



STATE OF LOUISIANA  
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
TECHNICAL SPECIFICATIONS FOR

**Asphalt Paver, Self-Propelled, Tracked**

**SERIES NO. 223-000**

**REV. 3/21/2023**

**EQUIPMENT SPECIFICATION 223-000F**

**GENERAL**

This specification sets forth the minimum requirements for a tracked, self-propelled asphalt paver/spreader with attached screed.

Equipment shall be new, a production model of current manufacture, and must meet all state and Federal safety and emission standards in effect at time of order.

**REPRESENTATIVE SPECIFICATIONS**

A Vögele universal class Super 1700-3i tracked paver and Vögele VF 500 screed with appropriate options and standard features was used to develop these specifications and establish equivalency evaluation criteria.

Equipment of similar style, type, character, quality, features, and purpose conforming to the following detailed requirements/specifications will be considered. For evaluation purposes, bidder's proposing an exception/equivalent option/feature to those specified herein, may be required to provide manufacturer/product information (catalogue sheets, detailed specifications, pictures, etc.). This information will be evaluated against the minimum requirements of this specification. Proposed submittals that are determined not to be equivalent to the established criteria will be rejected.

**LOUISIANA AUTHORIZED DEALER(S)**

Proposed item(s) must be from a manufacturer who has at least one (1) authorized dealer within the State of Louisiana where parts and service can be obtained. Authorized dealer(s) must have properly trained technicians plus all other resources necessary to perform warranty and repair services in complete accordance with the manufacturer's requirements. A letter certifying the ability to meet this requirement, inclusive of the company name(s) and address(es) of the Louisiana authorized dealer(s), should be supplied with the bid submittal and may be required prior to award.

**DELIVERY & ACCEPTANCE**

Vendor shall perform a test run of each unit to verify that all features and capabilities are operating properly at time of delivery. Documentation of testing may be required prior to acceptance by the Department.

Unit(s) must be delivered completely assembled (including all components, accessories, etc.) and ready for operation without any additional preparation including, but not limited to, ensuring all fluid levels are at their full mark, fuel tank(s) is full, all necessary lubrication has been performed, etc.

Any unit delivered under this specification is subject to rejection if there is evidence of poor workmanship, by either the vendor or the original manufacturer. Noted defects and/or nonconformance findings may



be corrected by the vendor. Corrections must be completed and approved by the Equipment Engineer or his representative prior to final acceptance.

Unit(s) shall be delivered "**on the ground**;" DOTD will not unload nor provide any unloading equipment to the vendor/delivery driver in order to offload the unit(s).

**NOTE:** The Department will have space available for equipment to be unloaded.

**EACH UNIT MUST BE SUPPLIED WITH THE FOLLOWING DOCUMENTATION:**

1. Dealer's Service Policy
2. Owner's/Operator's Manual(s)
  - a. One (1) Hardcopy
  - b. One (1) Digital Copy
    - i. Acceptable Formats: PDF delivered via USB "Flash Drive", or E-mail
3. Service Manual(s)
  - a. One (1) Hardcopy
  - b. One (1) Digital Copy
    - i. Acceptable Formats: PDF delivered via USB "Flash Drive", or E-mail
4. Build Sheet(s) – as applicable
  - a. One (1) Hardcopy
  - b. Build sheets should be written in plain language (not company specific codes) and include, at a minimum, all standard & optional features of the delivered unit.

**NOTE:** Invoices will not be processed for payment until the unit(s) have been inspected by the Equipment Engineer or their representative and deemed in compliance with the specifications.

**BID SUBMITTALS**

Any additions, deletions, or variations from the specifications should be noted in the "Bidder's Exceptions" page of this specification. Exceptions that are noted to be less than a minimum requirement will not be accepted.

Any additions, deletions or variations from the manufacturer's standard published specifications should be noted on the "Bidder's Exceptions" page of this specification. Unless otherwise noted, any items appearing in the manufacturer's standard published specifications furnished by the Bidder are assumed to be included in the Bidder's submittal.

