

SPECIFICATIONS

GENERAL SPECIFICATIONS – VST-36/40/47/52-I

Note: *Specifications on units may vary or change without prior notifications due to option selections.*

This section includes a brief description of each of the major (standard) components.

PLATFORM - The closed fiberglass platform is 24 In. x 24 In. x 42 In. deep (.61 m x .61 m x 1.07 m) with an inside and outside step for easy access.

Maximum rated platform capacity for all models is 600 lbs (272 kg) without jib/winch and 500 lbs (227 kg) with jib/winch.

The actual platform capacity may be reduced depending on the chassis and mounting configuration. See “Vehicle Specifications” for the actual platform capacity of a particular installation.

PERSONNEL RESTRAINT SYSTEM - A safety belt or harness and a lanyard are required and can be supplied by Time Manufacturing Company at an additional cost. Consult applicable work practices and regulations to choose between a safety belt and a harness. The anchor for the lanyard is attached to the platform support.

INDIVIDUAL LOWER CONTROLS - Individual full-pressure controls at the turret actuate all boom functions. The lower control station is equipped with a selector valve to override the upper controls.

SINGLE STICK UPPER CONTROL - The full-pressure single-stick upper control includes a safety trigger to prevent inadvertent operation. The lift movements correspond with control handle movements. An emergency stop and a tool selector control are located at the upper controls.

TRUGUARD - This advanced upper controls isolation system provides 4” of electrical isolation from the entire upper controls, including the control dash panel. This system also includes a protective shield which helps prevent environmental and work related contaminants from making direct contact with the isolating surfaces.

THE UPPER CONTROLS DO NOT PROVIDE PROTECTION IN THE EVENT OF ELECTRICAL CONTACT AND ARE NOT A SUBSTITUTE FOR MINIMUM APPROACH DISTANCES, COVER-UPS, RUBBER GLOVES AND OTHER PERSONAL PROTECTIVE EQUIPMENT.

HYDRAULIC PLATFORM ROTATION - A hydraulic rotary actuator, operated by a control lever, rotates the platform 180° from one side of the boom, to the end-hung position, and to the other side of the boom.

HYDRAULIC PLATFORM LEVELING - A master and slave cylinder controls platform leveling. The leveling system can be operated from the upper or lower controls to adjust platform leveling, tilt the platform for clean out, or to ease the removal of an injured operator.

OUTER/INNER BOOM ASSEMBLY- The outer/inner boom assembly includes an outer boom, telescopic inner boom, extension system, and hose assemblies. The outer boom consists of an 8 in. x 10 in. (203 mm x 254 mm) steel section, with a 9 in. x 11 in. (229 mm x 279 mm) fiberglass Electroguard section (N/A on VST-52). The 6-7/8 in. x 8-7/8 in. (165 mm x 216 mm) rectangular fiberglass inner boom is housed within the outer boom. The extension system consists of an extension cylinder, holding valves, and a hose carrier housed inside the boom. The hoses routed through the outer/inner boom assembly are non-conductive and fully contained within the boom assembly.

A double acting cylinder with two integral holding valves articulates the outer/inner boom assembly. A boom support cradle and a boom tie down strap are included.

LOWER BOOM WITH CHASSIS INSULATING SYSTEM – Each end of a high strength fiberglass insert (chassis insulating system) is installed inside a rectangular 8 in. x 10 in. (203 mm x 254 mm) high strength steel section. The steel and fiberglass sections are bonded with pressure-injected epoxy to fill any voids. A double acting cylinder, with two integral holding valves, articulates the lower boom. The lower boom and compensation link form a parallelogram linkage to maintain the knuckle at a constant angle to the turret.

CYLINDERS - Both the upper and lower cylinders are a threaded head-cap design. Both are equipped with two integral holding valves that prevent down creep and to lock the booms in position in the event of hose failure.

TURRET - The turret wings are designed for strength and rigidity. A bearing cover seals out moisture and prevents foreign materials from obstructing the turret rotation. The turret plate is machined to provide a flat surface to support the rotation bearing.

CONTINUOUS ROTATION - Unrestricted rotation is accomplished by a hydraulically driven worm and

spur gear with a shear-ball rotation bearing. The critical bolts holding the lift to the rotation bearing and the rotation bearing to the pedestal are grade 8 hex head capscrews. These critical bolts are torque seal marked to provide a quick means of detecting any turning of the bolt upon inspection. An eccentric ring is used for gearbox backlash adjustment.

LUBRICATION - Non-lube bearings are used at most points of motion. Only the rotation bearing requires periodic lubrication.

PEDESTAL - The pedestal is tubular with a reinforced mounting plate. The top plate of the pedestal is 1-1/4 in. (32 mm) thick and machined flat to support the rotation bearing.

HYDRAULIC OIL RESERVOIR - A 17 gallon (64.4) hydraulic oil reservoir is built integral to the pedestal. Two sight gauges allow quick hydraulic fluid level checks.

HYDRAULIC SYSTEM - The open-center hydraulic system operates at 3000 psi (207 bars) at 6 gpm (22.7 lpm). A 10 micron pressure filter is installed after the pump and a 10-micron return-line filter, mounted above the hydraulic oil level and inside the pedestal, can be easily changed without draining the reservoir. The 100 mesh (149 micron) suction strainer in the reservoir can be removed for cleaning. A gate valve, located below the reservoir, prevents oil loss when the pump is serviced. A magnetic drain plug attracts metal particles from the oil.

PAINT - The complete unit is primed and painted prior to assembly. The standard color is white urethane.

HOSES AND FITTINGS - The hoses routed through the booms are high pressure and non-conductive with swaged hose end fittings. Retainers separate the hoses inside the booms to prevent chafing and nylon sleeves are installed over hoses at points of movement. Reusable fittings can be installed if a hose is damaged.

ENGINE START / STOP - The start/stop circuit has been designed so the lift cannot be operated unless the truck ignition switch is in the "RUN" position and the master control is activated. This feature makes it difficult for unauthorized individuals to operate the lift when the truck is locked. An air cylinder at the upper controls and a toggle switch at the electrical lower controls at the pedestal are used to energize this system.

HYDRAULIC TOOL CIRCUIT AT THE PLATFORM - This system is intended for open center hydraulic

tools. The tool circuit provides 6 gpm (22.7 lpm). A pressure reducing valve in the tool circuit limits the tool pressure. The valve can be adjusted from 1000 to 2500 psi (69 to 173 bars).

LINE-LIFTING SOCKET - Built as part of the platform support structure, is a vertical line-lifting socket for 3 in. (76 mm) diameter line-lifting attachments. The socket is automatically leveled with the platform without any manual adjustments.

ELECTRICAL INSULATION SPECIFICATIONS - The outer/inner boom assembly is tested and certified for electrical work at 46 KV and below in accordance with ANSI A92.2 requirements. Aerial devices may be designed and configured for gloving work and tool methods at 46KV and below. The outer/inner boom assembly is fully insulated even in a retracted position. The chassis insulating system (lower boom insert) is also tested according to ANSI A92.2.

OUTRIGGER / BOOM INTERLOCK SYSTEM - The outrigger/boom interlock system prevents lift operation until the outriggers contact the ground and outrigger retraction before the aerial lift is properly stored.

SLOPE INDICATORS - Slope indicators are required on Versalift units and supplied by Time Manufacturing Co. slope indicators shall be installed to indicate the level of rotation bearing relative to the ground.

MANUALS - Two Operator's Manuals and two Service Manuals, one Manual of Responsibilities, and one EMI Safety Manual, are included with each aerial lift.

OPTION SPECIFICATIONS - VST-36/40/47/52-I

Below is a brief description of some of the available options for the aerial lift.

OUTRIGGERS - The modified A-frame outriggers are equipped with pilot operated check valves, internal thermal relief valves, pivot feet, and separate controls. Outrigger dimensions vary with chassis application. For a 31 in. (0.79 m) frame height, the outriggers furnish 122 in. (3.1 m) of spread, 8 in. (203 mm) of penetration, and 18 in. (457 mm) of ground clearance. For a 37-1/4 in. (0.95 m) frame height, the outriggers furnish 125-3/8 in. (3.2 m) of spread, 8 in. (203 mm) of penetration, and 18 in. (457 mm) of ground clearance.

