man-portable, aluminum tripod mast designed for rapid payload deployment. The AM2 is extremely flexible and reliable and is capable of elevating multiple devices on a single mast.

The AntennaMast Model AM2 is available with three different payload deployment options. The EZ Raze™ system with cable winching device and safety brake enables the user to lift and lower heavier payloads in a safe and controlled manner without disassembling the mast system.

The mast tube lift winch provides a mechanical assist for the lifting of the mast tubes for heavier payloads.

The user is also able to elevate the mast tubes and payload by breach loading the tubes through the tripod center collar.

- Rapid set-up
  - Includes a tripod with two (2) built-in levels and large no-slip adjustment knobs that are easy to operate. Interlocking mast tubes allow for directional adjustment of the payload
- Flexible
  - A variety of payload adaptors and accessories are available to accomplish diverse missions
- Simple
  - No tools or special training are needed for deployment
- Rugged
  - Designed to meet MIL-STD-810 for use in a variety of harsh environments
- Durable
  - Components are constructed of aluminum and stainless steel and are covered by a two (2) year warranty
- Complete system
  - AM2 system includes all components needed to safely deploy rated payload at selected height
- Transportable
  - Every mast system comes with a rugged wheeled transport bag designed for easy unloading and loading
- A full range of interchangeable accessories and payload adaptors are available for the AntennaMast

Height (m / ft.)	Model #	Deployable Load (lb / kg)	Deployment Method	Deployment Time (Persons)	System Weight (lb / kg)	Guying (Primary / Secondary)	Wind Survival Speed (mph / km/h)
AM2 Standard Deployment							
49.2 / 15	715061500	20 / 9.1	Manual	20–30 (2–4)	103.6 / 47	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
45.9 / 14	715061400	25 / 11.3	Manual	15–20 (1–3)	100.5 / 45.6	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
42.7 / 13	715061300	30 / 13.6	Manual	15–20 (1–3)	97 / 44	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
39.4 / 12	715061200	35 / 15.9	Manual	15–20 (1–3)	93.8 / 42.5	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
36.1 / 11	715061100	40 / 18.1	Manual	15–20 (1–3)	90.5 / 41.1	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
32.8 / 10	715061000	50 / 22.7	Manual	15–18 (1–3)	87.3 / 39.6	Top / Mid Guying Optional	70 / 113 @ 6 sq. ft.
29.5 / 9	715060900	55 / 24.9	Manual	15–18 (1–3)	84 / 38.1	Top	70 / 113 @ 6 sq. ft.
26.2 / 8	715060800	55 / 24.9	Manual	15–18 (1–3)	80.8 / 36.7	Top	70 / 113 @ 6 sq. ft.
23 / 7	715060700	60 / 27.2	Manual	10–18 (1–2)	77.6 / 35.2	Top	70 / 113 @ 6 sq. ft.
19.7 / 6	715060600	60 / 27.2	Manual	10–18 (1–2)	74.3 / 33.7	Top	70 / 113 @ 6 sq. ft.
16.4 / 5	715060500	65 / 29.5	Manual	5–10 (1–2)	71 / 32.2	Top	70 / 113 @ 6 sq. ft.
13.1 / 4	715060400	70 / 34	Manual	5–10 (1–2)	67.8 / 30.8	Top	70 / 113 @ 6 sq. ft.
9.8 / 3	715060300	85 / 38.6	Manual	5–10 (1–2)	64.6 / 29.3	Top	70 / 113 @ 6 sq. ft.
6.6 / 2	715060200	100 / 45.4	Manual	5–10 (1–2)	61.3 / 27.8	Top	70 / 113 @ 6 sq. ft.
AM2 with Mast Tube Lift Winch							
49.2 / 15	715071500	20 / 9.1	Lift Winch	20–30 (2–4)	110.6 / 50.2	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
45.9 / 14	715071400	25 / 11.3	Lift Winch	15–20 (1–3)	107.5 / 48.8	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
42.7 / 13	715071300	30 / 13.6	Lift Winch	15–20 (1–3)	104.5 / 47.4	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
39.4 / 12	715071200	35 / 15.9	Lift Winch	15–20 (1–3)	100.8 / 45.7	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
36.1 / 11	715071100	40 / 18.1	Lift Winch	15–20 (1–3)	97.5 / 44.2	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
32.8 / 10	715071000	50 / 22.7	Lift Winch	15–18 (1–3)	94.3 / 42.8	Top / Mid Guying Optional	70 / 113 @ 6 sq. ft.
29.5 / 9	715070900	55 / 24.9	Lift Winch	15–18 (1–3)	91 / 41.3	Top	70 / 113 @ 6 sq. ft.
26.2 / 8	715070800	55 / 24.9	Lift Winch	15–18 (1–3)	87.8 / 39.8	Top	70 / 113 @ 6 sq. ft.
23 / 7	715070700	60 / 27.2	Lift Winch	10–18 (1–2)	84.6 / 38.4	Top	70 / 113 @ 6 sq. ft.
19.7 / 6	715070600	60 / 27.2	Lift Winch	10–18 (1–2)	81.3 / 36.9	Top	70 / 113 @ 6 sq. ft.
16.4 / 5	715070500	65 / 29.5	Lift Winch	5–10 (1–2)	78 / 35.4	Top	70 / 113 @ 6 sq. ft.
13.1 / 4	715070400	70 / 34	Lift Winch	5–10 (1–2)	74.8 / 33.9	Top	70 / 113 @ 6 sq. ft.
9.8 / 3	715070300	85 / 38.6	Lift Winch	5–10 (1–2)	71.6 / 32.5	Top	70 / 113 @ 6 sq. ft.
6.6 / 2	715070200	100 / 45.4	Lift Winch	5–10 (1–2)	68.3 / 31	Top	70 / 113 @ 6 sq. ft.
AM2 with EZ Raze Payload Elevation System							
49.2 / 15	715071500	20 / 9.1	Lift Winch	20–30 (2–4)	110.6 / 50.2	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
45.9 / 14	715071400	25 / 11.3	Lift Winch	15–20 (1–3)	107.5 / 48.8	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
42.7 / 13	715071300	30 / 13.6	Lift Winch	15–20 (1–3)	104.5 / 47.4	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
39.4 / 12	715071200	35 / 15.9	Lift Winch	15–20 (1–3)	100.8 / 45.7	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
36.1 / 11	715071100	40 / 18.1	Lift Winch	15–20 (1–3)	97.5 / 44.2	Top / Mid Guying Optional	70 / 113 @ 4 sq. ft.
32.8 / 10	715071000	50 / 22.7	Lift Winch	15–18 (1–3)	94.3 / 42.8	Top / Mid Guying Optional	70 / 113 @ 6 sq. ft.
29.5 / 9	715070900	55 / 24.9	Lift Winch	15–18 (1–3)	91 / 41.3	Top	70 / 113 @ 6 sq. ft.
26.2 / 8	715070800	55 / 24.9	Lift Winch	15–18 (1–3)	87.8 / 39.8	Top	70 / 113 @ 6 sq. ft.
23 / 7	715070700	60 / 27.2	Lift Winch	10–18 (1–2)	84.6 / 38.4	Top	70 / 113 @ 6 sq. ft.
19.7 / 6	715070600	60 / 27.2	Lift Winch	10–18 (1–2)	81.3 / 36.9	Top	70 / 113 @ 6 sq. ft.
16.4 / 5	715070500	65 / 29.5	Lift Winch	5–10 (1–2)	78 / 35.4	Top	70 / 113 @ 6 sq. ft.
13.1 / 4	715070400	70 / 34	Lift Winch	5–10 (1–2)	74.8 / 33.9	Top	70 / 113 @ 6 sq. ft.
9.8 / 3	715070300	85 / 38.6	Lift Winch	5–10 (1–2)	71.6 / 32.5	Top	70 / 113 @ 6 sq. ft.
6.6 / 2	715070200	100 / 45.4	Lift Winch	5–10 (1–2)	68.3 / 31	Top	70 / 113 @ 6 sq. ft.

