

Purchase Order

Page 1 of 1

PO Accounting Date: 11/4/2016

THIS NUMBER MUST APPEAR ON ALL INVOICES,
PACKAGES AND SHIPPING PAPERS.

Purchase
Order #

PO-002595

Delivery must be made within
doors of specified destination.

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Truckee Meadows Water Authority
Accounts Payable
PO Box 30013
Reno NV 89520-3013

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TEC Equipment Inc
PO Box 11272
Portland OR 97211

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Truckee Meadows Water Authority
1355 Capital Blvd
Reno NV 89502

Requester Contact Name		Requester Contact Phone Number		Vendor Number		
				000256		
Date Ordered	Date Requested	Freight Method/Terms				
11/4/2016	4/9/2017					
Line #	Description/Part No.	Qty	UOM	Unit Price	Discount Amount	Extended Price
1	Boom Truck Replacement - NRS 332 Public Bid - TMWA Bid No. 2017-002 - awarded to lowest responsive and responsible bidder (Asset Veh - 332 Public Bid) 1-1690 FA-VEH	284044.00	usd	1.00		\$284,044.00
<div> Mark Foree General Manager</div>						

Truckee Meadows Water Authority's Terms and Conditions shall govern this and all related transactions, review them at
http://tmwa.com/docs/po_terms_and_conditions.doc

This Purchase Order number must be indicated on all invoices, cartons and packing slips.

PO Total	\$284,044.00
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**PURCHASE AGREEMENT
(NRS 332)**

**BOOM TRUCK REPLACEMENT
TMWA Bid No.: 2017-002**

THIS EQUIPMENT/PRODUCT PURCHASE AGREEMENT (also herein referred to as "Contract"), made and entered into this 5th day of November, 2016, by and between the Truckee Meadows Water Authority hereinafter called "TMWA" and **TEC Equipment, Inc. 1955 E. Greg St. Sparks, NV 89431** hereinafter called the "Supplier".

WITNESSETH, that TMWA and the Supplier, for the consideration hereinafter named, agree as follows:

Article 1 Scope of Work

The Supplier shall provide equipment/product for the Boom Truck Replacement ("Boom Truck") including Truck Cab and Chassis with crane and all accessories Installed and Complete as provided in the specifications ("Boom Truck") and provide all of the equipment and services described in the specification prepared by TMWA (Exhibit "A" attached hereto) and as amended by specific addenda, and shall do everything required by this Agreement in furnishing the Boom Truck.

Delivery of the Boom Truck shall be to TMWA's Corporate Boulevard Yard located at 1355 Capital Boulevard, Reno, Nevada.

Article 2 Contract Time, Guaranteed Delivery Date, and Liquidated Damages

Supplier agrees to deliver the Boom Truck, in a good and satisfactory condition, pursuant to the Specification to the TMWA Corporate Boulevard Yard site located at 1355 Capital Avenue, Reno, Nevada no later than **One Hundred Fifty (150) calendar days** following the issuance of the Notice to Proceed, unless otherwise agreed to between the parties, which is the Guaranteed Delivery Time as defined in the Bid Package.

TMWA and Supplier recognize that time is of the essence of this Agreement.

Article 3 The Contract Sum

TMWA shall pay Supplier, as full compensation for furnishing the Boom Truck, services, and other specified items in accordance with the Contract Documents and to the satisfaction of TMWA, the lump sum amount of: **Two Hundred and Eighty-Four Thousand and Forty Four (\$ 284,044.00) Dollars.**

Article 4 Payment

Payment for the Boom Truck item described on the Bid Schedule will be made within 30 days of the later of: i) inspection by TMWA and acceptance of delivery of such Boom Truck; or ii) receipt of an invoice for the Boom Truck item.

Article 5 Acceptance and Final Payment

Testing and acceptance of the Boom Truck shall be as specified in the Specifications, Bid and Contract Documents. Acceptance of final payment by the Supplier shall constitute a full waiver and release by the Supplier of all claims against TMWA arising out of or relating to this Agreement.

Article 6 The Contract Documents

The following is an enumeration of the Contract Documents that are fully a part of the Contract as if herein repeated:

1. Bid Documents and Bid Form
2. Agreement
3. Specifications
4. Addenda

Article 7 Warranty

Supplier warrants that the Boom Truck furnished under the Contract will be of good quality and new and that the Boom Truck will be free from defects and will conform with the requirements of the Specifications, Bid and Contract Documents.

Article 8 Indemnification/Hold Harmless

Notwithstanding any provision to the contrary in the Contract Documents, TMWA waives any requirement that the Supplier on this bid provide insurance (other than property insurance insuring risk of loss until delivery and acceptance by TMWA) in connection with the delivery of the Boom Truck.

Article 9 Performance Bond (*Not Required*)

Article 10 Termination

In addition to other provisions of this Agreement, TMWA may terminate the Agreement in accordance with the procedures specified in the Bid Documents, Bid Form, Specifications and Contract upon giving Supplier seven day notice in writing.

Article 11 Governing Law

This Agreement shall be governed by, interpreted under and construed and enforced in accordance with the laws of the State of Nevada, with venue in the County of Washoe. Each of the parties hereto acknowledge and agree that the laws of the State of Nevada and the selection of venue in the County of Washoe were freely chosen by the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

TRUCKEE MEADOWS WATER AUTHORITY

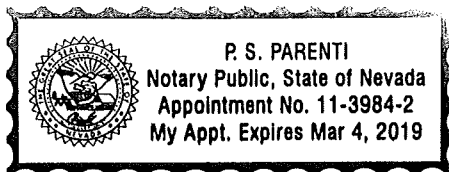
Dated: Nov. 5, 2016 By: Mark Force
General Manager

ATTEST: _____
TMWA Clerk

Dated: Nov 1, 2016 Supplier: TEC Equipment, Inc
By: Chet Johnson
Name: Chet Johnson
Title: TRUCK SALES

STATE OF NEVADA)
) ss:
COUNTY OF WASHOE)

On this 1st day of NOVEMBER, 2016, personally appeared before me, a Notary Public, CHET JOHNSON, who acknowledged to me that he/she executed the foregoing Agreement for Equipment/Product as the authorized representative of the Supplier.



P. S. Parenti
Notary Public

ATTACHMENT "A"

18 ton Boom Truck

The specification provided is based on an International cab and chassis, the Truckee Meadows Water Authority will consider other models as long as they can be compared as equal to or better.

Cab and Chassis Specification

Base Chassis, Model 7600 SBA 6X4 2010 with 230.00 Wheelbase, 162.90 CA, and 100.00 Axle to Frame.

FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm)

Maximum OAL

BUMPER, FRONT Steel, Swept Back

Includes

: BUMPER, FRONT Powder Coated Gray (Argent) Color

WHEELBASE RANGE 183" (465cm) Through and Including 248" (630cm)

AXLE, FRONT NON-DRIVING {Meritor MFS-18-133A} Wide Track, I-Beam Type, 18,000-lb Capacity

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front

Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

SUSPENSION, FRONT, SPRING Multileaf, Shackle Type; 18,000-lb Capacity; Less Shock Absorbers

Includes

: SPRING PINS Rubber Bushings, Maintenance-Free

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front

Suspension; Brake System; Brakes, Front

Air Cam; Wheels; Tires.

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes

- : BRAKE LINES Color and Size Coded Nylon
- : DRAIN VALVE Twist-Type
- : GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster
- : PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel
- : PARKING BRAKE VALVE For Truck
- : QUICK RELEASE VALVE On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4
- : SLACK ADJUSTERS, FRONT Automatic
- : SLACK ADJUSTERS, REAR Automatic
- : SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4

Notes

: Rear Axle is Limited to 46,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Standard Rear Air Cam Brakes Regardless of Axle /Suspension Ordered.

BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers

Notes

: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.

TRAILER CONNECTIONS Four-Wheel, With Hand Control Valve and Tractor Protection Valve, for Straight Truck

TRAILER HOSES Glad Hands for Four-Wheel Connections, Temporarily Mounted with Bulkhead Connectors on End of Frame, Includes

Additional Hosing and Dummy Glad Hands

DRAIN VALVE {Berg} Manual; With Pull Chain, for Air Tank

AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-Channel)

AIR DRYER {Meritor Wabco System Saver 1200} with Heater

Includes

: AIR DRYER LOCATION Inside Left Rail, Back of Cab

BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 Spring Brake

BRAKE CHAMBERS, FRONT AXLE {Bendix} 24 SqIn

BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

AIR COMPRESSOR {Bendix BA-921 Head Unload} 15.9 CFM Capacity, Single Cylinder

AIR TANK LOCATION (2) : One Mounted Under Each Frame Rail, Front of Rear Suspension, Parallel to Rail

STEERING COLUMN Stationary

STEERING WHEEL 2-Spoke, 18" Dia., Black

STEERING GEAR (2) {Sheppard M100/M80} Dual Power

EXHAUST SYSTEM Switchback Horizontal Aftertreatment Device, Frame Mounted Right Side Under Cab; Includes Single Short

Horizontal Tail Pipe, Frame Mounted Right Side Back of Cab

ELECTRICAL SYSTEM 12-Volt, Standard Equipment

Includes

: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab

: FUSES, ELECTRICAL SAE Blade-Type

: HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover

: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever

: HEADLIGHTS (2) Sealed Beam, Round, with Chrome Plated Bezels

: JUMP START STUD Located on Positive Terminal of Outermost Battery

: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light

: STARTER SWITCH Electric, Key Operated

: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector

: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature

: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever

: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted

: WIRING, CHASSIS Color Coded and Continuously Numbered

JUMP START STUD (2) Remote Mounted

ALTERNATOR {Leece-Neville AVI160P2013} Brush Type; 12 Volt 160 Amp. Capacity, Pad Mount

BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and

Ground, Less Trailer Socket

BATTERY SYSTEM {Deka/EAST PENN 9A31} Maintenance-Free (3) AGM 12-Volt 2775CCA Total

RADIO AM/FM/WB/Clock/Bluetooth/USB Input/3MM Auxiliary Input, MP3, Apple Device Play & Control, Bluetooth for Phone & Music, with

Multiple Speakers

HORN, ELECTRIC Disc Style

CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade

STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start

BATTERY BOX Steel, Mounted Inside the Cab, Under Passenger Seat, 3 Battery Capacity

TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender

FENDER EXTENSIONS Omit

INSULATION, UNDER HOOD for Sound Abatement

GRILLE Stationary, Chrome

INSULATION, SPLASH PANELS for Sound Abatement

FRONT END Tilting, Fiberglass, With Three Piece Construction Includes Long Hood

PAINT SCHEMATIC, PT-1 Single Color, Design 100

Includes

: PAINT SCHEMATIC ID LETTERS "GS"

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

VEHICLE REGISTRATION IDENTITY ID for the State of California

CLUTCH Omit Item (Clutch & Control)

ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection, for N13 Engines

ENGINE, DIESEL {Navistar N13} EPA 2010, SCR, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 430 Peak HP (Max)

FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed With Residual Torque Device for Disengaged Fan Speed

Includes

: FAN Nylon

FEDERAL EMISSIONS {Navistar N13} EPA, OBD and GHG Certified for Calendar Year 2016

AIR CLEANER Single Element

Includes

: AIR CLEANER with Vacuator

: GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted

ENGINE CONTROL, REMOTE MOUNTED for PTO with N13 Engines

COLD STARTING EQUIPMENT Automatic; With Engine ECM Control

EMISSION COMPLIANCE Low NOx Idle Engine, Complies with California Clean Air Regulations;

Includes "Certified Clean Idle" Decal on

Hood

RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1593 SqIn, 1012 SqIn CAC, 1543 SqIn 3 Core LTR

TRANSMISSION, AUTOMATIC {Allison 4000_RDS_P} 5th Generation Controls; Close Ratio, 5-Speed, With Overdrive; On/Off Hwy;

Includes Oil Level Sensor, With PTO Provision, Less Retarder

OIL COOLER, AUTO TRANSMISSION {Modine} Water to Oil Type

TRANSMISSION SHIFT CONTROL {Allison} Push-Button Type; for Allison 3000 & 4000 Series

Transmission

SHIFT CONTROL PARAMETERS {Allison} 3 Speed S1 Secondary Shift Schedule for 5 or 6 Speed

Allison Gen4/Gen 5 3000 & 4000

Series Transmissions

TRANSMISSION OIL Synthetic; 63 thru 76 Pints

ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS); General Purpose Trucks,

Construction

TRANSMISSION TCM LOCATION Located Inside Cab

PTO LOCATION Left Side of Transmission

AXLE, REAR, TANDEM {Meritor MT-40-14X-4DFR} Single Reduction, 0.433"(11mm) Wall Housing

Thickness, 40,000-lb Capacity, R

Wheel Ends . Gear Ratio: 3.70

Includes

: POWER DIVIDER LOCK Electric over Air Operated, Cab Control with Indicator Light