INDEPENDENT OUTRIGGERS - Narrow angle

modified A-frame outriggers are shear-plate mounted to the frame and are equipped with pilot operated check valves, internal thermal relief valves, pivot feet, and separate controls. Outrigger dimensions vary with chassis application. For a 37-1/4 in. (0.95 m) frame height, the outriggers furnish 101-3/4 in. (2.6 m) of spread, 7-3/4 in. (197 mm) of penetration, and 15-3/4 in. (400 mm) of ground clearance.

TORSION BAR (VST-36/40 only) – An over-frame or under-frame torsion bar for the rear axle adds stability to the vehicle and is available as an option. Ballast may be required with the use of a torsion bar. A front axle under-frame torsion bar is also available and can be used in conjunction with the rear torsion bar to reduce the amount of ballast needed.

BACKUP PUMP - An auxiliary hydraulic pump designed to bring the booms down in case the main hydraulic source fails. The backup pump is driven by a DC motor, which is powered by the truck-engine battery. The system is connected in parallel with the main pump and is designed for non-continuous operation. An air cylinder at the upper controls and a toggle switch at the electrical lower controls at the pedestal are used to energize this system.

SECOND SET OF TOOL POWER PORTS - A second set of tool power ports are installed at the platform to accommodate a second open center tool.

EXTRA CONTROL CIRCUIT - Consists of an additional air cylinder at the platform, toggle switch at the pedestal, pressure switch in the turret and airline to the platform. An additional pass in the collector ring is required for each control circuit.

MANUAL THROTTLE CONTROL - Gives the operator a choice of economical engine idle speeds or faster engine speeds with faster lift movements when required. The manual throttle control is designed to operate only when the truck engine is running and the master control is activated. An air cylinder at the upper controls or a toggle switch at the electrical lower controls at the pedestal are used to energize this system.

4-AXIS CONTROL - The 4-Axis controller option is a full pressure control located at the platform which consists of a multi-jointed handle control that actuates the interlock section and four individual boom function valves.

CATEGORY D DIELECTRIC TESTING AND CERTIFICATION - Testing and certification for ANSI A92.2 Category D are available. These aerial devices which are designed and manufactured for

work in which the insulating is not considered as primary insulation, but secondary. These aerial devices are NOT designed for gloving work methods. They are rated at voltages of 46kv.

PLATFORM VARIATIONS:

- 24 in. x 24 in. (0.61 m x 0.61 m) Fiberglass Platform (Standard)
- 24 in. x 30 in. (0.61 m x 0.76 m) Fiberglass Platform
- 24 in. x 42 in. (0.61 m x 1.07 m) Fiberglass Platform
- 24 in. x 48 in. (0.61 m x 1.22 m) Fiberglass Platform
- 36 in. x 60 in. (0.91 m x 1.52 m) Aluminum Walk-In Platform (Reduces maximum platform capacity by 100 lbs.) This option requires Category D rating.
- 40 in. x 64 in. (1.02 m x 1.55 m) Aluminum Walk-In Platform (Reduces maximum platform capacity by 100 lbs.). This option requires Category D rating.

PLATFORM COVER - Vinyl covers are available for the platforms.

PLATFORM LINER - Platform liners are available for each of the platforms.

LIFTING EYE - A lifting eye attachment near the end of the outer boom has a 1000 lbs. (455 kg) maximum capacity. (Not available on the VST-36-I)

PEDESTAL HEIGHT VARIATIONS – Various height pedestals are available to accommodate different cab heights and mounting locations. See the detailed Dimensional Specifications for the available and standard pedestal heights of each model.

MANUAL JIB AND WINCH - The material handling jib and winch consists of a winch and a jib pole that are automatically leveled with the platform. Up to 1000 lbs. (454 kg) material handling capacity can be provided at elevated boom angles. The winch is hydraulically powered through a self-locking worm gear drive, so a load-holding brake is not required. The winch provides line speeds of 15 to 30 ft. per minute (5 to 9 m per min.). Eighty feet (24 m) of 1/2-in. (13 mm) diameter polyester rope with a clevis hook is provided.

The angle of the jib pole is manually adjusted; the jib-pole assembly tilts in 10° increments from horizontal to a maximum of 50° above horizontal. The jib-pole assembly also can be rotated to any of the three convenient load-lifting positions to accommodate a load. Those positions are 30° CW, 0°, and 30° CCW

from the boom centerline. The jib pole and winch assemblies can be rotated to a stowed position 180° from the end hung position, or they can be easily removed when not needed.

HYDRAULIC JIB AND WINCH - The material handling jib and winch consists of a winch and a jib pole that are automatically leveled with the platform. Up to 1000 lbs. (454 kg) material-handling capacity can be provided at elevated boom angles. The winch is hydraulically powered through a self-locking worm gear drive, so a load-holding brake is not required. The winch provides line speeds of 15 to 30 ft. per minute (5 to 9 m per min.). Eighty feet (24 m) of 1/2-in. (13 mm) diameter polyester rope with a clevis hook is provided.

The 4 in (100 mm) square jib pole hydraulically tilts with 90° of travel relative to the platform, from horizontal to vertical. Since the pole is automatically leveled with the platform, there is a total of 200° of jib pole articulation relative to the upper boom. The jib pole also hydraulically extends and retracts, providing 16-in. (400-mm) travel, from 44 in. to 60 in. (1.1 m to 1.5 m). The jib-pole assembly also can be rotated to any of three convenient load-lifting positions to accommodate a load. The jib pole and winch assemblies can be rotated to a stowed position 180° from the end-hung position, or they can be easily removed when not needed.

ARTICULATED JIB – Jib and winch consisting of a winch, two piece jib pole assembly, and articulating arm. This feature comes in two different options, up to 1,000 lbs. or 1,100 lbs. material handling can be provided depending on boom and jib positions. The winch is hydraulically powered by a self-locking worm gear drive and is rated at 1000 lbs full drum. The winch provides an average line speed of approximately 20 FPM (6.1 m/minute).

The 3” diameter round inner jib pole is dielectrically tested and can be manually pinned in 5 different length positions, for a total of 22” length adjustment. The 4” diameter round outer jib pole is manufactured from FRP but is not dielectrically tested. The jib pole assembly is automatically leveled with the platform and can be hydraulically tilted from -10° to + 86° for a total of 96°.

The jib pole assembly is mounted on an articulating arm. The arm is compensated so the jib pole stays at approximately the same angle relative to the ground as the arm articulates. The arm travels 91°, providing the equivalent to 17.5” horizontal jib pole extension and 20” vertical jib pole extension. The jib and winch assembly can be manually indexed

about a vertical axis in one of three different pin positions. This positions the jib up to 30° to either side of the boom, for a total travel of 60°. The jib and winch assembly can be removed without tools when not needed.

AUTOMATIC BOOM LATCH – The automatic boom latch is designed to automatically restrain the upper boom in the cradle when stowed and automatically release the boom when the lift is operated. The latch is actuated by a hydraulic cylinder and includes a manual over-ride to open the latch without hydraulic power.

PLATFORM ELEVATOR (Not available with aluminum platform) – Hydraulically controlled platform elevator which will raise the platform and control panel 24” at the boom tip. Driven by a hydraulic cylinder, the platform elevator can be raised proportionally using the same style control valve used for all boom function. **Note:** This reduces the unit capacity by 100 lbs.

SLOPEMAX – This limit system allows operators to work on surface slopes greater than 5°. SlopeMAX operates with three different sensors. A lower boom angle sensor, a turret base plate angle sensor, and a boom stow sensor. The system uses a hydraulic enabled valve to shut off flow to limit the lower boom raise function depending on the slope range the aerial device is parked on.