EXPEDITION SERIES RANGER MAST

Extended Heights up to 60 ft. | Payload Capacity up to 40 lb

See willburt.com for complete model range

The lightest, most stable, single-man portable field mast in the world

The Will-Burt Expedition Series offers a variety of added features for increased performance and convenience. The system includes a 6 in. (150 mm) diameter payload adapter. The Ranger™ Mast has a large tripod base, making the mast very stable. It is erected with 4 ft. (1.2m) tube sections to heights from 8 to 60 ft. (2.5 to 18.3 m). A custom payload interface can be designed to fit specific needs. The Expedition Series tripod and mast are constructed of carbon composite material.

- Lighter weight than aluminum
  - Easier to transport and deploy
- Stronger
  - More durable – won't bend or break
- Stiffer
  - More stable for payloads
- Quicker, easier set-up and retraction
  - Faster deployment
- Easier transportability
  - Two compact transport pack options allow you to select the best one to fit your deployment needs
- Large, adjustable tripod
- Friction locks for height adjustment
- Ergonomic tube lifter
- Two highly visible bubble levels
- A full range of interchangeable accessories and payload adaptors are available for the Expedition Series

Height (m / ft.)	Model #	Deployable Load (lb / kg)	Deployment Method	Deployment Time (Persons)	System Weight (lb / kg)	Guying (Primary / Secondary)	Wind Survival Speed (mph / km/h)
Ranger Mast Standard Deployment							
60 / 18.3	714076000	5 / 2.3	Manual	20–30 (2–4)	90 / 40.8	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
56 / 17.1	714075600	5 / 2.3	Manual	20–30 (2–4)	87 / 39.5	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
52 / 15.8	714075200	10 / 4.5	Manual	15–20 (1–3)	84 / 38.1	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
48 / 14.6	714074800	10 / 4.5	Manual	15–20 (1–3)	82 / 37.2	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
44 / 13.4	714074400	15 / 6.8	Manual	15–20 (1–3)	79 / 35.8	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
40 / 12.2	714074000	20 / 9.1	Manual	15–18 (1–3)	73 / 33.1	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
36 / 11	714073600	25 / 11.3	Manual	15–18 (1–3)	70 / 31.8	Top / Mid Guying Optional	70 / 113 @ 2 sq. ft.
32 / 9.8	714073200	30 / 13.6	Manual	15–18 (1–3)	68 / 30.8	Top	70 / 113 @ 4 sq. ft.
28 / 8.5	714072800	35 / 15.9	Manual	10–18 (1–2)	65 / 29.5	Top	70 / 113 @ 4 sq. ft.
24 / 7.3	714072400	40 / 18.1	Manual	10–18 (1–2)	63 / 28.6	Top	70 / 113 @ 4 sq. ft.
20 / 6.1	714072000	40 / 18.1	Manual	5–10 (1–2)	60 / 27.2	Top	70 / 113 @ 4 sq. ft.
16 / 4.9	714071600	40 / 18.1	Manual	5–10 (1–2)	58 / 26.3	Top	70 / 113 @ 4 sq. ft.
12 / 3.7	714071200	40 / 18.1	Manual	5–10 (1–2)	56 / 25.4	Top	70 / 113 @ 4 sq. ft.
Ranger Mast with EZ Raze Payload Elevation System							
60 / 18.3	714176000	30 / 13.6	Carriage	20–30 (2–4)	115 / 52.2	Top	70 / 113 @ 1 sq. ft.
56 / 17.1	714175600	35 / 15.9	Carriage	20–30 (2–4)	113 / 51.3	Top	70 / 113 @ 1 sq. ft.
52 / 15.8	714175200	35 / 15.9	Carriage	15–20 (1–3)	110 / 49.9	Top	70 / 113 @ 1.5 sq. ft.
48 / 14.6	714174800	40 / 18.1	Carriage	15–20 (1–3)	108 / 49	Top	70 / 113 @ 1.5 sq. ft.
44 / 13.4	714174400	40 / 18.1	Carriage	15–20 (1–3)	105 / 47.6	Top	70 / 113 @ 2 sq. ft.
40 / 12.2	714174000	40 / 18.1	Carriage	15–18 (1–3)	99 / 44.9	Top	70 / 113 @ 3 sq. ft.
36 / 11	714173600	40 / 18.1	Carriage	15–18 (1–3)	96 / 43.5	Top	70 / 113 @ 4 sq. ft.
32 / 9.8	714173200	40 / 18.1	Carriage	15–18 (1–3)	94 / 42.6	Top	70 / 113 @ 4 sq. ft.
28 / 8.5	714172800	40 / 18.1	Carriage	10–18 (1–2)	91 / 41.3	Top	70 / 113 @ 4 sq. ft.
24 / 7.3	714172400	40 / 18.1	Carriage	10–18 (1–2)	89 / 40.4	Top	70 / 113 @ 4 sq. ft.
20 / 6.1	714172000	40 / 18.1	Carriage	5–10 (1–2)	86 / 39	Top	70 / 113 @ 4 sq. ft.
16 / 4.9	714171600	40 / 18.1	Carriage	5–10 (1–2)	84 / 38.1	Top	70 / 113 @ 4 sq. ft.
12 / 3.7	714071200	40 / 18.1	Carriage	5–10 (1–2)	82 / 37.2	Top	70 / 113 @ 4 sq. ft.