: REAR AXLE DRAIN PLUG (2) Magnetic, For Tandem Rear Axle

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

SUSPENSION, REAR, AIR, TANDEM {Hendrickson HAS-402-55} 55" Axle Spacing; 40,000-lb Capacity,

9.5" Ride Height, With Shock

Absorbers Mounted Inboard

Includes

: CROSSMEMBER, SUSPENSION 3-Piece

Notes

: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear

Suspension; Brake System; Brakes, Rear

Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

: When Specifying Axle Ratio, Check Performance Guidelines and TCAPE for Startability and Performance

DEF TANK 9.5 U.S. Gal. 36.0L Capacity, Frame Mounted Outside Left Rail, Under Cab

FUEL/WATER SEPARATOR {Racor} Fuel Pre-Filter and Filter Base, Includes Water-In-Fuel Sensor

LOCATION FUEL/WATER SEPARATOR or Fuel Filter, Mounted Inside Left Rail, Back of Cab

FUEL TANK Top Draw; D-Style, Non-Polished Aluminum, 16" Tank Depth, 50 U.S. Gal., 189 L Capacity, with Quick Connect Outlet,

Mounted Left Side, Under Cab

FUEL COOLER Less Thermostat; Mounted in Front of Cooling Module

CAB Conventional

Includes

: ARM REST (2) Molded Plastic; One Each Door

: COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window

: CUP HOLDERS Two Cup Holders, Located in Lower Center of Instrument Panel

: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater

Dimming, Integral to Console, Center

Mounted

: GLASS, ALL WINDOWS Tinted

: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side

: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side

: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color

: STEP (4) Two Steps Per Door

GAUGE CLUSTER English With English Electronic Speedometer

Includes

: GAUGE CLUSTER (6) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic),

Voltmeter, Washer Fluid Level

: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout

: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage
(Visual and Audible)

IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster

GAUGE, DEF FLUID LEVEL

SEAT, DRIVER {National 2000} Air Suspension, High Back With Integral Headrest, Vinyl, Isolator, 1

Chamber Lumbar, With 2 Position

Front Cushion Adjust, -3 to +14 Degree Angle Back Adjust

Includes

: SEAT BELT 3-Point, Lap and Shoulder Belt Type

MIRRORS (2) {Lang Mekra} Styled; Rectangular, Power Both Sides Flat Glass Only, Thermostatically
Controlled Heated Heads, Clearance

Lights LED, Black Heads, Brackets and Arms, Breakaway Type, 7.09" x 15.75" & Integral Convex Both
Sides, 102" Inside Spacing

SEAT, PASSENGER {Seats, Inc.} Non Suspension, High Back, Fixed Back, Integral Headrest, Vinyl, for
use with Batteries in Cab

AIR CONDITIONER {Blend-Air} With Integral Heater & Defroster

Includes

: HEATER HOSES Premium

: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps

: REFRIGERANT Hydrofluorocarbon HFC-134A

INSTRUMENT PANEL Center Section, Flat Panel

WINDOW, POWER (2) and Power Door Locks, Left and Right Doors, Includes Express Down Feature

HVAC FRESH AIR FILTER

STORAGE POCKET, DOOR Molded Plastic, Full Width; Mounted on Passenger Door

CAB INTERIOR TRIM Deluxe

Includes

: "A" PILLAR COVER Molded Plastic

: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is Covered Except for the

Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering

: CAB, INTERIOR TRIM, CLOSEOUT Lower Dash Closeout Panel; Molded Plastic; Under Instrument Panel Driver Side

: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets and CB Radio Pocket

: DOOR TRIM PANELS Molded Plastic; Driver and Passenger Doors

: FLOOR COVERING Rubber, Black

: HEADLINER Soft Padded Cloth

: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section

: STORAGE POCKET, DOOR (1) Molded Plastic, Full-Length; Driver Door

: SUN VISOR (2) Padded Vinyl with Driver Side Toll Ticket Strap, Integral to Console

CAB REAR SUSPENSION Air Bag Type

WHEELS, FRONT {Maxion 90541} DISC; 22.5x8.25 Rims, Painted Steel, 2-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs

WHEELS, REAR {Maxion 10038} DUAL DISC; 22.5x7.50 Rims, Painted Steel, 5-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs

PAINT IDENTITY, FRONT WHEELS Disc Front Wheels; With Vendor Applied White Powder Coat Paint

PAINT IDENTITY, REAR WHEELS Disc Rear Wheels; With Vendor Applied White Powder Coat Paint

(8) TIRE, REAR 11R22.5 Load Range G HSR2 (CONTINENTAL), 498 rev/mile, 75 MPH, All-Position

(2) TIRE, FRONT 12R22.5 Load Range H HSR2 (CONTINENTAL), 483 rev/mile, 75 MPH, All-Position

Services Section:

WARRANTY Standard for Paystar 5000, and Workstar 7500/7600, Effective with Vehicles Built January 2, 2015 or Later, CTS-2003Z

Crane and Accessories

This specification below is based on the Elliott 1870CP and may be substituted with an equal or better unit, but must incorporate all options as listed below. If an equal or better unit is proposed, TMWA will review the proposal and reserves the right to determine at its discretion if the proposed substitution is equal or better.

All items below are to be installed to the manufactures specifications and must meet all DOT requirements including DOT certification.

All manufactures warranties to be assigned to TMWA such as the Life Time Structural Warranty for outrigger/stabilizers including any crane manufacturer and or accessory warranties.

A one year full parts and labor warranty is required for all parts and equipment not specifically covered by manufactures warranties and it will be the responsibility of the bidder to provide any warranty work for the first year. If the bidder is outside of the local area (30 mile radius from our facility) they will be required to make arrangements for warranty work to be performed locally or be responsible for transportation and return of the vehicle to/from their facility .