VST-36-I DIMENSIONAL SPECIFICATIONS

Based on 40 in. (1.02 m) Frame Height, all Dimensions Nominal

Horizontal Reach	26 ft. 2 in. (8.0 m)
Maximum Platform Capacity (varies with installation and jib/winch)	600 lbs. (272 kg)
Jib Capacity (varies with boom position)	1000 lbs. (454 kg)

With 46.25 in. (1.17 m) Tall Pedestal (Standard)

Height to Bottom of Platform	36 ft. 4 in. (11.1 m)
Working Height	41 ft. 4 in. (12.6 m)
Stowed Travel Height	10 ft. 6 in. (3.2 m)
Weight of Lift.....	3,200 lbs. (1450 kg)

With 52.25 in. (1.33 m) Tall Pedestal (6 in. Taller)

Height to Bottom of Platform	36 ft. 10 in. (11.2 m)
Working Height	41 ft. 10 in. (12.8 m)
Stowed Travel Height	11 ft. 0 in. (3.4 m)
Weight of Lift.....	3,220 lbs. (1460 kg)

With 58.25 in. (1.48 m) Tall Pedestal (12 in. Taller)

Height to Bottom of Platform	37 ft. 4 in. (11.4 m)
Working Height	42 ft. 4 in. (12.9 m)
Stowed Travel Height	11 ft. 6 in. (3.5 m)
Weight of Lift.....	3,240 lbs. (1470 kg)

With 64.25 in. (1.63 m) Tall Pedestal (18 in. Taller)

Height to Bottom of Platform	37 ft. 10 in. (11.5 m)
Working Height	42 ft. 10 in. (13.1 m)
Stowed Travel Height	12 ft. (3.7 m)
Weight of Lift.....	3,260 lbs. (1480 kg)

Hydraulic System

Operating Pressure	3000 psi (207 bars)
Flow Rate	6 gpm (22.7 lpm)
Filtration.....	10 micron Pressure and Return 100 mesh Suction
System Type.....	Open Center
Power Source	PTO Pump

Boom Action

Outer/Inner Boom Travel	-25° to +85°
Lower Boom Travel.....	0° to +87°
Inner Boom Extension	79 in. (2.0 m)
Rotation	360° Continuous.

Insulation Gap

Upper Boom Fully Retracted	46 in. (1.2 m)
Lower Boom	12 in. (305 mm)

Ambient Temperature Range for Operation.....-40°F (-40°C) to 120°F (49°C)

VST-40-I DIMENSIONAL SPECIFICATIONS

Based on 40 in. (1.02 m) Frame Height, all Dimensions Nominal

Horizontal Reach	30 ft. 2 in. (9.2 m)
Maximum Platform Capacity (varies with installation and jib/winch)	600 lbs. (272 kg)
Jib Capacity (varies with boom position)	1000 lbs. (454 kg)

With 46.25 in. (1.17 m) Tall Pedestal (Standard)

Height to Bottom of Platform	40 ft. 4 in. (12.3 m)
Working Height	45 ft. 4 in. (13.8 m)
Stowed Travel Height	10 ft. 6 in. (3.2 m)
Weight of Lift.....	3,300 lbs. (1495 kg)

With 52.25 in. (1.33 m) Tall Pedestal (6 in. Taller)

Height to Bottom of Platform	40 ft. 10 in. (12.4 m)
Working Height	45 ft. 10 in. (14.0 m)
Stowed Travel Height	11 ft. 0 in. (3.4 m)
Weight of Lift.....	3,320 lbs. (1505 kg)

With 58.25 in. (1.48 m) Tall Pedestal (12 in. Taller)

Height to Bottom of Platform	41 ft. 4 in. (12.6 m)
Working Height	46 ft. 4 in. (14.1 m)
Stowed Travel Height	11 ft. 6 in. (3.5 m)
Weight of Lift.....	3,340 lbs. (1515 kg)

With 64.25 in. (1.63 m) Tall Pedestal (18 in. Taller)

Height to Bottom of Platform	41 ft. 10 in. (12.8 m)
Working Height	46 ft. 10 in. (14.3 m)
Stowed Travel Height	12 ft. (3.7 m)
Weight of Lift.....	3,360 lbs. (1525 kg)

Hydraulic System

Operating Pressure	3000 psi (207 bars)
Flow Rate	6 gpm (22.7 lpm)
Filtration.....	10 micron Pressure and Return 100 mesh Suction
System Type.....	Open Center
Power Source	PTO Pump

Boom Action

Outer/Inner Boom Travel	-25° to +85°
Lower Boom Travel.....	0° to +87°
Inner Boom Extension	103 in. (2.6 m)
Rotation	360° Continuous.

Insulation Gap

Upper Boom Fully Retracted	46 in. (1.2 m)
Lower Boom	12 in. (305 mm)

Ambient Temperature Range for Operation.....-40°F (-40°C) to 120°F (49°C)

SPECIFICATIONS

VST-47-I DIMENSIONAL SPECIFICATIONS

Based on 40 in. (1.02 m) Frame Height, all Dimensions Nominal

Horizontal Reach	30 ft. 9 in. (9.4 m)
Maximum Platform Capacity (varies with installation and jib/winch)	600 lbs. (272 kg)
Jib Capacity (varies with boom position)	1000 lbs. (454 kg)

With 46.25 in. (1.17 m) Tall Pedestal (6 in. Shorter)

Height to Bottom of Platform	46 ft. 4 in. (14.1 m)
Working Height	51 ft. 4 in. (15.6 m)
Stowed Travel Height	10 ft. 6 in. (3.2 m)
Weight of Lift.....	3,580 lbs. (1620 kg)

With 52.25 in. (1.33 m) Tall Pedestal (Standard)

Height to Bottom of Platform	46 ft. 10 in. (14.3 m)
Working Height	51 ft. 10 in. (15.8 m)
Stowed Travel Height	11 ft. 0 in. (3.4 m)
Weight of Lift.....	3,600 lbs. (1630 kg)

With 58.25 in. (1.48 m) Tall Pedestal (6 in. Taller)

Height to Bottom of Platform	47 ft. 4 in. (14.4 m)
Working Height	52 ft. 4 in. (16.0 m)
Stowed Travel Height	11 ft. 6 in. (3.5 m)
Weight of Lift.....	3,620 lbs. (1640 kg)

With 64.25 in. (1.63 m) Tall Pedestal (12 in. Taller)

Height to Bottom of Platform	47 ft. 10 in. (14.6 m)
Working Height	52 ft. 10 in. (16.1 m)
Stowed Travel Height	12 ft. (3.7 m)
Weight of Lift.....	3,640 lbs. (1650 kg)

Hydraulic System

Operating Pressure	3000 psi (207 bars)
Flow Rate	6 gpm (22.7 lpm)
Filtration.....	10 micron Pressure and Return 100 mesh Suction
System Type.....	Open Center
Power Source	PTO Pump

Boom Action

Outer/Inner Boom Travel	-25° to +85°
Lower Boom Travel.....	0° to +84°
Inner Boom Extension	103 in. (2.6 m)
Rotation	360° Continuous.

Insulation Gap

Upper Boom Fully Retracted	52 in. (1.3 m)
Upper Boom Extended 12+ Inches	64 in. (1.6 m)
Lower Boom	12 in. (305 mm)

Ambient Temperature Range for Operation.....-40°F (-40°C) to 120°F (49°C)

VST-52-I DIMENSIONAL SPECIFICATIONS

Based on 40 in. (1.02 m) Frame Height, all Dimensions Nominal

Horizontal Reach	30 ft. 4 in. (9.3 m)
Maximum Platform Capacity (varies with installation and jib/winch)	600 lbs. (272 kg)
Jib Capacity (varies with boom position)	1000 lbs. (454 kg)

With 46.25 in. (1.17 m) Tall Pedestal (12 in. Shorter)

Height to Bottom of Platform	50 ft. 6 in. (15.4 m)
Working Height	55 ft. 6 in. (16.9 m)
Stowed Travel Height	10 ft. 6 in. (3.2 m)
Weight of Lift.....	3,760 lbs. (1705 kg)

With 52.25 in. (1.33 m) Tall Pedestal (6 in. Shorter)

Height to Bottom of Platform	51 ft. (15.5 m)
Working Height	56 ft. (17.1 m)
Stowed Travel Height	11 ft. 0 in. (3.4 m)
Weight of Lift.....	3,780 lbs. (1715 kg)

With 58.25 in. (1.48 m) Tall Pedestal (Standard)

Height to Bottom of Platform	51 ft. 6 in. (15.7 m)
Working Height	56 ft. 6 in. (17.2 m)
Stowed Travel Height	11 ft. 6 in. (3.5 m)
Weight of Lift.....	3,800 lbs. (1725 kg)

With 64.25 in. (1.63 m) Tall Pedestal (6 in. Taller)

Height to Bottom of Platform	52 ft. (15.8 m)
Working Height	57 ft. (17.4 m)
Stowed Travel Height	12 ft. (3.7 m)
Weight of Lift.....	3,820 lbs. (1730 kg)

Hydraulic System

Operating Pressure	3000 psi (207 bars)
Flow Rate	6 gpm (22.7 lpm)
Filtration.....	10 micron Pressure and Return 100 mesh Suction
System Type.....	Open Center
Power Source	PTO Pump

Boom Action

Outer/Inner Boom Travel	-25° to +85°
Lower Boom Travel.....	0° to +84°
Inner Boom Extension	53 in. (1.35 m)
Rotation	360° Continuous.

