

030300 & 030500

STAINLESS STEEL SPREADER

**STAINLESS STEEL, RUBBER TROUGH SPREADER, IOWA SPINNER (030300)
STAINLESS STEEL, RUBBER TROUGH SPREADER, HANGING SPINNER (030300H)
STAINLESS STEEL SPREADER, IOWA SPINNER (030500)
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September 29, 2022 GAW

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I. STAINLESS STEEL SPREADER SPECIFICATIONS:

A. INTENT STATEMENT:

The purpose of these specifications is to describe a stainless steel and a stainless-steel rubber trough, under the tailgate, salt and/or anti-skid spreader to be used in snow removal and road maintenance operations.

The spreader shall be rigidly mounted by the Department to the sides of the dump body, below floor level and beneath the tailgate. During the maintenance operations, it shall permit the dumping of materials without filling the auger trough or interfering with the operation of the tailgate.

The spreader shall be capable of being controlled by the truck hydraulic system to vary the amount and throw of salt and/or anti-skid being spread on the roadway surface. The spreaders shall be compatible with existing Department truck mounted hydraulic systems, and it shall be the responsibility of the successful vendor to ensure this compatibility.

The spreader shall be single auger, hydraulically powered, cab controlled (by a, GL400, Freedom, XDS or Spread Smart controller, not included with spreader) unit with an Iowa style or single self-leveling spinner assembly, combination anti-spill/hinged cover plate with hinged trough bottom (with hydraulic lock out Ref. section 2 and 12) to permit the cleaning of the entire auger chamber. All spreader configurations shall have a pre-wet spray bar installed.

B. COMPONENTS:

NOTE: All references made to stainless steel shall be AISI Type 304 stainless steel.

7 gauge 0.1875-inch

10 gauge 0.1350 inch

Per EQN-9, EQN-9C, EQN-3A

All nuts, bolts and hardware brackets, or angle stock, unless otherwise specified, shall be stainless steel (no substitutes), with all edges deburred and rounded.

1. DIMENSIONS:

Overall width of vertical trough end plate shall be 96 inch.

Overall height shall be approximately 18 inch.

Overall depth shall be approximately 18 inch.

Inside trough width opening shall be 81 inch + or – 1/2-inch. Per EQN-9.

2. TOP COVER:

Two-position top cover. When raised, normal spread mode. When lowered with spreader not in use, allows full dump-over capability **without damage to hydraulic lock out device components or hydraulic couplers, including material buildup in couplers and lock out device components.**

Spreader material, full width, shall be a minimum 0.135-inch thick stainless steel.

Properly secured to prevent material leakage in spreading positions.

3. AUGER:

Per: EQN-6, EQN-3 and EQN-29, auger shall be bevel cut. (Material is specified in drawing.)

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I. STAINLESS STEEL SPREADER SPECIFICATIONS: (Continued)

B. COMPONENTS: (Continued)

4. AUGER BEARING:

1-1/4-inch shaft diameter.

2 bolt flanged type ends self-aligning, anti-friction, thrust, re-lube type, with retaining collar with set screw with Zerk fitting cover, eccentric type, or equal, per EQN- 10.

5. AUGER MOTOR:

The auger motor is a standard, no substitute. It is the responsibility of the successful Vendor to ensure that the spreader's assembly is designed and manufactured in such a way as to ensure compatibility and serviceability with the Department's hydraulic system/s.

Auger Motor: White Hydraulics: Model RE (no substitution), with a 50-pulse auger motor sensor installed. Kit # W80509

Displacement cu in: 32

Housing: 08 (A style 4 bolt)

Output Shaft: 14 1-1/4 inch straight

Rotation: 1 clockwise

Options: 25 Options

Note: Porting is 7/8 inch 'o' ring

Fitting Per EQN-9

6. STAINLESS STEEL SPREADER, URETHANE SPINNER ASSEMBLY:

Spinner frame shall be an "Iowa" type (ECN-030300 or 030500).

Spinner frame (Hanging) self-leveling type (ECN-030300H or 030500H).

Urethane spinner disc shall be per EQN-9B No Substitute without prior approval.

7. DISC:

Ref: C.U.E. Inc. Spinner Part #CC1229S per EQN-9B (No substitute without prior approval).

8. HUB:

REF: C.U.E., Inc., hub Part #20559-0650 (4 bolt type hub mounted to spinner disc with locking type nuts for use with spinner motor (bolt pattern shall match for referenced spinner). No Substitute without prior approval.

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I. STAINLESS STEEL SPREADER SPECIFICATIONS: (Continued)

B. COMPONENTS: (Continued)

9. SPINNER MOTOR:

Gerotor type hydraulic drive motor
Hydraulic port opening: 1/2-inch NPT.
Flange mount: 4 bolt.
Shaft keyway: 1 inch woodruff.
Displacement: 3.0 cubic inch/rev. maximum.
Fittings Per EQN-9C.