1870CP BASIC UNIT

1 "Rear mount sub-frame for an 18' bed. A 27' retracted to 70' extended 3-section proportional boom. Sheave head shall be equipped with three sheaves. Winch features a burst of speed 12,800 lb. bare drum pull with 275' of 9'16"" diameter 6x37 EIPS wire rope w/ 9,600 lb. single line pull. Internal boom hard-wire anti-two-block and Load Moment Indicator (LMI) hydraulic overload protection system. 360 degree continuous rotation. Hydraulic system includes 3-section gear pump (counterclockwise rotation), 70 gallon oil reservoir with sight and temperature gauge, 10 micron return line filter, and single gate valve on suction line. Single operator platform and seat mounted on roadside of turret with engine start/stop switch, system pressure gauge, cup holder, 12V power outlet, lifting capacity chart, range diagram chart, boom angle indicator, crane control levers, signal horn, variable speed foot throttle, and LMI display. Two sets of ""Out-and-Down"" over frame outriggers located at front and rear, each set having a 17'6"" center to center extended span and equipped with removable ball socket aluminum pads. Independent outrigger controls with manual control valves located at rear of unit with bubble levels. Horizontal boom rest at front of flatbed with bulkhead. Downhaul weight with hook. Maximum tip height of 80' and maximum lifting capacity of 18 US tons at 5' radius. Includes mounting to truck chassis, electronic throttle interface, hydraulic fluid, rear bumper, mud flaps, backup alarm, safety triangle kit, tested and ready to operate. 360 degree stability. Unit certified to ANSI B30.5 for Mobile Cranes.

BED

1. 18' Wood Deck Bed With LED Lights (1,600 lbs.)
2. Tie-Down Rails on Both Sides of Bed

JIB

1. 23' Non-Extendable 1-Piece Jib (Side Stows on Boom)(550 lbs.)

OUTRIGGER/STABILIZER

1. Automatic Safety Rotation Lockout to Prevent Boom from Rotating to Side Where Outriggers Are Not Fully Extended Horizontally

LIFTING OPTION

1. 275' of 9/16" Diameter Spin Resistant Wire Rope, In Lieu of Standard Wire Rope
2. 15-Ton Single Sheave Hook Block for 2/3 Parts of Line. (240 lbs.)

Man Basket

1. 2 Person Gravity-Leveled Rotating Steel Basket (40" x 60")(600 lbs.)
Basket Test Weight Kit (750 lbs. for 600 lb. capacity)

REMOTE CONTROL

1. 4-Function Radio Remote Controls

PTO

1. Hot Shift PTO for Automatic Transmission
2. Clockwise Rotation Pump (Required for Automatic Transmission)

TOOL BOX

1. 2 each 24" x 20" x 18" Steel Underbody Mounted
2. 2 each 36" x 20" x 18" Steel Underbody Mounted

ADDITIONAL REQUIRED OPTIONS

1. Additional Control Valve for Second Hydraulic Option
2. 36" High Bulkhead at Front of Bed (150 lbs.)
3. 36" High Stake Racks on all three sides
4. Fold Down Bed Access Ladder With Grab Handles
5. Vertical Holder on Bed for 2/3 Part Line Hook Block
6. Van Air 125CFM, w100PSI Underdeck Air Compressor hydraulically driven, and weight of 453lbs installed.
7. Coxreel model TSH-N-3100 or equal
Hose reel must be equipped 100 feet of 3/8" ID air hose rated @ 500psi max
A 500 psi rated ball valve located between compressor and hose reel plumbed to give operators ground access.
Hose Reel to be mounted curb side rear behind outriggers pulling toward curb.
8. ICC Bumper w/Pintle Hitch Premier 580, D Rings mounted each side of Pintle, and 7 pin trailer plug. Pintle hitch to be 24" to center from ground. Glad Hands at the rear.
9. 97DBA Back Up Alarm
10. TV550 Pro Vision Back Up Camera /w 7" Monitor
11. 2 each LED Flood Light 7" Grote part #81704 mounted on each side of boom rest 12" above the cab roof.
12. 2 each Grote Short Bracket part # 00872
13. Grote Amber Beacon part# 78783 mounted S.S. front of bulkhead 6" above cab roof.
14. 4 each ECCO Strobes part # 9014A two to be mounted on each corner of the front bumper and two to be mounted each corner rear of the flat bed.
15. Additional Set of Operation, Maintenance, and Parts Manuals
16. Operation In-Service Training approximately 4 hours, training to be conducted at the TMWA general office building 1355 Capital Blvd Reno NV 89520

PAINT

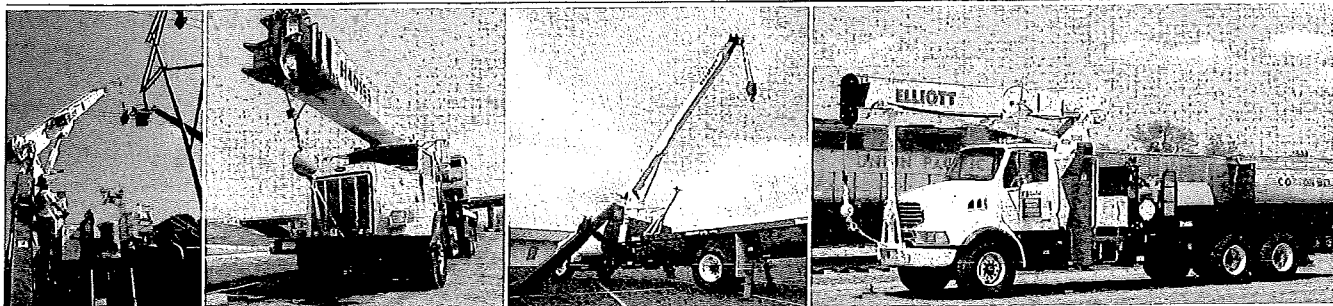
Paint Crane Frame, Turret, Boom, Operator's Platform, and Control Console White. Subbase, Bed, and Reservoir to be Black. Outriggers, Boom Rest, and Bulkhead to be Red.

All painted steel must be zinc primed prior to painting.