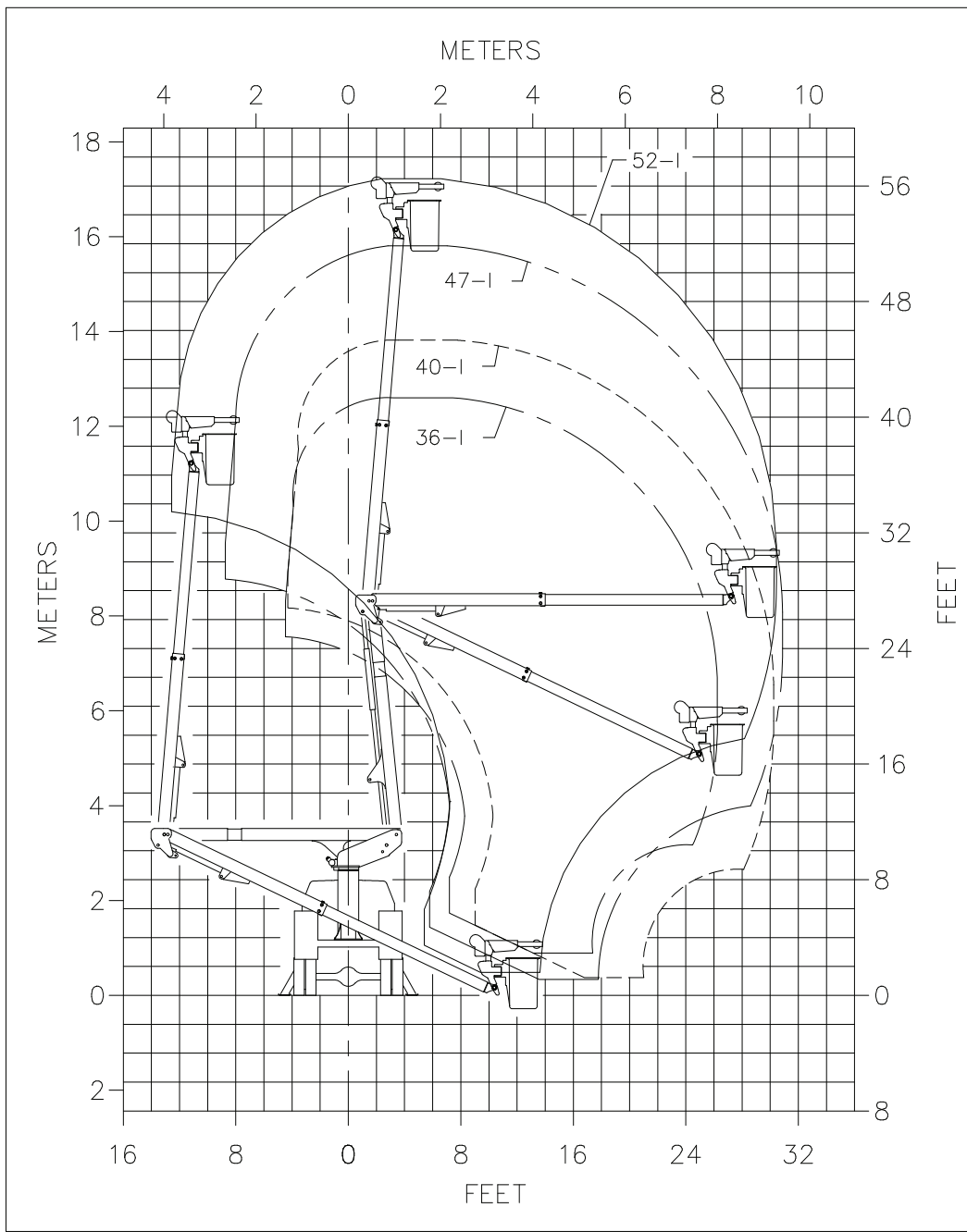
Insulation Gap

Upper Boom Fully Retracted	64 in. (1.6 m)
Lower Boom	12 in. (305 mm)

Ambient Temperature Range for Operation.....-40°F (-40°C) to 120°F (49°C)

SPECIFICATIONS

REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
56818		FIRST RELEASE	LBR	DJH	SRS	12-13-07



UNLESS OTHERWISE NOTED:
 TOLERANCES: FRACTIONS ± 1/16, DECIMALS .X ± .1, .XX ± .03, .XXX ± .005
 ANGLES ± 1°
 MACHINED SURFACE FINISHES = 125/
 PROJECTION OF VIEWS
 ALL DIMENSIONS ARE IN INCHES
 THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.

TIME
 MANUFACTURING COMPANY
 WACO TEXAS

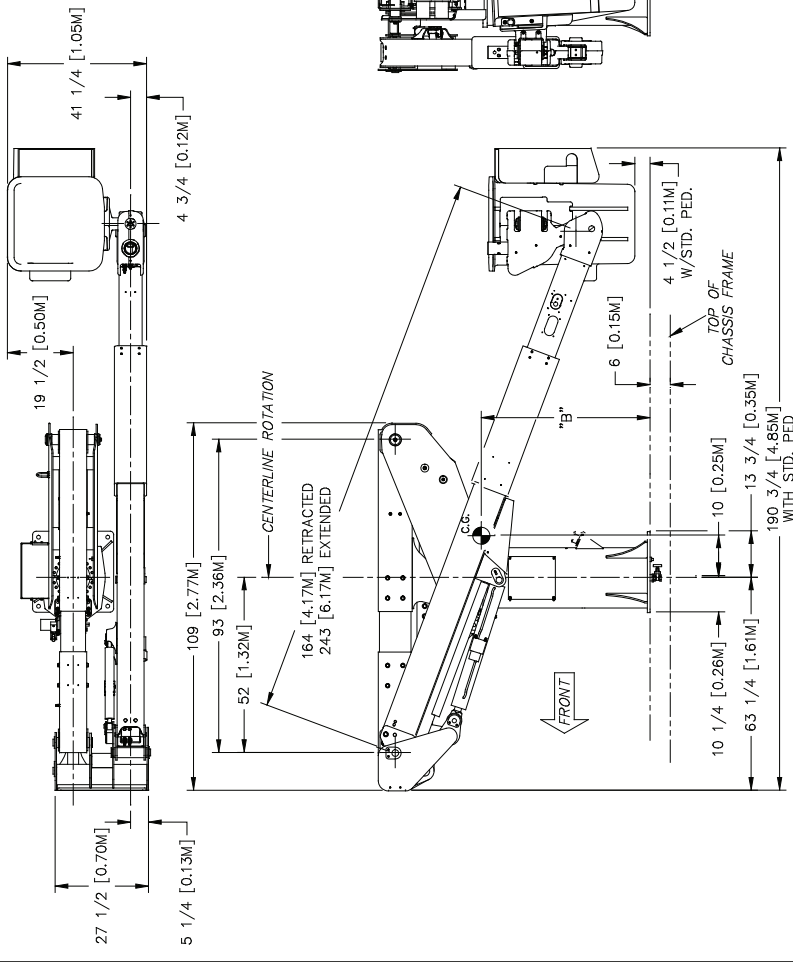
MATERIAL

 FINISH

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EST WT #	MANUAL	
SHEET 1 OF 1	DWG. NO. 21938-DWG	