Bidder should note on their submittal any installation(s) to the equipment that will be performed by the vendor instead of the manufacturer.

Failure to note any specification exceptions, manufacturer specification alterations, and/or vendor installations prior to award may result in rejection of the equipment at the time of delivery.

**THE NUMBER OF DELIVERY DAYS AFTER RECEIPT OF ORDER (ARO) MAY BE USED AS A FACTOR IN THE AWARD.**



## EQUIPMENT SPECIFICATIONS

### NOTICE TO BIDDERS

Bidder should review the detailed "Equipment Specification" completely and respond to the compliance question at the end of each section by marking "X", in the space provided, for "Yes" or "No". Mark "Yes" to indicate that the equipment bid meets the section exactly as specified. Mark "No" if there are exceptions to any part of that section. Exceptions/deviations to any part of the specification are to be detailed on the "Bidder's Exceptions" page of this specification.

**IN ORDER TO BE CONSIDERED FOR AWARD, BIDDER SHOULD RETURN THIS SPECIFICATION, COMPLETED IN FULL, WITH THEIR BID SUBMITTAL.**

**Note: All Values listed below are minimums unless noted otherwise.**

### 1. General

- 1.1. The intent of this specification is to describe a new tracked, self-propelled asphalt paver/spreader with attached screed capable of uniformly placing a layer of pavement material up to 12" thick, in a continuous manner without stopping.

### 2. Engine

- 2.1. Liquid cooled diesel, Tier 4f\*
  - 2.1.1. \*Engine must comply with all applicable USA emissions standards in place at the time of manufacture
- 2.2. 170 HP
- 2.3. Economy Mode capable
- 2.4. Hydraulic-driven cooling fan controlled by can-bus computer system with input from engine coolant, hydraulic oil, and air intake temperature sensors

Comply: \_\_\_ Yes \_\_\_ No

### 3. Electrical System

- 3.1. 24-volt electrical system
- 3.2. Digital color display for all engine vitals, visible from either operator station, including:
  - 3.2.1. Operating hours
  - 3.2.2. Fuel quantity
  - 3.2.3. System voltage
  - 3.2.4. Engine temperature
  - 3.2.5. Oil Pressure
- 3.3. LED lights on all control solenoids indicating a complete electrical circuit
- 3.4. Onboard diagnostic for all electrical circuits on the tractor and screed
  - 3.4.1. 3 levels of diagnostics to display troubleshooting information digitally without the need of an external computer
- 3.5. Control Panel back lighting for low-light operation



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- 3.6. Work lights (2 forward, 2 rear, and 2 rear outward)
- 3.7. Rotary beacon with control switch on the tractor control
- 3.8. Back up alarm (97db min.)
- 3.9. Electric screed heater
  - 3.9.1. 30 KW generator to supply power to screed heater

Comply: \_\_\_ Yes \_\_\_ No

### 4. Propel System

- 4.1. Three performance modes
  - 4.1.1. Pave Mode: engages all of the paving automatic functions and pre-sets while providing an operating speed of up to 250 fpm
  - 4.1.2. Maneuver Mode: disengages all of the paving functions while allowing machine to maneuver at up to 250 fpm
  - 4.1.3. Travel Mode: Allows for high speed transport at up to 7.5 mph.
- 4.2. Ability to select and display paving speed while standing
- 4.3. A joystick on the operator's console controlling forward, reverse, and neutral through two variable displacement pumps
- 4.4. Each pump drives a variable displacement motor coupled to a planetary gear box, on each drive wheel, allowing infinite speed range in each of the two stages
- 4.5. Trim steer to allow hands-off turning feature with digital display on control station indicating turn
- 4.6. Spring-centered joystick for steering
- 4.7. Spring-applied, hydraulically released, multiple disc parking brakes mounted directly to each planetary drive
- 4.8. Parking brakes automatically engage when the forward/ reverse lever is returned to neutral, or the engine is off
- 4.9. Steering guide assembly, easily removed for each side