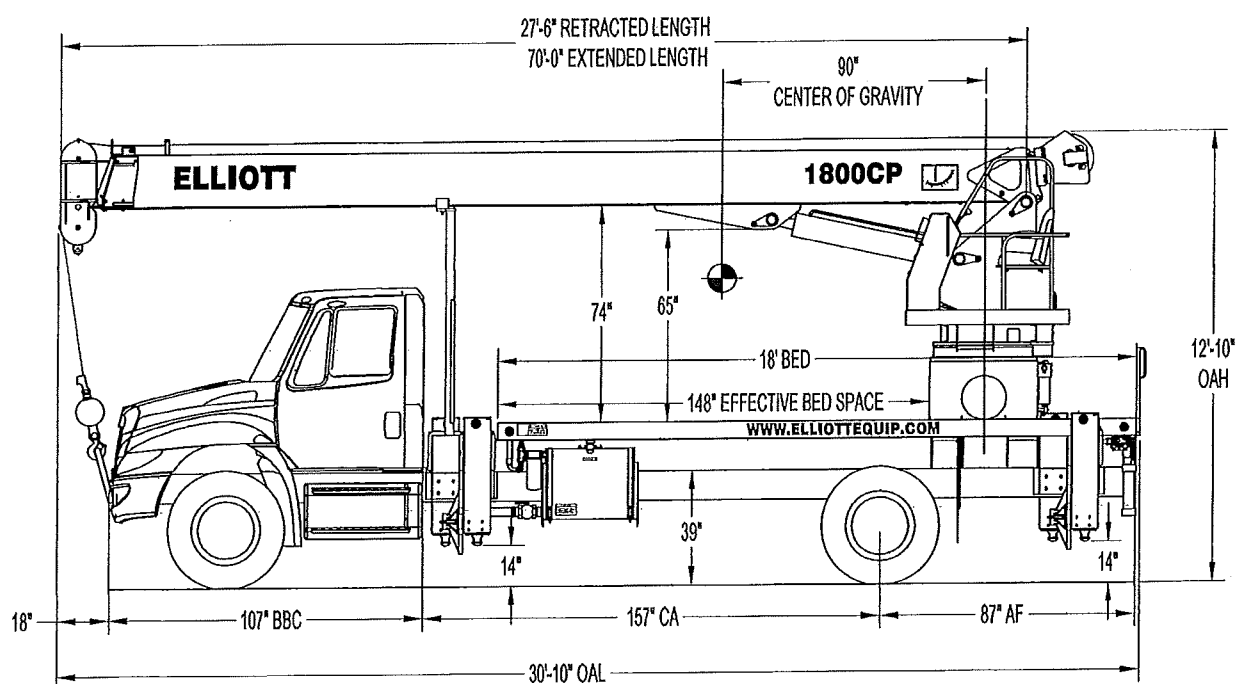
BoomTruck™

1870CP

TECHNICAL SPECIFICATIONS



1870CP SIDE VIEW DIAGRAM



- **Maximum Vertical Reach** 120'/36,6 m
- **Working Area** 360 Degrees
- **Lifting Capacity** 36,000 lbs/16 329 kg
- **Boom Length** 70'/21,3 m
- **Crane Weight (Dry)** 16,235 lbs/7364 kg
- **Jib Lengths** 23', 23-40'/7 m, 7-12 m
- **Winch Bare Drum Pull** 12,800 lbs/5806 kg

- **Powered Boom Sections** 3
- **Overall Height** 12'10"/3,9 m
- **Operator Controls** Rotating Single Seat
- **Outrigger Type Front** Out-Down
- **Outrigger Spread Front** 17'6"/5,3 m
- **Outrigger Type Rear** Out-Down
- **Outrigger Spread Rear** 17'6"/5,3 m



Elliott Equipment Company
4427 South 76th Circle
Omaha, NE 68127

Phone: 402-592-4500
Fax: 402-592-4553
Email: sales@elliottequip.com

Built for You.
www.elliottequip.com

TECHNICAL SPECIFICATIONS

Crane Capacity: 36,000 lbs at five feet load radius.

Maximum Tip Height: 80' height (120' with optional 40' jib)

Control Console: Rotating single seat control station on street side of crane equipped with four single axis control levers for the main crane controls and two grip strut steps for access. Operator station includes adjustable operator seat, LMI display, bubble level gauge, engine start/stop switch, signal horn button, variable speed foot throttle, lifting capacity chart, range diagram chart, boom angle indicator, system pressure gauge, 12V DC power source, and cup holder. Outrigger controls mounted at rear under each corner of bed.

Boom: Three-section fully proportional, high strength steel plated rectangular tube sections. A maximum boom tip height of 80' mounted on a truck. The boom nose contains one floating upper sheave and two lower sheaves. Assembly includes heavy-duty cylinder fittings, pivot pins, and replaceable wear pads.

Winch: Mounted at the base of the boom for a long fleet angle and flat level spooling of cable. Winch is driven by a planetary reducer and powered by a hydraulic motor. Burst-of-speed winch provides increased line speed. The winch brake is spring applied, pressure release design. Supplied with 275' of 9/16" wire rope with a single line pull of 9,600 pounds, and a downhaul ball with swivel hook for single part line.

Load Moment Indicator System: System senses hoist cylinder pressures, boom length and boom angle with hydraulic function lockout. The display console is equipped with a bar graph showing crane utilization, boom angle or boom length, a mode select controls for main boom and jib operation, and an anti-two block with an audio/visual warning and shut-off functions to limit hook-boom point contact.

Outriggers: Two sets of out and down main outriggers with a 17'6" span, ball-socket removable aluminum outrigger pads and independent outrigger controls.

Frame: Full length, all welded rigid 4-plate design sub-frame. Sub-frame allows for bolt-on addition of 18' bed.

Turret: Reverse offset turret is one-piece weldment. Turret rotates on large diameter ball bearing.

Rotation: Hydraulic motor drives turret through double reduction planetary swing drive for continuous rotation. The swing drive system has a spring applied, pressure release brake.

Lift: One double-acting long stroke cylinder provides smooth and stable boom elevation. Holding valve prevents boom from falling in event of hose failure.

Boom Extension: Incorporates a single double-acting hydraulic extension cylinder, attached to the largest boom section, with a proportional cable extension system driving the outermost section.

Hoses: All high pressure hoses are wire braid reinforced with a minimum safety factor of 4 to 1.

Cylinders: All cylinders use microhoned cylinder tubing, chrome shafts, top grade packing and protective rod wipers. Cylinder-mounted holding valves provided on all load-holding cylinders.

Hydraulic System: Equipped with cable-shift PTO, three-section gear pump, SAE O-ring face seals on pressure lines, and a 10-micron return line filter. The control valve distributes all flow to hoist system, swing circuit, and other crane functions. System is open center type.

Oil Tank Capacity: 70 gallon mounted to truck frame on roadside.

Cab Equipment: PTO cable or switch with indicator lights installed in truck cab. U/L approved 5:BC dry chemical

fire extinguisher installed in truck cab.

Operators Manual & Video: Two CD copies and one hard copy of operation, maintenance, safety and parts manual provided with each unit. Operational and safety video provided at delivery.

Installation: Unit installed on chassis, painted, system and tank filled with oil, tested, inspected, and ready to operate.

Standard Paint: Paint turret and boom white, outriggers red, and bed and boxes black.

Bumper: Bureau of Motor Carrier Safety rear bumper.

Weight: Approximately 16,235 lbs. with 18' steel-floor bed less truck.