SPECIFICATIONS

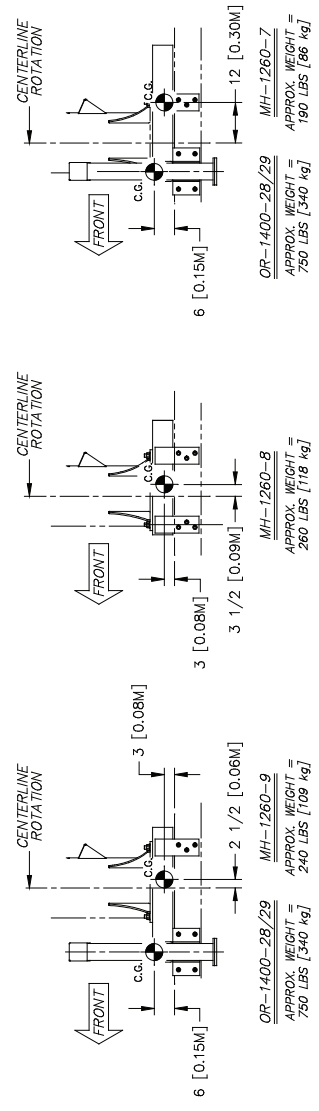
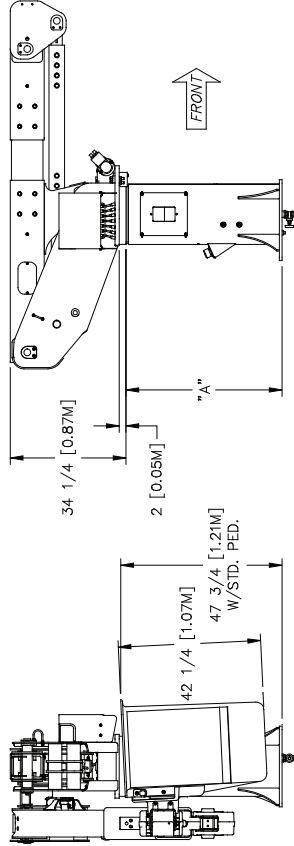
REV. NO.	DESCRIPTION	BY	CHKD.	DATE
156818	FIRST RELEASE	LBR	DJM	12-13-07



STANDARD →

PEDestal OPTION	"A"	"B"	WEIGHT *
P-1260-8 (46" TALL)	46 1/4 [1.17M]	50 [1.27M]	3200 LBS [1451 kg]
P-1260-9 (52" TALL)	52 1/4 [1.33M]	54 [1.37M]	3220 LBS [1460 kg]
P-1260-10 (58" TALL)	58 1/4 [1.48M]	58 [1.47M]	3240 LBS [1470 kg]
P-1260-11 (64" TALL)	64 1/4 [1.63M]	63 [1.60M]	3260 LBS [1480 kg]

VST-36-1 SHOWN



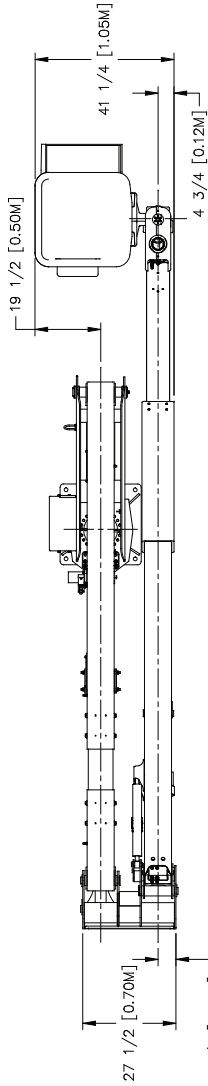
- NOTES:
- 1.) ALL DIMENSIONS ARE IN INCHES WITH METRIC EQUIVALENTS IN METERS.
 - 2.) * INDICATES WITHOUT OIL IN RESERVOIR, AND WITHOUT MOUNTING HARDWARE.
 - 3.) UPPER BOOM IS SHOWN AT STOWED POSITION.
 - 4.) P-1260-8 (46" TALL) PEDESTAL OPTION IS SHOWN.
 - 5.) ADD 150 LBS [68 kg] FOR JIB AND WINCH OPTION.
 - 6.) ADD 130 LBS [60 kg] FOR HYDRAULIC OIL IN RESERVOIR.

USE OTHERS: NOTES: DIM. BY DATE TITLE	MANUFACTURING COMPANY	WACO TEXAS	VST-36-1/N OVERALL
TOLERANCES: DECIMALS: 1/16 ± .003	TIME		
ANGLES: ± 1/8	SCALE	B	1=35
MACHINED SURFACE FINISHES: PROJECTION OF VEWS	EST WT #	MANUAL	
THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS NOT TO BE REPRODUCED OR COPIED WITHOUT PERMISSION OF THE MANUFACTURER.	SHEET	1	OF 1
	DWG. NO.		21926-DWG



SPECIFICATIONS

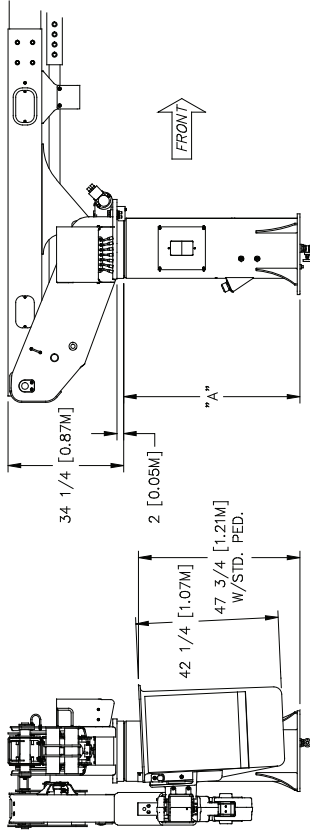
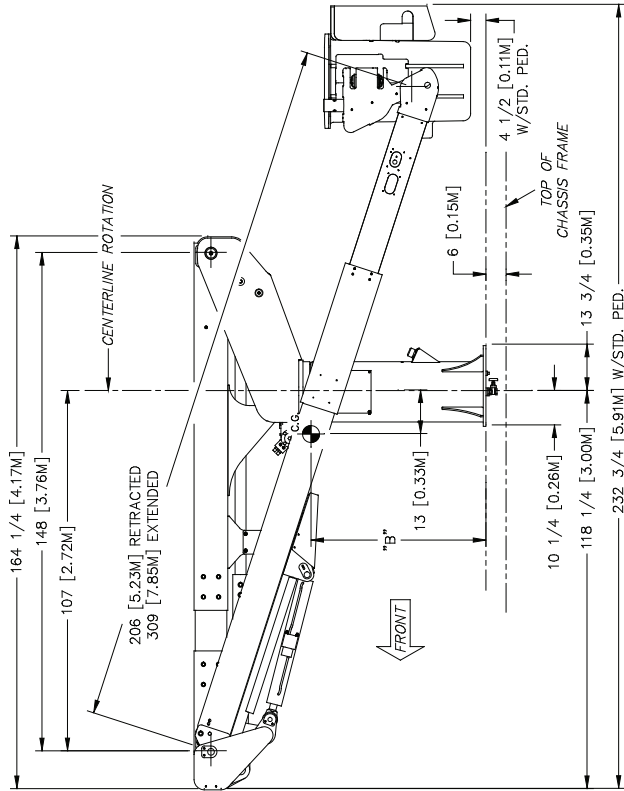
REV	DESCRIPTION	BY	CHKD	APPR.	DATE
3	FIRST RELEASE	LBR	DJH	SRS	12-13-97



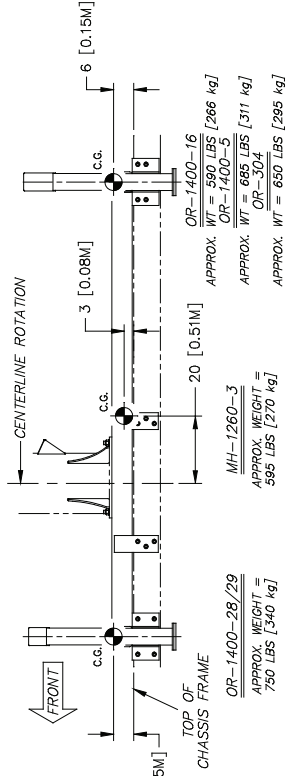
DIMENSIONAL CHART

PEDESTAL OPTION	"A"	"B"	WEIGHT *
P-1260-8 (46" TALL)	46 1/4 [1.17M]	53 [1.37M]	3580 LBS [1620 kg]
P-1260-9 (52" TALL)	52 1/4 [1.33M]	57 [1.45M]	3600 LBS [1630 kg]
P-1260-10 (58" TALL)	58 1/4 [1.48M]	60 [1.52M]	3620 LBS [1640 kg]
P-1260-11 (64" TALL)	64 1/4 [1.63M]	64 [1.63M]	3640 LBS [1650 kg]