10. PAINT:

All carbon steel surfaces (motor & bearings) shall be properly prepared by thorough cleaning, removal of dirt, grease, rust and corrosion and shall be painted with proper undercoat and a sealer. All stainless steel shall be unpainted.

11. COUPLERS:

Spinner: One (1) Male and one (1) Female 56 series-10, no substitute/standardization.
Spreader: One (1) Male and one (1) Female 56 series-12, no substitute/standardization.
All hydraulic couplers shall be anodized steel.

All necessary hardware and fittings shall be supplied to ensure that the system is fully functional. Ship all loose hardware and couplers in the boxed spinner.

12. SAFETY:

Appropriate decals, instructional and WARNING/S, shall be provided and fixed.

There shall be a lock out system that will prevent the lower auger inspection pan from being lowered (opened) while the hydraulic line is connected to the auger motor. Lock out device shall be designed:

- **To prevent damage when in full dump-over mode to system components and hydraulic couplers.**
- **To prevent material, build up in couplers and lockout device components.**

Lock out to be plumbed with 3/4-inch hoses and couplers.

13. TROUGH: Per EQN-9

There shall be hinged trough bottom with spring loaded latches.

Bottom shall be separate from the anti-spill/cover.

ECN-030500 & 030500H Only Separate one piece bottom shall be full spreader width, minimum 7-gauge stainless steel.

Separate anti-skid/cover plate shall be minimum 10-gauge stainless steel.

Bottom shall be properly secured to prevent material leakage in spreading positions.

Bottom shall be hinged by bolts or pins (stainless steel) with a minimum of three (3) center hinge points and two (2) end points. End pieces, one piece formed front wall and rear wall, shall be minimum seven (7) gauge stainless steel.

I. STAINLESS STEEL SPREADER SPECIFICATIONS: (Continued)

B. COMPONENTS: (Continued)

STAINLESS STEEL WITH A RUBBER TROUGH SPREADER ECN-030300 & 030300H ONLY

Trough shall be constructed from natural black rubber material, 0.313-inch-thick, as per RMA - grade 2 ply. Reinforced with polyester fabric interweave. Rated at minimum 150 PSI tensile strength per inch of width. Discharge opening oblong, approximately 4 inch wide by 6 inch long.

SPREADER PRE-WET TUBE (All Spreader Configurations)

There shall be a 0.50-inch ID. stainless steel schedule 40 pipe the length of the spreader, threaded both ends. threaded ends shall pass through both end plates approximately 1 1/2-inch. Pipe shall be stitched welded in the front crease formed by the vertical and sloped bend, just above the auger. Pipe shall have six (6) 0.01250 inch holes through sidewall evenly spaced and inline the length of pipe and directed to the front centerline of auger. Right (passenger) end shall be capped with stainless steel hex cap. Left (driver) side shall have one (1) inch male camlock.

14. ANTI-FLOW PLATE OPENING:

Anti-flow plate shall be mounted over the trough opening. Anti-flow plate shall be arched to provide a minimum of 3/4-inch clearance between the shield and the outer periphery of the auger flight. Anti-flow plate shall butt against end plate. Anti-flow plate shall be minimum 10-gauge stainless steel. Anti-flow plate length shall be 14 inch. Discharge opening shall be approximately 6-inch-wide by 7-inch-long rectangular opening. Discharge opening shall begin from end plate on roadside.

15. QUICK DETACH:

There shall be quick detach bracket per EQN-3A.

16. PACKAGING:

All loose hardware shall be packaged and individually attached and shipped with each spreader. Motors shall be lubricated and have plugs installed. Bearing shall be greased. Each unit shall have an instructional and parts manual, packaged in plastic with the loose hardware.

17. PILOT MODEL:

The successful bidder shall, after receipt of the purchase order, furnish the Department of Transportation with one (1) complete pilot model meeting all the requirements of the specifications. Pilot model shall be delivered to the Department of Transportation, 17th & Arsenal Blvd., Harrisburg, PA for inspection, testing and approval by the Department of Transportation. Pilot model shall be built and presented for approval "prior to building the remaining units". (Presentation of pilot model is not required if the quantity is one (1) but the pilot model requirements are applicable regardless of quantity).

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I. STAINLESS STEEL SPREADER SPECIFICATIONS: (Continued)

B. COMPONENTS: (Continued)

DELIVERY:

All spreader shall be properly supported, banded, and shipped on wooden mounts.
All spinners shall be properly boxed, banded and shipped on wooden pallets.