Truck Chassis Required: Approx. 156" C.A. RBM 1,463,000 in.-lb. per rail, 13,000 lb. front axle and 33,000 lb. GVWR required. Trucks must have 12V electrical system with high capacity alternator, cab clearance stop/tail/backup lights, and I.D. lamps. Recommended GVWR is minimum for BoomTruck with flatbed only. Contact factory when additional equipment is to be added.

Options:

23' Fixed or 40' Telescopic Jib.

Radio Remote Controls.

1 or 2 Person Gravity Leveled Steel Basket.

Rotation Resistant Wire Rope.

Hydraulic Tool Circuits on Bed.

Much More...

Elliott Equipment Company reserves the right to change the specification of any unit at any time without prior notice. This brochure is only a statement of general specifications on the date of this publication. For more detailed info on specific Elliott trucks go to www.elliottequip.com



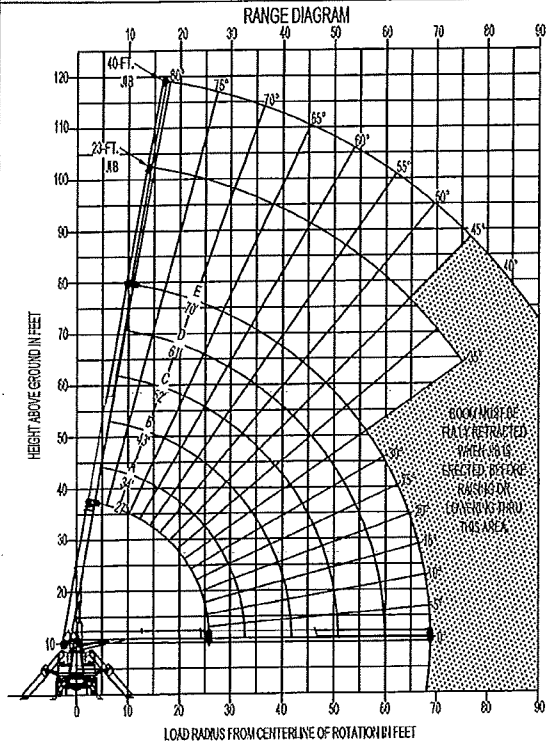
Elliott Equipment Company
4427 South 76th Circle
Omaha, NE 68127

Phone: 402-592-4500
Fax: 402-592-4553
Email: sales@elliottequip.com

Built for You.
www.elliottequip.com

MAXIMUM LIFTING AND RANGE CAPABILITIES

ELLIOTT MODEL 1800 70-FT. BOOM



ALLOWABLE LINE PULL			
1-PART LINE	2-PART LINE	3-PART LINE	4-PART LINE
9600-LBS.	19200-LBS.	28800-LBS.	36000-LBS.
9060-LBS.	18120-LBS.	27180-LBS.	36000-LBS.
7680-LBS.	15360-LBS.	23040-LBS.	30720-LBS.

NOTICE

- DO NOT DEADEND LINE BLOCK AGAINST BOOM WHEN EXTENDING BOOM
- KEEP AT LEAST 5 WRAPS OF LOADLINE ON THE WINCH DRUM AT ALL TIMES
- USE ONLY 3/8" DIAMETER WIRE ROPE, AS SPECIFIED BELOW, WITH THE PROPER BREAKING STRENGTHS LISTED
- ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. SEE OPERATION & SAFETY MANUAL
- MAXIMUM CAPACITY WITH "BURST OF SPEED" IS 600 LBS.

DEDUCTIONS FROM RATED LOADS FOR HANDLING DEVICES SUPPLIED BY ELLIOTT EQUIPMENT CO.

OVERHAUL BALL - SEE OVERHAUL BALL MFR. NAMEPLATE

LOAD BLOCK - SEE BLOCK MFR. NAMEPLATE

SWING AROUND JIB - SEE LOAD RATING CHART

WARNING:

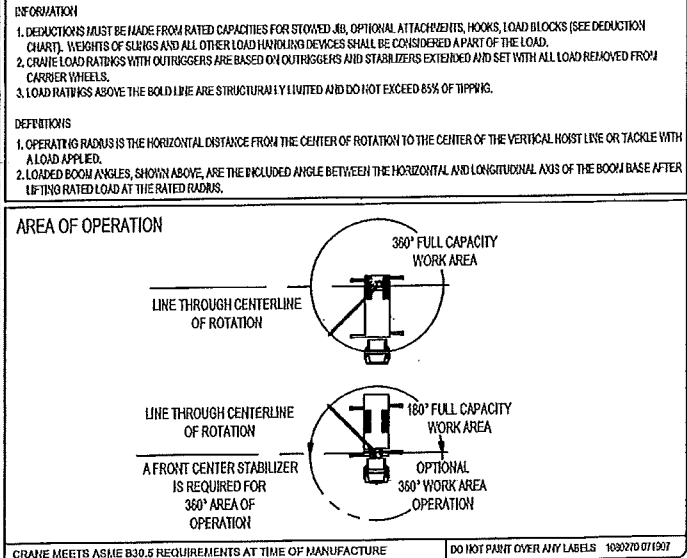
LIFTING OFF THE MAIN BOOM WHILE JIB IS EXTENDED IS NOT INTENDED OR APPROVED

MAIN BOOM LOAD RATINGS									
LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED									
LOAD RADIUS IN FEET	LOADED BOOM ANGLE	27-FT.	34-FT.	43-FT.	52-FT.	61-FT.	70-FT.		
5	79	36000							
10	68	21300	18500	16500	15000				
15	56	15200	14500	13500	12000	10300	9600		
20	41	11500	11100	10000	8900	8000	7300		
25	19	8600	8300	8000	7200	6500	5800		
30		27	6750	6400	5900	5400	4900		
35			38	5000	4700	4400	4200		
40				20	4200	4100	3900	3700	
45					30	3500	3400	3200	
50					14	2800	2600	2500	
55						26	2400	2300	
60							32	1900	
65								22	1550
		0	6000	0	4200	0	3000	0	1900
		340	270	210	170	150	130		
		530	420	330	270	230	200		