STANDARD →

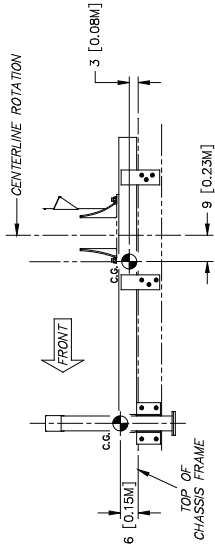
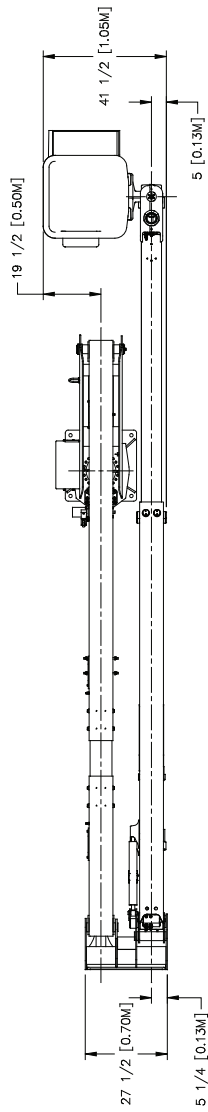


- NOTES:**
- 1.) ALL DIMENSIONS ARE IN INCHES WITH METRIC EQUIVALENTS IN METERS.
 - 2.) * INDICATES WITHOUT OIL IN RESERVOIR, AND WITHOUT MOUNTING HARDWARE.
 - 3.) UPPER BOOM IS SHOWN AT STOWED POSITION.
 - 4.) P-1260-9 (52" TALL) PEDESTAL OPTION IS SHOWN.
 - 5.) ADD 150 LBS [68 kg] FOR JIB AND WINCH OPTION.
 - 6.) ADD 130 LBS [60 kg] FOR HYDRAULIC OIL IN RESERVOIR.



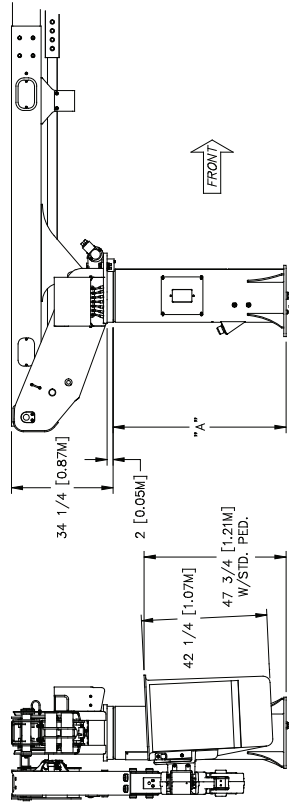
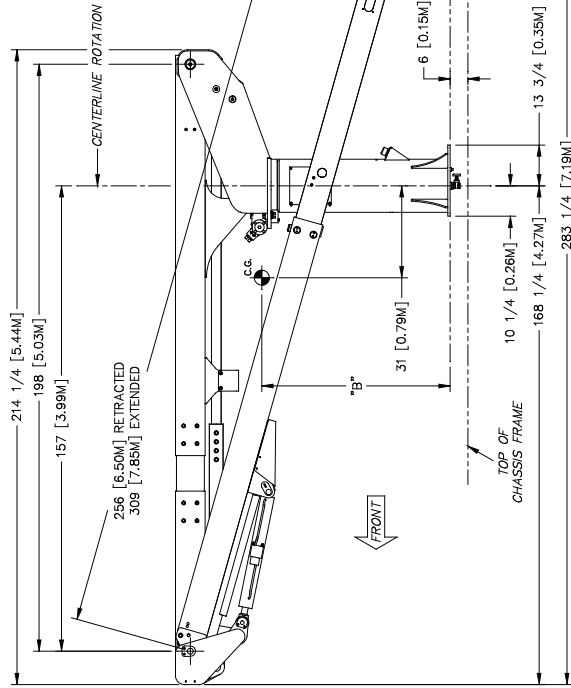
UNLESS OTHERWISE NOTED: DIMENSIONS DECIMALS TO ± 1/16 ANGLES ± 1° MACHINED SURFACE FINISH: 32 RA ALL DIMENSIONS ARE IN UNITS	DATE	TITLE
THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION OF THE MANUFACTURER AND IS NOT TO BE REPRODUCED WITHOUT THE EXPRESS PERMISSION OF THE MANUFACTURER.	12-15-07	VST-47-1/N OVERALL
MANUFACTURING COMPANY	SCALE	SIZE
TIME WACO TEXAS	B	11-35
MATERIAL	EST WT #	1
FINISH	SHEET	1 OF 1
	DWG. NO.	21928-DWG

REV	DATE	DESCRIPTION	BY	CHKD	DATE
1	04/01	FIRST RELEASE	LB	SPS	12-13-07



OR-1400-28/29
APPROX. WEIGHT
670 LBS [340 kg]

MH-1260-10
APPROX. WEIGHT
460 LBS [209 kg]

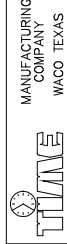


- NOTES:
- ALL DIMENSIONS ARE IN INCHES WITH METRIC EQUIVALENTS IN PARENTHESES.
 - * INDICATES WITHOUT OIL IN RESERVOIR, AND WITHOUT MOUNTING HARDWARE.
 - UPPER BOOM IS SHOWN AT STOWED POSITION.
 - P-1260-10 (58" TALL) PEDESTAL OPTION IS SHOWN.
 - ADD 150 LBS [68 kg] FOR JIB AND WINCH OPTION.
 - ADD 130 LBS [60 kg] FOR HYDRAULIC OIL IN RESERVOIR.

PEDESTAL	"A"	"B"	WEIGHT *
OP-1200-8	46 1/4 [1.17M]	54 [1.37M]	3760 LBS [1705 kg]
P-1260-9	52 1/4 [1.33M]	58 [1.47M]	3780 LBS [1715 kg]
P-1260-10	58 1/4 [1.48M]	62 [1.57M]	3800 LBS [1725 kg]
P-1260-11	64 1/4 [1.63M]	66 [1.68M]	3820 LBS [1730 kg]

STANDARD →

USE UNLESS OTHERWISE NOTED
TOLERANCES: DECIMALS
ANGLES ± 1/16
MACHINED SURFACE FINISH
PROJECTION OF VIEWS
ALL DIMENSIONS ARE IN INCHES
PERMANENT AND SOLE PROPERTY
OF TIME MANUFACTURING CO. (NOT
TO BE DISCLOSED, COPIED, OR
REPRODUCED WITHOUT THE
PERMISSION OF THE MANUFACTURER.)