A full range of interchangeable accessories and payload adaptors are available for the Expedition Series
See willburt.com for complete model range

Swivel 4-point Guy Collar

Rigid Guy Collar

EZ-Raze

Cup Holder

Multi-Use Adapter Plate

Steel Telescoping Tower
Integrated Trailer System

Telescoping Pneumatic Mast
Integrated Trailer System

Aluminum Telescoping Tower
Integrated Trailer System

WILL–BURT INTEGRATION & ELEVATION SYSTEMS

Extended Heights up to 130 ft. | Payload Capacity up to 1,200 lb

The Will–Burt Company, with the acquisition of Aluma Tower and Integrated Tower Systems (ITS) now offers integrated Telescoping Steel and Aluminum Tower Systems AND Telescoping Mast Systems - an elevation solution for every need! Will–Burt is a global leader in the design, manufacture, sales and rental of an extensive and affordable line of rapid–deployment Mobile Tower & Mast Systems; Tower & Mast Integrated Trailers, Trucks, Communication–Site–on–Wheels (COWs), and Mast–, Satellite– and Tower–Integrated Mobile Command and Communication Centers. This state–of–the–art equipment is designed specifically to support a global contingent of clientele representing the following industries:

- Telecommunications, Infrastructure Development / Restoration; Tower Owners/Operators Multi–media, Broadcasting
- First Responder, Public Safety and Emergency Management; Law Enforcement, Incident Command, Search & Rescue
- National Security / Homeland Defense, Domestic & Foreign Military Initiatives; Tactical, Support Functions, and Counter UAS
- Border Security, Immigration and Customs Enforcement; Disaster Preparedness/ Emergency Response
- Geophysical, Oil & Gas and Alternative Energy; Meteorological, Frequency and Weapon Systems Testing
- Transportation, Aviation, Aerospace and Construction; Entertainment, Logistics, Engineering, Municipal & Corporate Programs
- Global Support of Special Events; Political, Commercial, Industrial, Sporting, Civic and Numerous other Industries

Will–Burt's innovative rapid response systems are manufactured to both civilian and military specifications and built to withstand many of the world's most demanding environments. Will–Burt controls every aspect of manufacture and assembly through an ISO 9001:2015 certified quality management system in all manufacturing locations. Will–Burt's engineering expertise and vertical integration capabilities allows for efficient COTS products and unique custom designs for the seamless installation of common or client–specific technologies, or pre–integrated with a Will–Burt or client–furnished Communications, Surveillance, or Counter UAS Solutions. Will–Burt's rapidly deployed systems are proven key components in establishing the flow of vital information from remote and urban areas of need.

COMMON USES

- Broadcast
- Lighting
- Disaster Recovery / Emergency Response
- Border Security
- Surveillance
- Remote Communications Site Security
- Sensor Applications
- Systems Testing
- Energy Exploration / Production Sites
- Telecommunications
- Temporary Cell Site
- Lightning Protection
- Counter UAS

SURVEILLANCE / COMMUNICATIONS / COUNTER UAS

INTEGRATED TELESCOPING STEEL TOWER SYSTEMS

Self-Support & Guyed Heights (ft. / m)
38 / 11.6 | 55 / 16.8 | 72 / 21.9 | 89 / 27.1 | 106 / 32.3 | 120 / 36.6 | 130 / 39.6

Representative Sample – Contact Will-Burt for Additional Options

SRS-C SERIES – PORTABLE TOWER TRAILER


SR SERIES – MOBILE TOWER TRAILER

(Multiterrain Configuration)




IT SERIES – MOBILE TOWER TRAILER

(Urban Configuration)



INTEGRATED TELESCOPING STEEL TOWER SYSTEMS

Standard Payload Capacity (lb / kg): up to 550 / 250
Upgraded Payload Capacity (lb / kg): up to 625 / 284

Flexi-Fleet rental tower and mast systems are ready for deployment in case of emergencies

NC/SR SERIES – COMMUNICATION-SITE-ON-WHEELS (COW) TOWER TRAILER

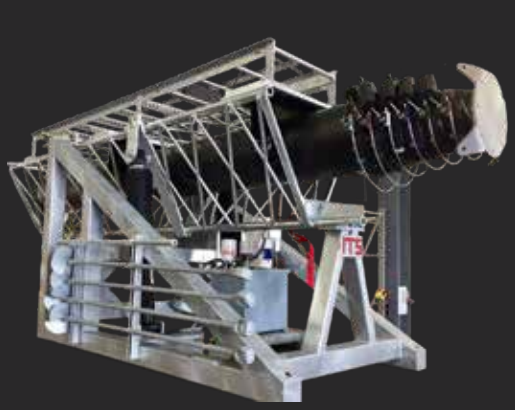


TMT SERIES – TRUCK MOUNTED TOWER SYSTEM



SKD SERIES – SKID MOUNTED



SURVEILLANCE / COMMUNICATIONS / COUNTER UAS

INTEGRATED TELESCOPING MAST SYSTEMS

Self-Support & Guyed Heights (ft. / m): Ranges 30 / 9 to 120 / 36
Tower Payload Capacity (lb / kg): up to 1,200 / 544

Representative Sample – Contact Will-Burt for Additional Options

RAPID DEPLOYMENT ELEVATION SYSTEM

ULTRA MAST – INTEGRATED SURVEILLANCE SYSTEM

INTEGRATED TELESCOPING MAST SYSTEMS

Self-Support & Guyed Extended Heights (ft. / m): up to 120 / 36
Tower Payload Capacity (lb / kg): up to 1,200 / 544

Flexi-Fleet rental tower and mast systems are ready for deployment in case of emergencies

COW SERIES – TRAILER MOUNTED MAST

(Vertical Mast Installation)



RD-S & RD-T SERIES – TRAILER MOUNTED MAST

(Multiterrain Configuration)


RD-S Series – Single Axle


RD-T Series – Tandem Axle

LC SERIES & MT SERIES – TRAILER MOUNTED MAST

(Urban Configuration)

LC Series – Single Axle

MT Series – Tandem Axle

SURVEILLANCE / COMMUNICATIONS / COUNTER UAS

INTEGRATED TELESCOPING ALUMINUM TOWER SYSTEMS

Guyed Extended Heights (ft. / m): Ranges 39 / 11.8 to 106 / 32
Unguyed Extended Heights (ft. / m): Ranges 39 / 11.8 to 92 / 28

Representative Sample – Contact Will-Burt for Additional Options

TM53-70 SUPER SCORPION

Patented Tower Section Slide System
Increases tower stability by reducing tower section movement when deployed

Self-Monitoring Systems available with SMARTtower® Technology
Automatically retracts tower or sends SMS message in severe weather allowing you to make the final decision