DEDUCTIONS FOR STOWED FIXED LENGTH JIB

DEDUCTIONS FOR STOWED EXTENDABLE JIB

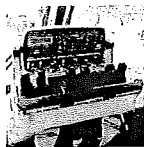
- WARNING**
1. THE OPERATOR MUST READ AND UNDERSTAND ALL DECALS IN ADDITION TO THE OPERATION AND SAFETY MANUAL BEFORE OPERATING THIS CRANE.
 2. POSITIONING OR OPERATION OF CRANE BEYOND AREAS SHOWN ON THIS CHART IS NOT INTENDED OR APPROVED EXCEPT WHERE SPECIFIED IN THE OPERATION AND SAFETY MANUAL.
 3. LOADED BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. THE BOOM ANGLE BEFORE APPLYING A LOAD SHOULD BE GREATER TO ACCOUNT FOR DEFLECTION. DO NOT EXCEED THE OPERATING RADIUS FOR A BOOM LENGTH AND LOAD RATING.
 4. THE JIB LOAD RATING CHART IS BASED ON THE LOADED BOOM ANGLES OF THE MAIN BOOM AND NOT THE LOAD RADIUS. DO NOT EXCEED JIB LOAD RATINGS AT REDUCED BOOM LENGTHS.
 5. FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
 6. FOR BOOM LENGTHS NOT SHOWN, USE THE RATING OF NEXT LONGER BOOM LENGTH. FOR RADIUS NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.
 7. CRANE LOAD RATINGS ON OUTRIGGERS AND STABILIZERS ARE BASED ON FREELY SUSPENDED LOADS WITH THE MACHINE LEVELED AND STANDING ON A FIRM UNIFORM SUPPORTING SURFACE. NO ATTEMPT SHALL BE MADE TO MOVE A LOAD HORIZONTALLY ON THE GROUND IN ANY DIRECTION.
 8. PRACTICAL WORKING LOADS DEPEND ON THE SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY SUCH AS HAZARDOUS SUBSURFACES, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING, ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.
 9. THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY LOAD WITHIN THE LIMITS OF THE LOAD RATING CHART. BOOM MUST BE FULLY RETRACTED AGAINST THE BOOM STOPS AT ALL TIMES WHEN LIFTING MINIMUM BOOM LENGTH CAPACITY LOADS.
 10. IF ANY OPERATIONAL, SUCH AS ANTI-2-BLOCK, OVERLOAD SYSTEM OR LEVELING INDICATOR IS MALFUNCTIONING OR INOPERATIVE, DISCONTINUE USE IMMEDIATELY AND CONTACT A QUALIFIED REPAIR FACILITY.
 11. CAPACITY INDICATING LIMITING DEVICES SHOULD NOT BE RELIED UPON TO REPLACE THE USE OF CAPACITY CHARTS AND PROPER OPERATING PROCEDURES.
- INFORMATION**
1. DEDUCTIONS MUST BE MADE FROM RATED CAPACITIES FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, LOAD BLOCKS (SEE DEDUCTION CHART), WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
 2. CRANE LOAD RATINGS WITH OUTRIGGERS ARE BASED ON OUTRIGGERS AND STABILIZERS EXTENDED AND SET WITH ALL LOAD REMOVED FROM CARRIER WHEELS.
 3. LOAD RATINGS ABOVE THE BOLD LINE ARE STRUCTURALLY LIMITED AND DO NOT EXCEED 85% OF TIPPING.
- DEFINITIONS**
1. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH A LOAD APPLIED.
 2. LOADED BOOM ANGLES, SHOWN ABOVE, ARE THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXIS OF THE BOOM BASE AFTER LIFTING RATED LOAD AT THE RATED RADIUS.



CHASSIS SPECIFICATIONS

	1870CP Boomtruck
Wheelbase (WB)	224" / 569 cm
Cab to Axle (CA)	156" / 396 cm
Cab to End of Frame (EOF)	247" / 627 cm
Frame Section Modulus	13.3 in3-110,000 psi
Front Axle Gross Weight Rating	13,000 lb / 5896 kg
Rear Axle Gross Weight Rating	20,000 lb / 9072 kg
Integral Front Frame Rails	Not Applicable

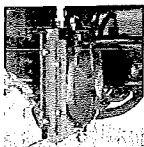
Chassis data is minimum general requirements-not for engineering.
Actual dimensions and truck data will depend on truck selection and axle configuration.
*Minimum chassis weight is required to meet 85% stability requirements.

OPTIONS

Radio Remote Control

Interference protected radio remotes let you get closer to your work and have full control over your machine.


Pin-On Jib Attachments

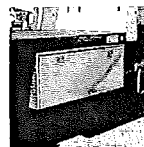
One piece & two piece telescoping or fixed jibs that stow on the side of the boom for easy placement while on the worksite.


Hydraulic Oil Cooler

Add a bed-mounted hydraulic oil cooler and fan to assist with high duty cycle job applications. A "must" for hot weather environments


Custom Paint

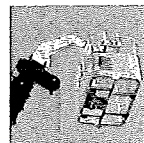
Choose from a wide list of high quality paint applications including Elliott's standard white or red paint, metallic paints, or multiple colors.


Tool Boxes

Optional tool boxes and bed storage can accommodate any storage need for tools, work materials and more.


Hook Block for Multi-Part Line

Elliott can install a 2-3 part hook block or a 4 part-hook block to improve lifting capabilities. The block can be stored at the rear of the bed.


Gravity Levelled Basket

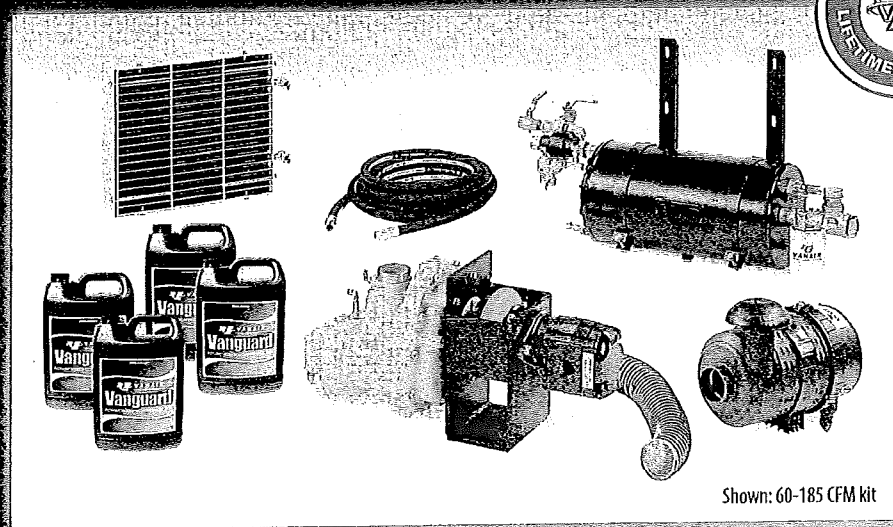
Elliott's pin-on work platform pins onto the boom for easy installation and removal. Gravity leveling and mechanical rotation makes it a great accessory for any worksite.