MANUFACTURING COMPANY
WACO TEXAS

DWG. BY DATE
LBR 12-13-07
SCALE
B 1=40
EST. WT # MANUAL
SHEET 1 OF 1
DWG. NO. 21929-DWG

SPECIFICATIONS

VST-36-I VEHICLE SPECIFICATIONS

With One Set of Outriggers behind Cab

400 lbs. Platform Capacity with Jib / 500 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension without material handling	60 in. (1.5 m)
Cab-to-Rear Axle Dimension with material handling	84 in. (2.14 m)
Frame Resisting Bending Moment	500,000 in-lbs (57,000 N-m)
GVWR	17,500 lbs. (7940 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	13,000 lbs. (5900 kg)

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	530,000 in-lbs (63,000 N-m)
GVWR	19,500 lbs. (8845 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	14,000 lbs. (6350 kg)

With Two Sets of Outriggers and Full Length Subframe

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	410,000 in-lbs (47,000 N-m)
GVWR	17,500 lbs. (7940 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	13,000 lbs. (5900 kg)

With Torsion Bar(s)

400 lbs. Platform Capacity with Jib / 500 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	500,000 in-lbs (57,000 N-m)
GVWR	30,000 lbs. (13,610 kg)
GAWR (Front).....	10,000 lbs. (4540 kg)
GAWR (Rear)	20,000 lbs. (9070 kg)
Approximate Curb Weight for Stability.....	TBD

NOTES:

- Actual GVWR and GAWR's should be based on the weight and location of the chassis, body, lift, ballast (if required), accessories, and the desired payload.
- Recommended GVWR and GAWR's listed above are based on typical installations with a 4x2 chassis. 4x4 and/or crew cab chassis will typically require higher axle ratings.
- The curb weight for stability will vary based on the rated platform capacity, mounting configuration, frame stiffness, and stability test requirements.
- To determine the Frame Resisting Bending Moment (RBM), use the formula below:
 - Section Modulus X Yield Strength = RBM
 - For example, the RBM of a 2008 Ford F-550 with reinforced frame is:
 $17.2 \times 36,000 = 619,200$ in-lbs

SPECIFICATIONS

VST-40-I VEHICLE SPECIFICATIONS

With One Set of Outriggers behind Cab

300 lbs. Platform Capacity with Jib / 400 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	530,000 in-lbs (60,000 N-m)
GVWR	17,500 lbs. (7940 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	13,500 lbs. (6120 kg)

400 lbs. Platform Capacity with Jib / 500 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	530,000 in-lbs (60,000 N-m)
GVWR	19,500 lbs. (8845 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	14,500 lbs. (6580 kg)

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	530,000 in-lbs (60,000 N-m)
GVWR	19,500 lbs. (8845 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	15,000 lbs. (6800 kg)

With Two Sets of Outriggers and Full Length Subframe

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	480,000 in-lbs (55,000 N-m)
GVWR	17,500 lbs. (7940 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	14,500 lbs. (6580 kg)

With Torsion Bar(s)

300 lbs. Platform Capacity with Jib / 400 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	530,000 in-lbs (60,000 N-m)
GVWR	30,000 lbs. (13,610 kg)
GAWR (Front).....	10,000 lbs. (4540 kg)
GAWR (Rear)	20,000 lbs. (9070 kg)
Approximate Curb Weight for Stability.....	TBD

NOTES:

- Actual GVWR and GAWR's should be based on the weight and location of the chassis, body, lift, ballast (if required), accessories, and the desired payload.
- Recommended GVWR and GAWR's listed above are based on typical installations with a 4x2 chassis. 4x4 and/or crew cab chassis will typically require higher axle ratings.
- The curb weight for stability will vary based on the rated platform capacity, mounting configuration, frame stiffness, and stability test requirements.
- To determine the Frame Resisting Bending Moment (RBM), use the formula below:
 - Section Modulus X Yield Strength = RBM
 - For example, the RBM of a 2008 Ford F-550 with reinforced frame is:
17.2 x 36,000 = 619,200 in-lbs

VST-47-I VEHICLE SPECIFICATIONS

With One Set of Outriggers behind Cab

400 lbs. Platform Capacity with Jib / 500 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	600,000 in-lbs (66,000 N-m)
GVWR	24,000 lbs. (10,890 kg)
GAWR (Front).....	9,000 lbs. (4080 kg)
GAWR (Rear)	16,000 lbs. (7260 kg)
Approximate Curb Weight for Stability.....	16,000 lbs. (7260 kg)

With One Set of Outriggers behind Cab

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	620,000 in-lbs (70,000 N-m)
GVWR	24,000 lbs. (10,880 kg)
GAWR (Front).....	9,000 lbs. (4080 kg)
GAWR (Rear)	16,000 lbs. (7260 kg)
Approximate Curb Weight for Stability.....	16,500 lbs. (7480 kg)

With Two Sets of Outriggers and Full Length Subframe

400 lbs Platform Capacity with Jib / 500 lbs Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	360,000 in-lbs (41,000 N-m)
GVWR	17,500 lbs. (7940 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	14,500 lbs. (6580 kg)

With Two Sets of Outriggers and Full Length Subframe

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	84 in. (2.14 m)
Frame Resisting Bending Moment	380,000 in-lbs (43,000 N-m)
GVWR	17,500 lbs. (7940 kg)
GAWR (Front).....	7,000 lbs. (3175 kg)
GAWR (Rear)	13,500 lbs. (6120 kg)
Approximate Curb Weight for Stability.....	15,000 lbs. (6800 kg)

NOTES:

- Actual GVWR and GAWR's should be based on the weight and location of the chassis, body, lift, ballast (if required), accessories, and the desired payload.
- Recommended GVWR and GAWR's listed above are based on typical installations with a 4x2 chassis. 4x4 and/or crew cab chassis will typically require higher axle ratings.
- The curb weight for stability will vary based on the rated platform capacity, mounting configuration, frame stiffness, and stability test requirements.
- To determine the Frame Resisting Bending Moment (RBM), use the formula below:
 - Section Modulus X Yield Strength = RBM
 - For example, the RBM of a 2008 Ford F-550 with reinforced frame is:
17.2 x 36,000 = 619,200 in-lbs

VST-52-I VEHICLE SPECIFICATIONS

With One Set of Outriggers behind Cab

400 lbs. Platform Capacity with Jib / 500 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	102 in. (2.6 m)
Frame Resisting Bending Moment	580,000 in-lbs (66,000 N-m)
GVWR	24,000 lbs. (10,890 kg)
GAWR (Front).....	9,000 lbs. (4080 kg)
GAWR (Rear)	16,000 lbs. (7260 kg)
Approximate Curb Weight for Stability.....	17,000 lbs. (7712 kg)

With One Set of Outriggers behind Cab

500 lbs. Platform Capacity with Jib / 600 lbs. Platform Capacity without Jib

Cab-to-Rear Axle Dimension	102 in. (2.6 m)
Frame Resisting Bending Moment	610,000 in-lbs (69,000 N-m)
GVWR	24,000 lbs. (10,890 kg)
GAWR (Front).....	9,000 lbs. (4080 kg)
GAWR (Rear)	16,000 lbs. (7260 kg)
Approximate Curb Weight for Stability.....	17,300 lbs. (7850 kg)

With Two Sets of Outriggers and Full Length Subframe

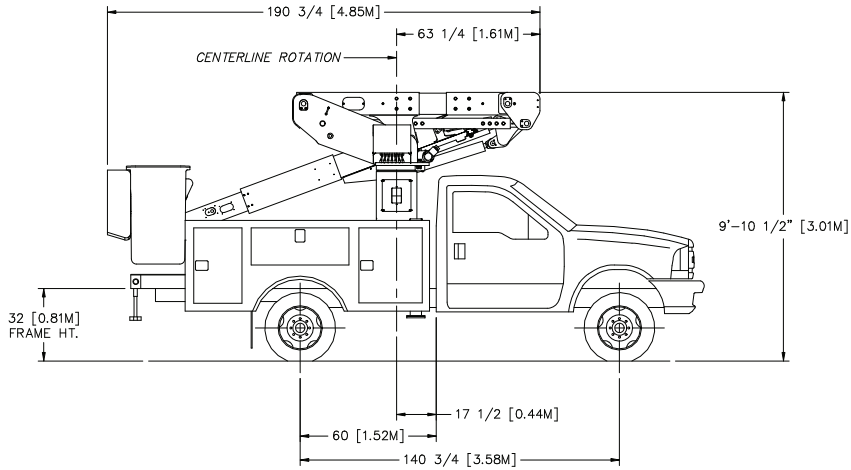
400 lbs Platform Capacity with Jib / 500 lbs Platform Capacity without Jib

Cab-to-Rear Axle Dimension	108 in. (2.74 m)
Frame Resisting Bending Moment	530,000 in-lbs (60,000 N-m)
GVWR	22,000 lbs. (9979 kg)
GAWR (Front).....	7,500 lbs. (3402 kg)
GAWR (Rear)	15,000 lbs. (6800 kg)
Approximate Curb Weight for Stability.....	17,300 lbs. (7847 kg)