TM55-90

S812 WITH SHELTER

INTEGRATED TELESCOPING ALUMINUM TOWER SYSTEMS

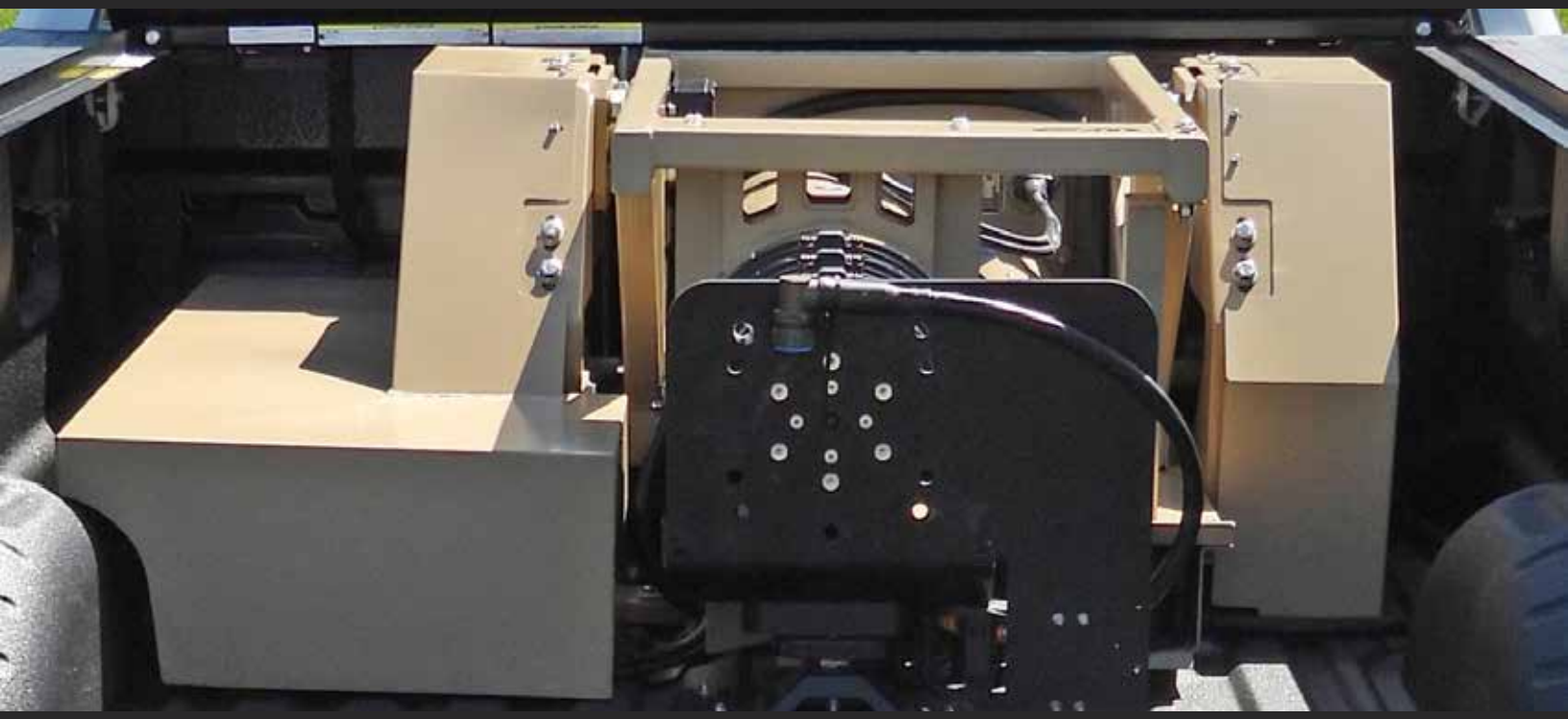
Guyed Tower Capacity (lb / kg): Ranges 50 / 22 to 275 / 124
Unguyed Tower Capacity (lb / kg): Ranges 350 / 158 to 600 / 272

Flexi-Fleet rental tower and mast systems are ready for deployment in case of emergencies

SKID SYSTEM

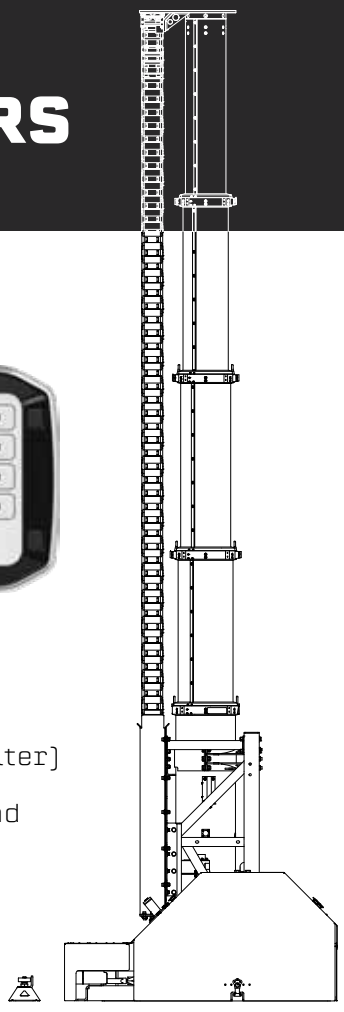
TM12

CUSTOM SOLUTIONS



MAST AND TILT SYSTEMS FOR TRAILERS, TRUCKS, AND SHELTERS

Heights up to 28 ft. | Payload Capacity up to 600 lb



COMPACT ELEVATION SYSTEM (CES)

- Compact
  - Elevation system and payload fits within 8 ft. / 2.4m full-size pickup bed envelope with 4m and 6m masts
    - Up to 24.7 ft^3 / 0.7m^3 available space for the sensor payload
  - Designed for transport while in horizontal or vertical positions (with mast stowed)
  - 30 second tilt time
- Minimized mast twist
  - Full-length mast section keys and keyways
- 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 (truck, trailer, shelter)
  - Available with a variety of Will-Burt mechanical telescoping masts
  - Standard Equipment Zig Zag e-Chain cable management system is compact and consumes no payload space
- Integrated Controls
  - Fully integrated control system
  - PC control capable
  - CAN-bus J1939 / RS485 Serial

