

6165 W Detroit St. • Chandler AZ 85226
 +1 (602) 276-0406 • +1 (800) 528-8242 • FAX +1 (480) 961-0513
 www.crafco.com

March 2024

The purpose of these specifications is to describe a mastic applicator attachment specifically designed for skid steer loaders and shall be capable of mixing and applying Crafco TechCrete, Mastic and Matrix products. All qualified bidders must have and maintain a complete inventory of repair parts and have experienced factory-trained service personnel for this equipment.

	<u>Comply</u>	<u>Does Not Comply</u>
1. GENERAL		
A. This machine shall be the manufacturer's current production model manufactured in the United States of America.	_____	_____
B. The machine will be capable of being filled with hot material from a Patcher II or Patcher 4 machine after preheating, which shall take less than 30 minutes. The machine shall also be capable of melting material blocks directly for small jobs; however, the heating/melting time may exceed 2 hours depending on number of blocks to be melted.	_____	_____
C. A comprehensive safety manual and an operational/maintenance manual shall be supplied with each unit.	_____	_____
D. Thermostatic control for the tank surface and material shall be provided and shall have sufficient sensitivity to maintain product temperature within the manufacturer's specified application temperature range.	_____	_____
E. Temperature indicating devices shall have intervals no greater than 5°F (2.8°C) and shall be calibrated as required to assure accuracy.	_____	_____
F. The mixer shall have a continuous material mixing system to provide uniform viscosity and temperature of the material being applied.	_____	_____
G. Power supply shall be provided by the Skid Steers 12Vdc power system.	_____	_____
2. REQUIRED SAFETY FEATURES		
A. The unit shall have a safety shut-off on the lid that automatically stops the agitator when the lid is opened.	_____	_____
B. This unit shall have a safety release in place for the hydraulically actuated gate to allow emergency manual closure of material gate in the event of hydraulic control failure.	_____	_____
C. Other _____	_____	_____
_____	_____	_____

3. FRAME

- | | | |
|--|-------|-------|
| A. This machine shall be a skid steer attachment that can be attached from either side and provides fork truck tubes for transport purposes when not connected to a skid steer loader. The frame shall include the features required to mate to the boom of typical skid steer loaders with the industry standard attachment system. | _____ | _____ |
| B. This machine shall provide walkable lids and top with diamond treadplate. There shall be 2 lids to provide loading of material from either side of the machine. The lids shall include self-latching locks that cannot be removed and can be operated from either side of the machine. | _____ | _____ |
| C. The primary structure of the machine shall be 2"x2" thick wall square tubing and steel sheet metal ranging from 10-gauge to 3/8" thick plate, all welded together. | _____ | _____ |
| D. Shall be compatible with Skid Steers with a minimum Rated Operating Capacity of 2,550 lbs. (1,156.6 Kg) | _____ | _____ |
| E. Other _____
_____ | _____ | _____ |

4. HEATING TANK

- | | | |
|---|-------|-------|
| A. The material heating tank shall be a V- shaped vessel with 7.5 inch (19 cm) radius at the bottom, 36 inch (91 cm) wide at the top, 13.5 inch (34 cm) deep, by 56.25 inches (143 cm) long having a capacity of 65 gallons (246 L) at ambient temperature. | _____ | _____ |
| B. The tank will have a side discharge chute with a hydraulically actuated material gate that drops material into a floating material drag box assembly. | _____ | _____ |
| C. The maximum filling height shall be 18 inches to allow the machine to be filled directly from a Patcher II or Patcher 4 machine. | _____ | _____ |
| D. A tubular propane burner shall heat an air jacket under the material tank. A flame spreader shall be situated between the flame and the material tank to minimize direct flame contact to tank. | _____ | _____ |
| E. Air baffles shall be provided to create the air jacket within which the burner operates and shall also provide protection against wind blowing out the flame. | _____ | _____ |
| F. A bottom burner cover shall be provided to prevent ignition of flammable materials under the machine (such as grass) while also providing paths for combustion air as well as water drainage while not in use. | _____ | _____ |
| G. Other _____
_____ | _____ | _____ |

<u>Comply</u>	<u>Does Not Comply</u>
---------------	------------------------

6. HYDRAULIC SYSTEM

- A. The hydraulic system shall be powered by the auxiliary hydraulic system of the skid steer loader through industry standard quick connect hydraulic fittings on the boom.
- B. Input flow shall be a minimum of 9 GPM and a maximum of 25 GPM.
- C. Mixer valve shall be solenoid operated by toggle switch located in switch pod of the in-cab control system.
- D. The control will allow for bi-directional operation of the mixer. A mix-melt mode that reverses automatically once a minute and a dispense mode that moves material towards the discharge gate shall be provided. The switch shall have a center "OFF" position for the mixer.
- E. The material gate shall be operated by a solenoid valve controlling a hydraulic cylinder to open/close the gate. The solenoid valve shall be operated by a by directional momentary toggle switch located in the switch pod of the in-cab control system. The toggle switch shall include a center stop position. A flow control valve will be mounted below the cab system storage case to adjust the speed of material gate opening and closing.
- F. The material gate shall include a manual release that allows the gate to be closed by hand in the event of a hydraulic control failure.
- G. Other _____