Comply: \_\_\_ Yes \_\_\_ No

### 5. Chassis

- 5.1. Safe deck space for storage of coolers, paving tools, and operator's maneuvering
- 5.2. Hinged doors at the side to provide access to valves and pumps standing on the ground with head up
- 5.3. Lockable storage space on deck for sensors and cables
- 5.4. Tilted rear wall of the mainframe for full visibility of the augers
- 5.5. Wash-down system
  - 5.5.1. Separate 5-gallon tank for environmentally friendly cleaning solutions
  - 5.5.2. Hose reel with wash-down hose and spray nozzle located at the rear of the tractor
- 5.6. 55 Gal. fuel tank
- 5.7. Push rollers

Comply: \_\_\_ Yes \_\_\_ No



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### 6. Operator Platform, Screed and Controls

- 6.1. Dual swing-out operator stations with weight adjustable heated deluxe seats, with perimeter rails with windshield and hardtop cover
- 6.2. Single operator control console that slides to each operator station and swivels outwards to enhance visibility
- 6.3. Sealed push button switches for individual hoppers, front apron, augers and conveyors, conveyor reverse, auto feed, feeder cleanout, auger raise and lower, tow points, screed lift, screed extensions, heat, engine start and stop
- 6.4. Instrument panel cover, showing only necessary functions for transport
- 6.5. Two screed control panels located next to each thickness control screw including automatic auger and conveyor, auger reverse, tow point, screed extension, extension slope and height, and screed hold override
- 6.6. Screed control with digital display of material height settings, paving speed, distance paved, vibration on/off auto and frequency, momentary screed lock and the ability to display troubleshooting Information without having to install an additional computer.
- 6.7. Smart wheel on the screed control providing 2 speed range for screed extension, slow speed for joint matching with a touch and faster speed at full position
- 6.8. Auger boost function that allows the auger speed to automatically increase when the screed extension speed is in fast mode
- 6.9. Digital display of material in front of tunnel, paving speed, distance paved
- 6.10. Backup control system for automatic auger and conveyor in the case of sensor or cable failure
- 6.11. Power crown switch with digital display of the screed crown
- 6.12. Material height at the end gate, controlled by sonic sensors, with adjustment and LED lights mounted on the end gate. Additional LED light on the sensor to be used as a flashlight
- 6.13. Automatic paving material height lock, increase and decrease on the screed control and the auger sensor. The display screen must automatically pop up when the paving material height +/- switch is activated
- 6.14. Power crown switch with digital display of the screed crown
- 6.15. Two screed remote controls with mounting brackets on the end gates controlling auger, conveyor, tow point, screed extension, slope and match-height and optional hydraulic auger tunnel
- 6.16. Backup screens on the screed control for unique functions on the screed remote control
- 6.17. Additional horn button for screed operator, located on each screed console with different sound than tractor operator' s horn
- 6.18. Auto back light on tractor and screed control switches to illuminate control switches
- 6.19. Lockable vandal covers for tractor and screed controls are provided
- 6.20. Lockable storage boxes for auger sensors and grade sensors and cables
- 6.21. Hydraulic screed hold preventing screed from settling when paving stops, automatically engaged when the operator brings the F & R lever to neutral
- 6.22. Hydraulic screed freeze preventing screed from rising after paving resumes, automatically engaged when the operator brings the F & R lever to neutral
- 6.23. Hydraulic screed lock, 2 pins hydraulically operated to hold the screed up for transportation
- 6.24. Automated grade and slope control using feedback from ski mounted sonic sensors
  - 6.24.1. Must include rigid storage box for transporting of ski & sensors