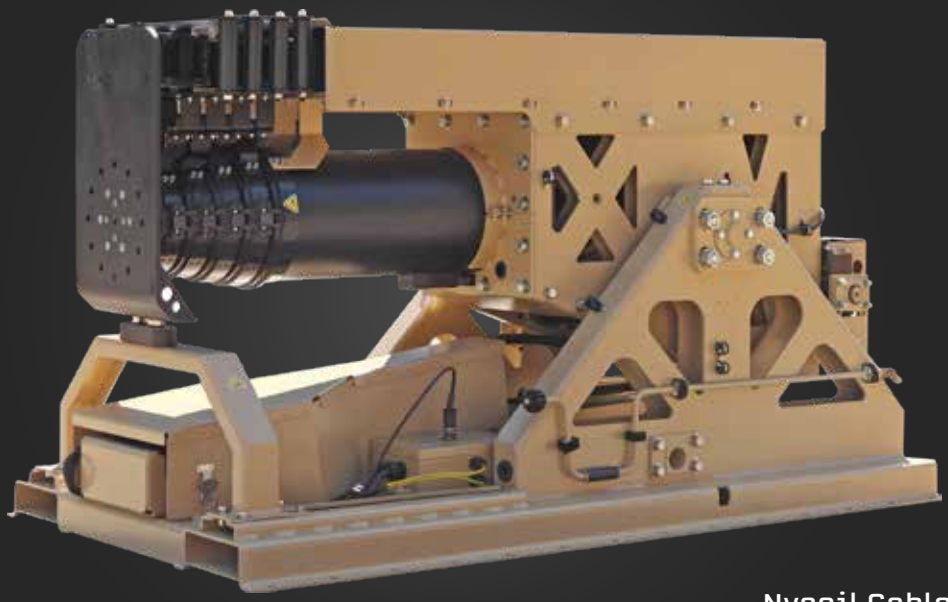
Fully Integrated Control System

Zig Zag e-Chain Cable Management

CES Models	4.0m Stiletto AL	6.0m Stiletto AL	8.54m Stiletto AL
Stowed Dimensions (Lx W x H) (in. / mm)	54.0 x 53.1 x 21.8 / 1372 x 1349 x 555	65.8 x 53.1 x 21.8 / 1672 x 1349 x 555	77.7 x 53.1 x 21.8 / 1973 x 1349 x 555
Extended Height (ft. / m)	13.7 / 4.1	20.2 / 6.1	28.6 / 8.7
Payload Capacity (lb / kg)	400 / 181	400 / 181	390 / 176
Telescopic Mast Type	Aluminum Mechanical Screw-Drive with Patented Automatic Locks		
Survival Wind Speed (mph / km/h)	81 / 130	81 / 130	72 / 116
Deployment Wind Speed (mph / km/h)	40 / 65	40 / 65	36 / 58
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Total Cycle Time / Approximate – Payload Dependent	50 / 35 / 35 / 45 / 165 seconds	50 / 60 / 60 / 45 / 215 seconds	50 / 100 / 100 / 45 / 295 seconds
Rotation Accuracy (Twist)	+/-1°	+/-1°	+/-1°
Voltage (MIL-STD 1275)	28 VDC	28 VDC	28 VDC
*Typical Payload Sail Area (ft.² / m²)	17 / 1.58 CD=1.5	12 / 1.11 CD=1.5	11 / 1.02 CD=1.5
CES + Mast Weight (lb / kg)	1,040 / 472	1,089 / 494	1,139 / 517
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable		
MIL-STD 810 Design	Yes	Yes	Yes
Optional Cable Management Available	Yes	Yes	Yes

CES Models	4.0m Stiletto AL	6.0m Stiletto AL
Stowed Dimensions (Lx W x H) (in. / mm)	54.0 x 53.1 x 21.8 /1372 x 1349 x 555	65.8 x 53.1 x 21.8 /1672 x 1349 x 555
Extended Height (ft. / m)	13.7 / 4.1	20.2 / 6.1
Payload Capacity (lb / kg)	600 / 272	550 / 249
Telescopic Mast Type	Aluminum Mechanical Screw-Drive with Patented Automatic Locks	
Survival Wind Speed (mph / km/h)	81 / 130	81 / 130
Deployment Wind Speed (mph / km/h)	40 / 65	40 / 65
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Total Cycle Time / Approximate – Payload Dependent	50 / 45 / 45 / 45 / 185 seconds	50 / 65 / 65 / 45 / 225 seconds
Rotation Accuracy (Twist)	+/-0.7°	+/-0.7°
Voltage (MIL-STD 1275)	28 VDC	28 VDC
*Typical Payload Sail Area (ft.² / m²)	17 / 1.58 CD=1.5	12 / 1.11 CD=1.5
CES + Mast Weight (lb / kg)	1,110 / 504	1,175 / 533
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable	
MIL-STD 810 Design	Yes	Yes
Optional Cable Management Available	Yes	Yes

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



Nycoil Cable Management

MAST AND TILT SYSTEMS FOR TRAILERS, TRUCKS, AND SHELTERS

Heights up to 49.2 ft. | Payload Capacity up to 600 lb

Automatic Mast Tilt System (AMTS)

- Strong and Robust
  - Designed for transport while in horizontal or vertical positions (with mast stowed)
  - No need for guying with field-proven rugged telescoping mast design
  - 45 second tilt time
- Minimized mast twist
  - Full-length mast section keys and keyways
- Flexible Installation
  - Skid design allows for installation on a variety of platforms (truck, trailer, shelter)
  - Available with a variety of Will-Burt mechanical telescoping masts
  - Optional Zig Zag e-Chain or Nycoil cable management systems
- Integrated Controls
  - Fully integrated control system
  - PC control capable
  - CAN-bus J1939 / RS485 Serial

Integrated Control System

AMTS with Stiletto AL	4.0m Stiletto AL	6.0m Stiletto AL	8.5m Stiletto AL	10.0m Stiletto AL	15.0m Stiletto AL
Stowed Dimensions (Lx W x H) (in. / mm)	69.25 x 36.25 x 36.76 / 1758.9 x 920.7 x 933.8	69.25 x 36.25 x 36.76 / 1758.9 x 920.7 x 933.8	80.02 x 36.25 x 36.76 / 2032.5 x 920.7 x 933.8	88.68 x 36.25 x 36.76 / 2252.5 x 920.7 x 933.8	109.37 x 36.25 x 36.76 / 2777.4 x 920.7 x 933.8
Extended Height (ft. / m)	13.7 / 4.1	20.2 / 6.1	28.5 / 8.7	33.3 / 10.1	49.7 / 15.1
Payload Capacity (lb / kg)	400 / 181	400 / 181	400 / 181	400 / 181	350 / 158
Telescopic Mast Type	Electro-Mechanical				
Survival Wind Speed (mph / km/h)	130 / 209	115 / 185	80 / 129	80 / 129	62 / 100
Deployment Wind Speed (mph / km/h)	40 / 64	40 / 64	35 / 56	35 / 56	30 / 48
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Total Cycle Time / Approximate – Payload Dependent	45 / 35 / 35 / 45 / 160 Seconds	45 / 60 / 60 / 45 / 210 Seconds	45 / 100 / 100 / 45 / 290 Seconds	45 / 100 / 100 / 45 / 290 Seconds	45 / 150 / 150 / 45 / 390
Rotation Accuracy (Twist)	+/-1°	+/-1°	+/-1°	+/-1°	+/-1°
Voltage (MIL-STD 1275)	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC
*Typical Payload Sail Area ($ft.^2$ / m^2)	17 / 1.58 CD=1.5	12 / 1.11 CD=1.5	11 / 1.02 CD=1.5	11 / 1.02 CD=1.5	8 / .74 CD=1.5
AMTS + Mast Weight (lb / kg)	1075 / 489	1124 / 511	1174 / 534	1205 / 548	1315 / 598
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable		CAN-bus J1939, RS485 Serial, PC Control Capable		
MIL-STD 810 Design	Yes	Yes	Yes	Yes	Yes
Optional Cable Management Available	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil

AMTS with Stiletto AL HD	4.0m Stiletto AL HD	6.0m Stiletto AL HD	8.5m Stiletto AL HD	10.0m Stiletto AL HD	12.0m Stiletto AL HD
Stowed Dimensions (Lx W x H) (in. / mm)	69.25 x 36.25 x 36.76 / 1758.9 x 920.7 x 933.8	69.25 x 36.25 x 36.76 / 1758.9 x 920.7 x 933.8	80.02 x 36.25 x 36.76 / 2032.5 x 920.7 x 933.8	88.68 x 36.25 x 36.76 / 2252.5 x 920.7 x 933.8	108.16 x 36.25 x 36.76 / 2747.3 x 920.7 x 933.8
Extended Height (ft. / m)	13.7 / 4.1	20.2 / 6.1	28.5 / 8.7	33.3 / 10.1	12.1 / 39.9
Payload Capacity (lb / kg)	600 / 272	600 / 272	600 / 272	600 / 272	600 / 272
Telescopic Mast Type	Electro-Mechanical	Electro-Mechanical	Electro-Mechanical	Electro-Mechanical	Electro-Mechanical
Survival Wind Speed (mph / km/h)	130 / 209	115 / 185	95 / 153	80 / 129	62 / 100
Deployment Wind Speed (mph / km/h)	40 / 64	40 / 64	40 / 64	40 / 64	40 / 64
Tilt Up / Mast Deploy / Mast Retract / Tilt Down / Total Cycle Time / Approximate – Payload Dependent	45 / 45 / 45 / 45 / 180 Seconds	45 / 65 / 65 / 45 / 220 Seconds	45 / 90 / 90 / 45 / 270 Seconds	45 / 105 / 105 / 45 / 300 Seconds	45 / 130 / 130 / 45 / 350 Seconds
Rotation Accuracy (Twist)	+/-7°	+/-7°	+/-7°	+/-7°	+/-7°
Voltage (MIL-STD 1275)	28 VDC	28 VDC	28 VDC	28 VDC	28 VDC
*Typical Payload Sail Area ($ft.^2$ / m^2)	17 / 1.58 CD=1.5	12 / 1.11 CD=1.5	11 / 1.02 CD=1.5	11 / 1.02 CD=1.5	8 / .74 CD=1.5
AMTS + Mast Weight (lb / kg)	1145 / 520	1210 / 550	1274 / 579	1300 / 591	1382 / 628
Integrated System Control	CAN-bus J1939, RS485 Serial, PC Control Capable		CAN-bus J1939, RS485 Serial, PC Control Capable		
MIL-STD 810 Design	Yes	Yes	Yes	Yes	Yes
Optional Cable Management Available	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil	Zig Zag e-Chain or Nycoil

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

INTEGRATED TRAILER, MAST AND TILT SYSTEMS

Heights up to 49.2 ft. | Payload Capacity up to 600 lb

Will–Burt's Integration and Elevation Systems division has been constructing integrated mobile elevation platforms for over 50 years. Will–Burt's engineering and manufacturing capabilities, guided by ISO 9001:2015 standards, produce the best and most consistent performing products in the industry.

- Maximizes sensor performance with powerful and precise mechanical telescopic masts
- Heights up to 49 ft. / 15m
- Payloads up to 600 lb / 272 kg
- Fast and easy deployment with integrated controls
- Optional Cable Management, Power Management, Cabinets, and other accessories available
- No need for guy systems – all options are self–supporting
- Will–Burt offers full integration of customer payloads and sensors or delivery of the elevation platform for customer payload installation

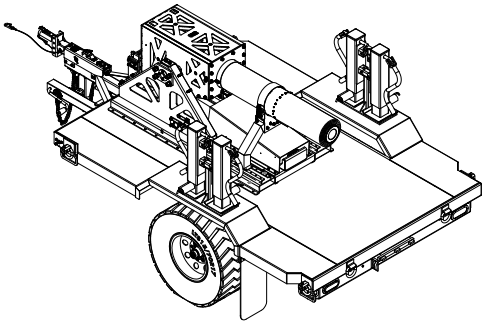
RD-S: SINGLE AXLE

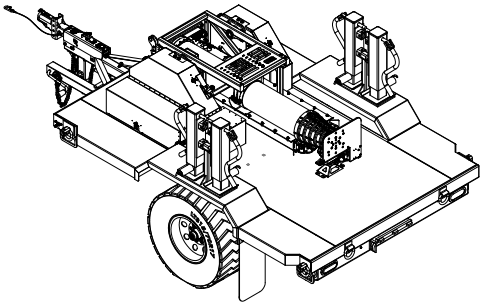
(AMTS / CES / Upright)

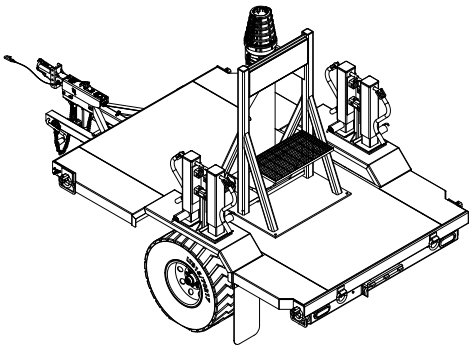
Dimensions L x W x H (in. / mm)	
Trailer Deck: 166 x 85 x 34 / 4216 x 2159 x 864	Outriggers Extended: 166 x 203 x 34 / 4216 x 5157 x 864

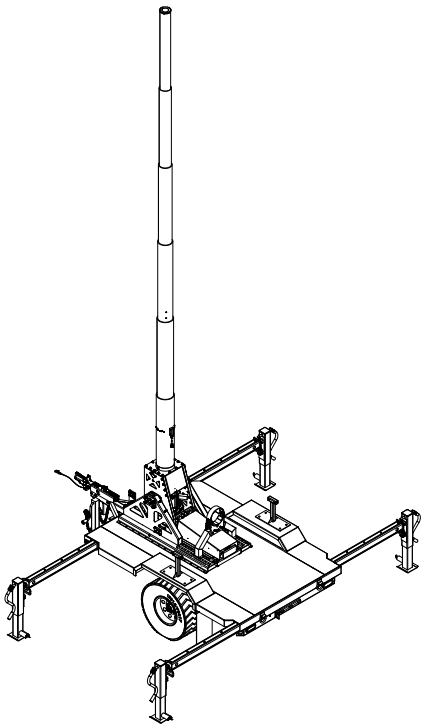
Weight (lb / kg)	
Trailer: 2,675 / 1214	Trailer GVWR: 6,000 / 2722