Body Mounted Hose Reels and Circuits

Let us work with you to customize your tool compatibility by adding hose reels or hydraulic circuits to the crane bed.

Underdeck 60 - 185 CFM hydraulic driven air compressor

HYDRAULIC DRIVEN 60 - 185 CFM UNDERDECK AIR COMPRESSOR



Shown: 60-185 CFM kit

All the Advantages of an Underdeck System

Lightweight, space saving and cost effective, Vanair's hydraulically-driven underdeck air compressor systems are ideal for vehicles that already have a built-in hydraulic system.

SPECIFICATIONS

Capacity (CFM)	Air (psi)	gpm	Hydraulic Pressure	Compressor Input	Compressor Oil Capacity	Mounted Weight (dry)
60	100 - 150	17.0	2300 - 2800	1030 rpm	2.5 gal.	428 lbs.
85	100 - 150	23.5	2300 - 2700	1460 rpm	2.5 gal.	428 lbs.
125	100 - 150	27.6 - 29.2	2100 - 2620	1330 rpm	3.5 gal.	453 lbs.
160	100 - 150	36.8 - 38.3	2200 - 2700	1675 rpm	3.5 gal.	453 lbs.
185*	100 - 150	42.2 - 44.2	2400 - 2830	1920 rpm	3.5 gal.	453-491 lbs.

Ratings above are approximate and are based on 120° F hydraulic fluid temperature. Add 400 psi minimum to hydraulic requirements for hydraulic system continuous pressure ratings. Machine hydraulic relief valve is set at 3200 psi. Consult Vanair for specific details.

**150 psi kit includes additional cooler. Consult factory for over 185 CFM.*



VANAIR
MOBILE POWER SOLUTIONS

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SPECIAL FEATURES

Air Compressor

- Lifetime warranty on air end
- 100,000 hours design life
- 100% Duty cycle
- Greater efficiency for lower engine RPM's
- Integrated inlet valve and rear discharge provides higher ground clearance
- Made in USA

Discharge System

- Intank coalescer system provides greater surface area for increased oil separation
- Coalescer is protected from the elements, eliminating the possibility of rust or damage from external source
- Exclusive anti-static coalescing element for greater safety
- Uses only 3.0 gallons of oil vs. 5.5 gallons compared to competitor's tanks
- Less prescribed maintenance and waste oil recovery costs
- Less than 2 ppm oil carryover
- Pressure rated to 250 psig
- 5 year warranty or 3000 hours for replacement on coalescer element only
- Smaller tank design makes installation easier
- Streamlined fittings on the end of tank
- ASME and CRN certified

Instrumentation

- Hour meter
- Pressure gauge
- Temperature gauge

Cooler(s)

- Capable of cooling up to 185 CFM at 100 psi
- Air to oil heat exchanger driven by 12V fan

Air Filter

- ABS plastic housing
- Dual stage

Hydraulic Motor

- Geared

Vanguard Rotary Screw Compressor Oil

- Full synthetic oil exclusively created for rotary screw compressors
- Flash point: 257° C/495° F
- Pour Point: -45°C / -50° F
- Outstanding thermal and oxidative stability
- Reduced oil disposal due to extended drain intervals

Safety Equipment

- High-temperature shutdown
- High-pressure shutdown
- Air pressure-relief safety valve
- Minimum pressure valve
- Automatic blowdown on shutdown
- Oil fill plug safety relief

OPTIONS/ACCESSORIES

- External, spin-on air-oil separating element
- Dual pressure
- Service/control line moisture separators
- Filter/lubricator/regulator (FLR)
- Air hoses, hose reels, and fittings
- OSHA safety valve (velocity fuse)
- Sullair® air tools
- Tool oiler/lubricator
- Post drivers
- Biodegradable Vanguard Green synthetic oil

DIMENSIONS – (without fittings)

60, 85, 125, 160 and 185 CFM Model

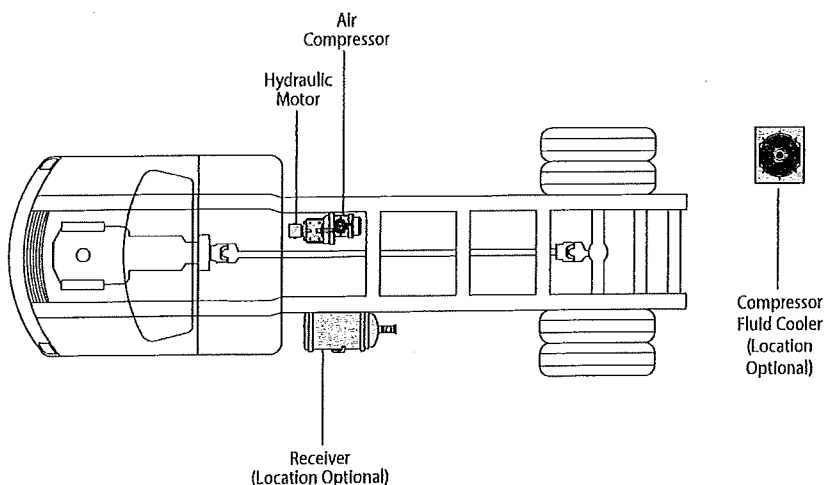
Compressor (in.) – 11.9 W x 18 L x 13 H

Air/fluid receiver (in.) – 10.25 D x 21.5 L

Remote air to oil cooler (in.) – 26.5 W x 19.25 H x 9.25 D

Hydraulic coupling including

motor (in.) – 12.25 W x 30.25 L x 15.5 H



HYDRAULIC SYSTEM REQUIREMENTS

Vanair highly recommends consulting a hydraulic supply expert for specifying the correct hydraulic pump size and type, oil reservoir size, hydraulic cooler, hydraulic pressure relief, and other hydraulic supply components for your application. Please take into consideration the following:

- The hydraulic flow and pressure requirements of the air compressor
- Keep in mind that when the compressor is running there is a continuous hydraulic load
- The duty cycle and ambient operating temperatures
- Other hydraulic equipment which may share the same hydraulic supply system (Vanair recommends a dedicated pump and hydraulic circuit)



VANAIR®
MOBILE POWER SOLUTIONS™

Specifications subject to change without notice.
HYDRAULICCOMPONENT-072215

Product improvement is a continuing goal. Design and specifications are subject to change without notice or obligations.