Comply: \_\_\_Yes \_\_\_No



## EQUIPMENT SPECIFICATIONS

### 7. Feeder System

- 7.1. Self-Cleaning front apron hydraulically lifted to dump material into the hopper before the hopper is lifted
- 7.2. Automatic centralized lubrication for auger and conveyor drive bearings
- 7.3. Self-lubricated conveyor idler bearing
- 7.4. Independent or combined hopper control and front apron
- 7.5. Individually controlled hopper with theoretical capacity of 14.3 tons, 2 hydraulic cylinders per side, and 2 mechanical hopper locks for transportation
- 7.6. Conveyor floor plates secured in tabs in the chassis rail and held down by the center chain guard
- 7.7. Dual slat conveyors with heat treated steel roller chain that are individually controlled in automatic and manual mode and also reversible
- 7.8. Paddle activated potentiometer sensors mounted above the conveyor tunnel to control the head of material in front of the tunnel
- 7.9. Individually controlled in automatic, manual mode and reversible augers
- 7.10. Augers and conveyors must be controlled independently in automatic and manual mode from either the tractor, screed or remote control
- 7.11. Material height at the end gate, controlled by sonic sensors, with adjustment and LED lights mounted on the end gate. Additional LED light on the sensor to be used as a flashlight
- 7.12. Automatic paving material height lock, increase and decrease on the screed control and the auger sensor. The display screen must automatically pop up when the paving material height +/- switch is activated
- 7.13. Digital display on the tractor console for material head in front of the delivery tunnels
- 7.14. Ability to select auger & conveyor RPM in the case of malfunctioning sensors or cables and be able to continue to pave in automatic
- 7.15. Feed augers
  - 7.15.1. Two (2) wear resistant, cast spreading augers.
  - 7.15.2. Auger flights shall be a minimum of 16" in diameter and have a pitch of not less than 13".
  - 7.15.3. The auger flight material shall be no less than 0.63" thick at the tip of the auger.
  - 7.15.4. Adjustable "kicker" augers shall be provided at either side of the auger drive box to minimize the risk of material (centerline) segregation.
  - 7.15.5. Three (3) 1' long, bolt-on stackable auger extensions shall be provided for each side of the paver.
- 7.16. Hydraulic adjustable auger, infinitely variable from 4" to 10" with indicator on rear wall
- 7.17. Automatic auger chamber fill switch that operates both augers and conveyors and cutoff automatically to selected cutoff point
- 7.18. Feeder clean out switch, operates both augers and conveyor for clean out or auger chamber fill

Comply: \_\_\_ Yes \_\_\_ No

### 8. Additional Screed Features

- 8.1. The screed shall be hydraulically extendable, capable of basic paving width from 8ft. to 15 ft. 6 in
- 8.2. The screed shall have a max paving width capability of 21 ft. with optional (not included here) heated bolt-on extensions and down to 6 ft. with optional cut-off plates.



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- 8.3. To minimize flexing of the extensions under all paving conditions, the extension screed shall be supported by a guide tube structure and carrier system consisting of a combination of 4 guide tubes per side with a minimum 3 in. diameter
- 8.4. The main screed plate shall be a minimum of 24" wide attached to the main screed with adjustable jack bolts for shim less adjustment of the screed plate alignment
- 8.5. The extensions shall be un-equal width front mounted, 12" wide without pre-strike off The RH and LH hydraulic extension shall have the ability to pave up to 3 ft. 9 in. without the addition of bolt on extensions
- 8.6. The extension screed match height mechanism shall be in the extension frame to maximize rigidity and not in the main screed fame
- 8.7. The extension screed independent angle of attack shall be accomplished by rotating the extension screed base on a pivot pin with the use of a screw adjuster mounted above the extension screed
- 8.8. The screed shall be capable of laying a uniform mat up to 12" thick at all paving widths
- 8.9. The screed heating system shall consist of an engine driven generator mounted on the tractor
- 8.10. The heating element shall be blade type and not heating pads
- 8.11. The main screed heating elements shall be removable without having to drop the main screed plate
- 8.12. The extension should have the ability to slope with the brake point at the edge of the main screed plate at any screed width
- 8.13. The extension must have the ability to install berm options that are either 12", 18" and 24" wide with the ability to infinitely berm from 0" to 6" high
- 8.14. There must be a cut-out switch on the screed control that prevents the berm and slope to function when activated

Comply: \_\_\_ Yes \_\_\_ No