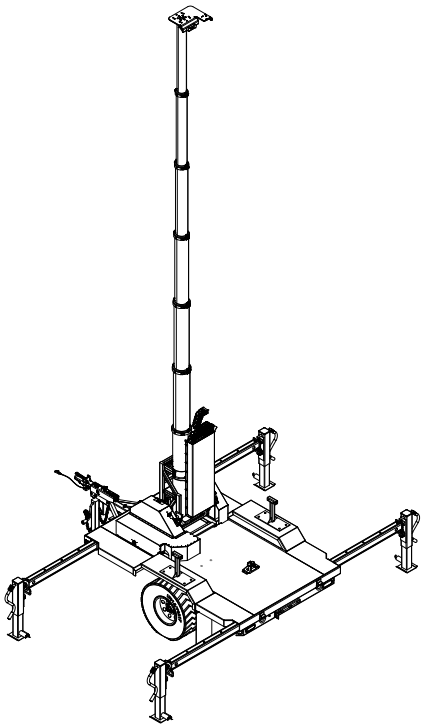
RD-S Trailer (AMTS) 8.54m Stiletto AL HD	RD-S Trailer (CES) 8.54m Stiletto AL	RD-S Trailer (Upright) 8.54m Stiletto AL

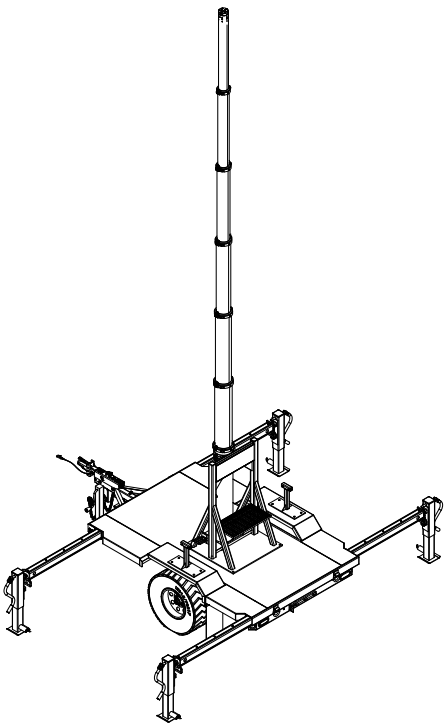












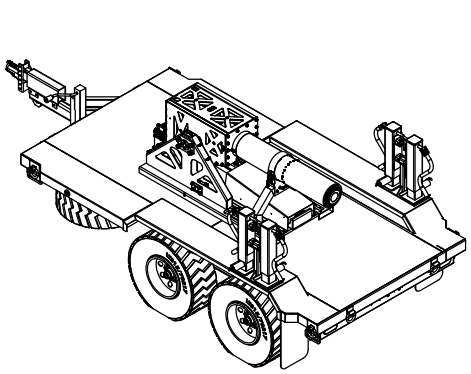
RD-T: TANDEM AXLE

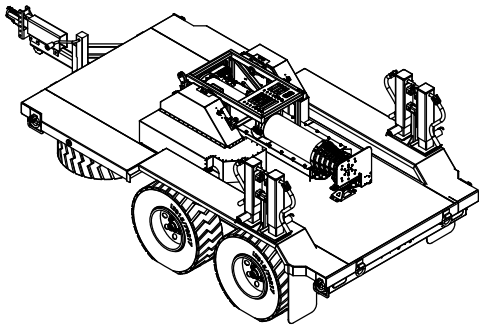
(AMTS / CES / Upright)

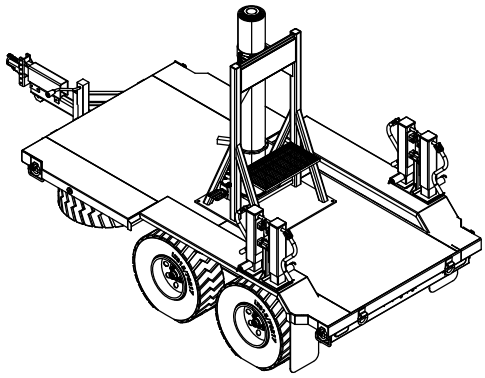
Dimensions L x W x H (in. / mm)	
Trailer Deck: 203 x 85 x 33 / 5157 x 2159 x 839	Outriggers Extended: 203 x 201 x 33 / 5157 x 2159 x 839

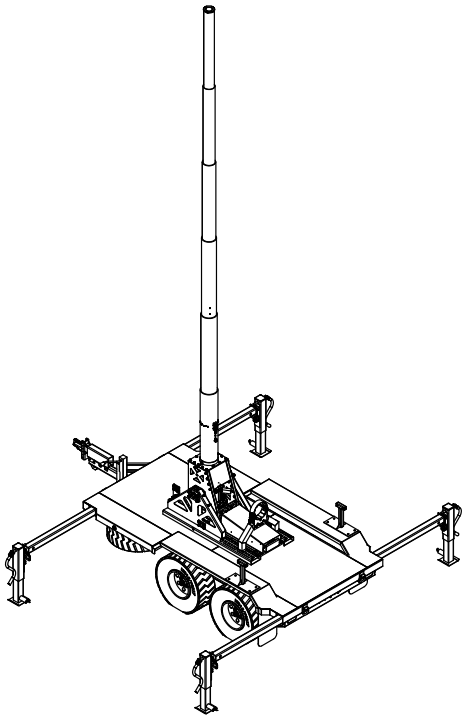
Weight (lb / kg)	
Trailer: 3,505 / 1590	Trailer GVWR: 12,000 / 5443

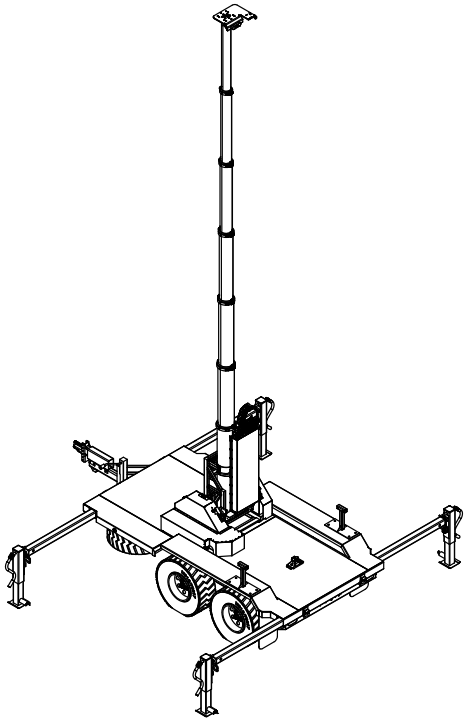
RD-T Trailer (AMTS) 8.54m Stiletto AL HD	RD-T Trailer (CES) 8.54m Stiletto AL	RD-T Trailer (Upright) 8.54m Stiletto AL HD