II. DRAWINGS:

EQN-3	dated	10-02-06	Sheet 1 of 2	AUGER DRIVE SLEEVE INSTRUCTIONS
EQN-3A	dated	05-23-02	Sheet 1 of 1	QUICK DETACH SPREADER KIT
EQN-6	dated	05-28-02	Sheets 1 & 3 Of 3	SPREADER AUGER DETAIL
EQN-9	dated	06-03-02	Sheets 1, 2 & 3 of 5	S/S PA DOT SPREADER DETAILS
EQN-9B	dated	06-03-02	Sheet 1 of 1	SPINNER/SPREADER TAILGATE URETHANE
EQN-9C	dated	07-26-07	6 Sheets	SPREADER/SPINNER STAINLESS STEEL
EQN-10	dated	06-26-97	2 Sheets	SPREADER BEARING INFORMATION
EQN-29	dated	08-08-17	1 Sheet	BEVEL CUT AUGER

The above referenced drawings shall become part of these specifications. These drawings reflect the intent of the Department and any discrepancies shall be resolved at the line setting ticket meeting between the vendor and the Equipment Chief, or the pre-production inspection of the equipment.

DRAWINGS APPEAR AT THE END OF THE SPECIFICATIONS.

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III. MANUALS:

The successful vendor shall furnish all applicable manuals per unit:

- 1 Operator's
- 1 Parts
- 1 Service
- 1 Motor
- 1 Body and Sub-frame (Parts and Service)
- 1 Complete set of manuals for any additional items/equipment added to a piece of equipment.

The manuals listed shall be official O.E.M. publications supplemented with technical manuals for all components as published by sub-vendors/manufacturers.

Parts Manual presented must be a relative to "all" items utilized to build these units, with appropriate part numbers.

All manuals shall be supplied on thumb drive in PDF format that can be loaded to a dedicated website.

Paper manuals may be supplied if available from manufacture. Paper manuals do not relieve the requirement for the thumb drives.

Delivery of manuals shall be completed with the delivery of each unit.

IV. TRAINING:

Mechanic:

The successful vendor shall provide services of qualified factory trained technicians for not more than ___0___ training sessions of not more than ___0___ hours at ___0___ PENNDOT locations to train personnel for in-depth preventive maintenance, overhaul and review of the proper usage of parts and service manuals, as well as component/system adjustments that need to be monitored at specified service intervals.

Operator:

The successful vendor shall provide services of qualified factory trained technicians for not more than ___0___ training sessions of not more than ___0___ hours at ___0___ PENNDOT locations to train personnel in the proper operation, safety and servicing of the equipment. The successful vendor shall submit a training plan to the Fleet Management Division for approval within 45 days after receipt of the Purchase Order. The training plan shall consist of course outline and class schedule.

All training must be completed within 60 days after the dates established in the approved training plan unless an extension is mutually agreed to in writing by the Chief of the Fleet Management Division.

All training shall be coordinated with the District Equipment Managers, with the exception of Asphalt related training, which must be coordinated with the Statewide Training Coordinator (717) 787-4836, Fax (717) 783-4438.

V. WARRANTY:

The warranty start-up date shall be defined as the date of transfer from the PennDOT Fleet Management Division to the designated county location.

This will be considered the date of delivery to the county and NOT the date of delivery by the successful bidder to the Department.

The PennDOT Fleet Management will supply the actual start-up date, equipment number, and serial number of the machine, via email, to the successful bidder.

It is the responsibility of the successful bidder to ensure that the equipment manufacturer recognizes and applies the Department's actual warranty start-up date in their database.

Warranty will be for a minimum of one (1) calendar year on the entire spreader, and two (2) calendar years for hydraulic motors (spinner & auger) and sensor or manufacturer's standard commercial term (whichever is greater), from date of departments acceptance. If the manufacturer neglects or fails to correct defect(s) during the warranty period, their responsibility shall continue until such time as it takes to correct the defect(s). The manufacturer is expected to respond to warranty problems and administrate effective solutions in the best interest of the Commonwealth. The successful bidder shall be an authorized dealer for the proposed spreader/s and shall comply with the manufacturer's warranty or authorize a qualified dealer in the locality in which the unit is assigned, to do whatever is required to comply with the manufacturer's warranty without cost to the Commonwealth.

The vendor will replace, free of charge within two (2) years from date of county acceptance, any spinner, auger motors and sensors which in the judgment of the manufacturer has failed because of defective material or workmanship, provided it is shown to be properly mounted, and not subject to abuse in operation or assembly.

The successful bidder shall be an authorized dealer for the proposed spreader/s and shall comply with the manufacturer's warranty or authorize a qualified dealer in the locality in which the unit is assigned, to do whatever is required to comply with the manufacturer's warranty without cost to the Commonwealth.