NOTES:

- Actual GVWR and GAWR's should be based on the weight and location of the chassis, body, lift, ballast (if required), accessories, and the desired payload.
- Recommended GVWR and GAWR's listed above are based on typical installations with a 4x2 chassis. 4x4 and/or crew cab chassis will typically require higher axle ratings.
- The curb weight for stability will vary based on the rated platform capacity, mounting configuration, frame stiffness, and stability test requirements.
- To determine the Frame Resisting Bending Moment (RBM), use the formula below:
 - Section Modulus X Yield Strength = RBM
 - For example, the RBM of a 2008 Ford F-550 with reinforced frame is:
17.2 x 36,000 = 619,200 in-lbs

REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
(A)	57989	ADDED FOR REFERENCE ONLY NOTE	DJH	MG	SRS	10/27/09

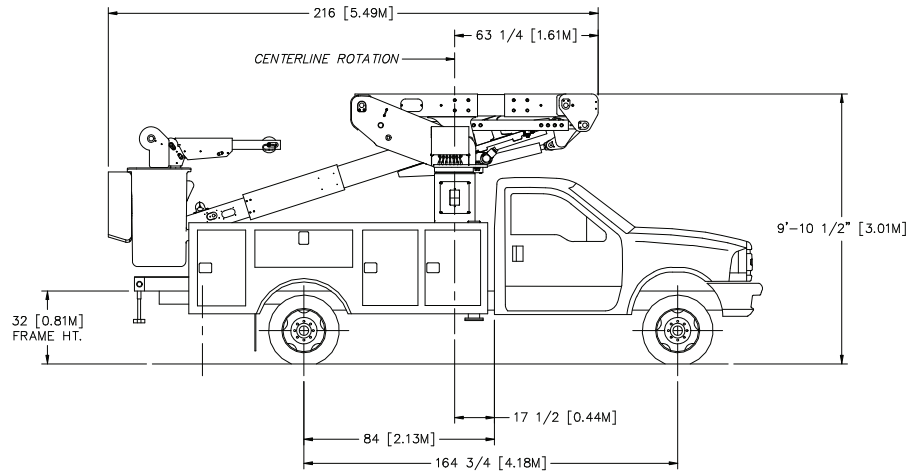


P-1260-8 PEDESTAL
OPTION SHOWN

FOR REFERENCE ONLY

UNLESS OTHERWISE NOTED: TOLERANCES: FRACTIONS ± 1/16 DECIMALS .XX ± .03 .XXX ± .005 ANGLES ± .1° MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS = 1ST ANGLE ALL DIMENSIONS ARE IN INCHES THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.	MANUFACTURING COMPANY WACO TEXAS	DWN. BY	DATE	TITLE
		LBR	12-13-07	VST-36-1 OUTLINE DRAWING
MATERIAL	FINISH	EST WT #	MANUAL	SHEET
		1	OF 1	DWG. NO.
				21943-DWG

REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
(A)	57989	ADDED FOR REFERENCE ONLY NOTE	DJH	MG	SRS	10/27/09



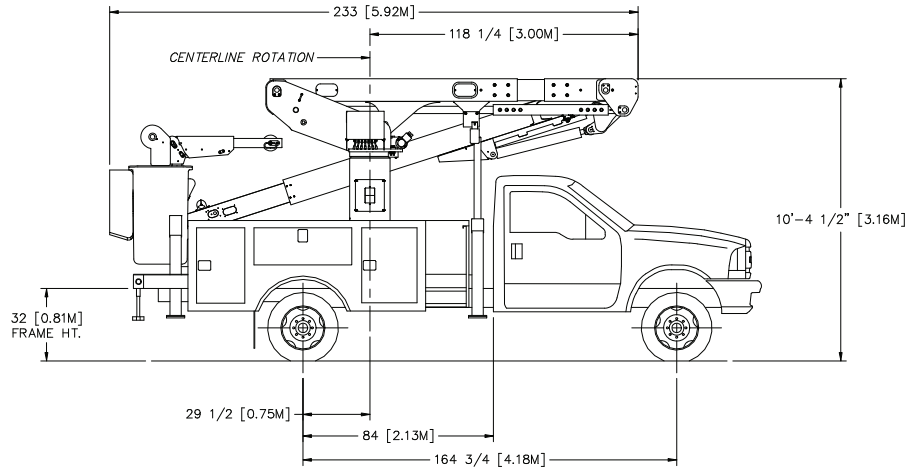
P-1260-8 PEDESTAL
OPTION SHOWN

FOR REFERENCE ONLY

UNLESS OTHERWISE NOTED: TOLERANCES: FRACTIONS ± 1/16 DECIMALS .XX ± .03 .XXX ± .005 ANGLES ± .1° MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS = 1ST ANGLE ALL DIMENSIONS ARE IN INCHES THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.	MANUFACTURING COMPANY WACO TEXAS	DWN. BY	DATE	TITLE
		LBR	12-13-07	VST-40-1 OUTLINE DRAWING
MATERIAL	FINISH	EST WT #	MANUAL	SHEET
		1	OF 1	DWG. NO.
				21944-DWG

SPECIFICATIONS

REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
57989		ADDED FOR REFERENCE ONLY NOTE	DJH	MG	SRS	10/27/09

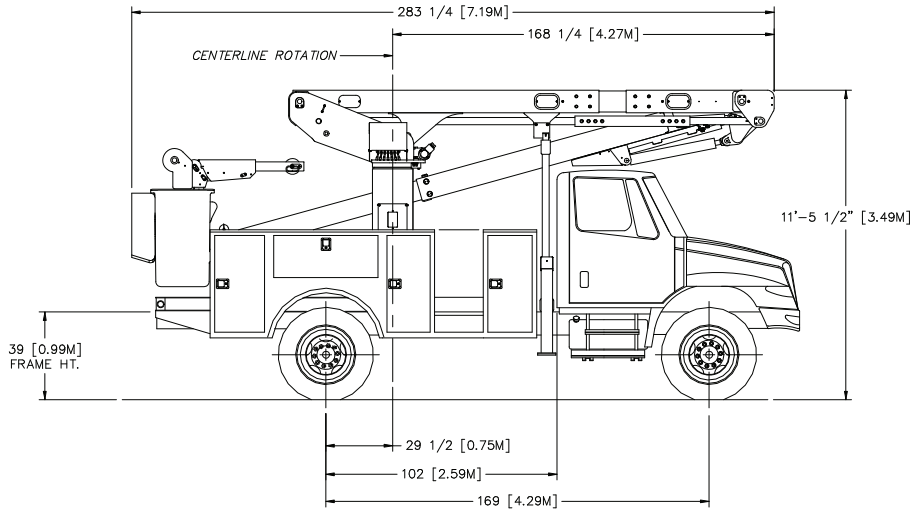


P-1260-9 PEDESTAL
OPTION SHOWN

FOR REFERENCE ONLY

<small>UNLESS OTHERWISE NOTED: TOLERANCES: DECIMALS FRACTIONS ± 1/16 .XX ± .03 ANGLES ± .005 .XXX ± .005 MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS ALL DIMENSIONS ARE IN INCHES THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.</small>		<p>MANUFACTURING COMPANY WACO TEXAS</p>	DWN. BY	DATE	<p>TITLE</p> <p>VST-47-1 OUTLINE DRAWING</p>
MATERIAL	EST WT #		MANUAL	SHEET	
FINISH	1 OF 1	—	1	21945-DWG	

REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
57989		ADDED FOR REFERENCE ONLY NOTE	DJH	MG	SRS	10/27/09



P-1260-10 PEDESTAL
OPTION SHOWN

FOR REFERENCE ONLY

<small>UNLESS OTHERWISE NOTED: TOLERANCES: DECIMALS FRACTIONS ± 1/16 .XX ± .03 ANGLES ± .005 .XXX ± .005 MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS ALL DIMENSIONS ARE IN INCHES THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.</small>		<p>MANUFACTURING COMPANY WACO TEXAS</p>	DWN. BY	DATE	<p>TITLE</p> <p>VST-52-1 OUTLINE DRAWING</p>
MATERIAL	EST WT #		MANUAL	SHEET	
FINISH	1 OF 1	—	1	21946-DWG	