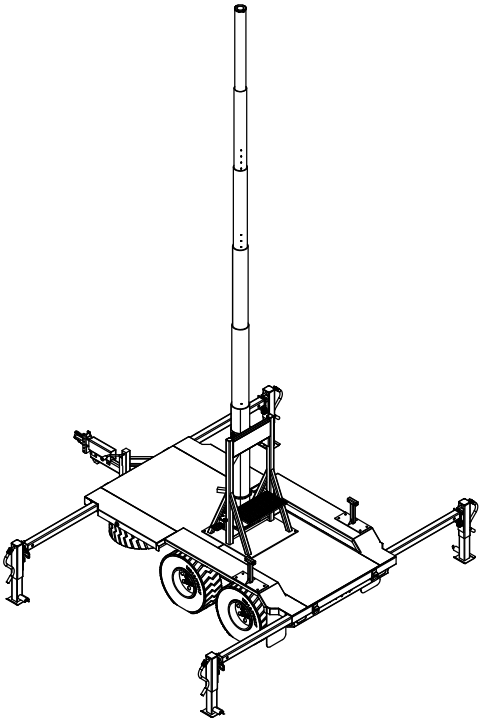












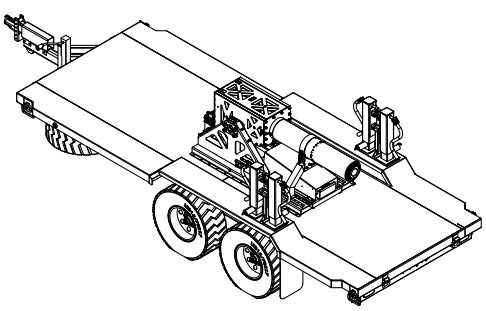
RD-T XL: TANDEM AXLE

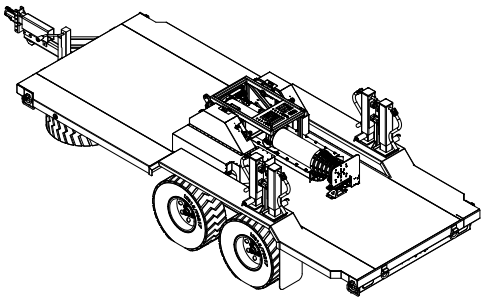
(AMTS / CES / Upright)

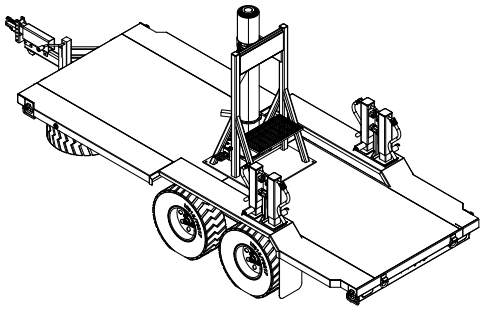
Dimensions L x W x H (in. / mm)	
Trailer Deck: 262 x 85 x 33 / 6655 x 5106 x 839	Outriggers Extended: 262 x 201 x 33 / 6655 x 5106 x 839

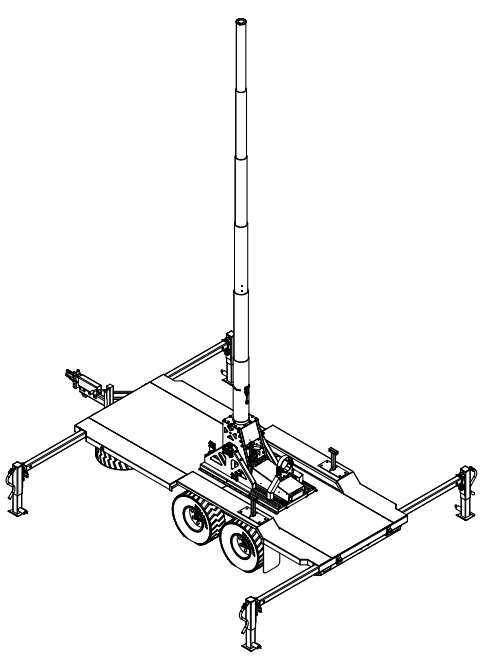
Weight (lb / kg)	
Trailer: 3,613 / 1639	Trailer GVWR: 12,000 / 5443

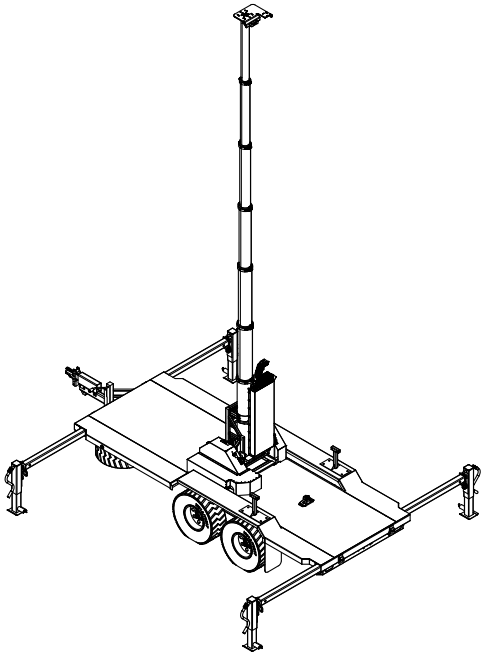
RD-T XL Trailer (AMTS) 8.54m Stiletto AL HD	RD-T XL Trailer (CES) 8.54m Stiletto AL	RD-T XL Trailer (Upright) 8.54m Stiletto AL HD

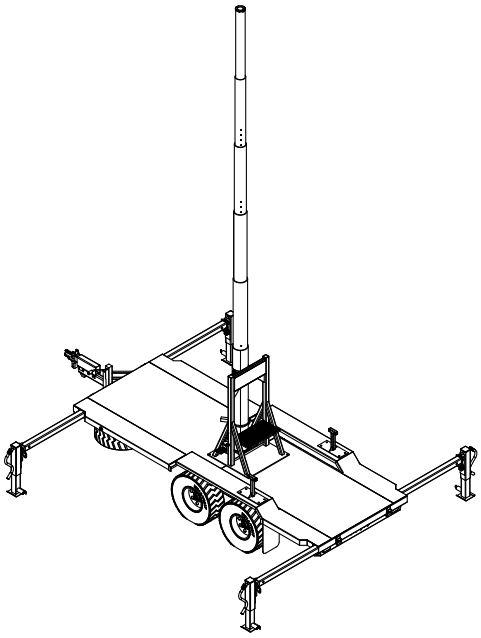












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E-mail: sales@clarkmasts.com

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. 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.

Disclaimer: *Dimensions and weights are for reference only and are subject to change. Please contact Will-Burt for current engineering specifications.*

ISO 9001:2015
INNOVATION ELEVATED®