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7. HEATING SYSTEM

- A. The material tank is heated by a 76,000 BTU/hr propane burner at the bottom of the material tank. Burner shall run a minimum of 8.4 hours on a full 30gal tank of propane (worst case scenario continuous burn)
- B. The burner shall be a stainless-steel pipe configuration with flame holes down the length of both sides of the burner as well as flame holes at the end of the pipe cap to heat the material discharge chute area.
- C. The burner flame shall contact the stainless-steel flame spreader instead of the material tank directly.
- D. The burner exhaust gas shall be vented through the side air baffles and end caps through openings along the top edges of these panels.
- E. Other _____

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Comply Does Not Comply

8. IGNITION OF BURNER

- A. The burner shall be lit by a constant duty high voltage transformer powering an electric spark igniter. _____
- B. This igniter shall work with a sensor that detects a lack of burn or ignition and shuts down the fuel supply. _____
- C. The thermostat control is located in the control box. _____
- D. Other _____

9. TEMPERATURE CONTROL

- A. The mixer shall have a thermostatic control device that will automatically regulate tank and material temperature. _____
- B. The control shall have a digital readout for temperatures of tank and material. _____
- C. The thermostat shall control burner ignition for a material temperature range from a low of 200°F (93.3°C) up to a high of 450°F (232.2°C). _____
- D. The tank temperature range shall be from a low of 150°F (65.5°C) up to a high of 550°F (287.7°C). _____
- E. The controls shall be activated by a single power switch. _____
- F. All temperature controls shall be contained in a single weatherproof control box. _____
- G. Other _____

10. AGITATION

- A. The material shall be mixed by a hydraulically driven, full sweep horizontal mixer shaft with eight angled paddles. _____
- B. This feature ensures that material remains in complete suspension. _____
- C. The mixer shaft shall be coupled from a 1 to 2.7 chain drive to the hydraulic motor resulting in a max mixer torque of 480 ft. lbs. _____
- D. The mixer rotates in both directions. _____
- E. Mixer shall have a fixed speed and shall not change regardless of input flow (Minimum 8 GPM - Max 25 GPM input). _____
- E. For additional safety the mixer will shut off automatically when either loading lid is opened. _____
- F. Other _____

11. DRAG BOX

- A. A drag box that floats and follows the contour of the ground independent of the machine shall be provided. The drag box shall include provisions for 6" as well as 10" wide patching hoppers that shall be interchangeable. The drag box shall be pulled along by the machine, yet flow in a vertical direction with some tilting as required to maintain good contact with the ground
- B. The drag box hoppers shall be 7" deep, allowing for adequate filling such that the maintained level of material in the hopper is not critical as the operator drives the loader forward and applies material to the roadway being repaired.
- C. The hoppers shall rotate between a stowed position and an in-use position. A lock bar shall be included that easily locks the hopper in either of these positions. When the hopper is stowed, it shall be rotated upwards far enough that the machine can sit fully flat on the ground with the drag box installed. When the hopper is locked down for in-use, the hopper shall reach the ground with at least 2" to float while the machine is held 6" off the ground by the loader.

12. OPERATOR VISIBILITY

- D. A wireless color camera system shall be provided to provide visibility of the interior of the drag box hopper as well as the crack defect in the road to be filled that is in front of the drag box.
- E. The camera shall be mounted to the machine such that its position may be adjusted through a wide range of heights and angles to satisfy the operator's requirements for visibility of material level in the hopper as well as the crack to be repaired that lies ahead of the drag box.
- F. The camera mount shall be reversible such that it can be mounted to view in either direction of travel of the machine.

13. TOOLS

- G. A tool for clearing any material jams in the discharge chute shall be provided.
- H. A holder for the tool shall be provided at the top of the material discharge gate, on both sides for easy access and storage

14. PAINT

- A. All painted surfaces shall be coated with Axalta two part epoxy paint applied by Axalta certified painters
- B. Other _____

<u>Comply</u>	<u>Does Not Comply</u>
---------------	------------------------

15. TRAINING

- A. An authorized, factory-trained representative will be made available for a full day of training at a facility designated by the bidding agency. _____
- B. At this training session a complete operational, mechanical and safety overview will occur. _____
- C. Both safety and operational manuals will be viewed and discussed with all concerned personnel. _____
- D. Additionally, the representative will be available at that time for "on the job" safety and field training. _____
- E. Other _____ _____

16. SAFETY AND TRAINING MANUALS

- A. A written Safety Manual will be provided to the bidding agency. _____

17. PARTS

- A. Bidders must show proof that a large stock of parts for the model of equipment upon which they are bidding is maintained at their facility. _____

18. AWARD

- A. Equipment is for use by the Highway Department and must meet the requirements of that agency as interpreted by the Highway Commissioner. _____
- B. Prior to award the Purchasing Agency may require a visit to the supplier's facility to assure supplier has plant capacity to manufacturer and deliver equipment on time as required. _____
- C. If it is determined that the supplier cannot supply as requested, this is just cause for cancellation. _____

19. WARRANTY

- A. The manufacturer shall warranty the equipment for two years or as otherwise noted in the manufacturer's standard warranty policy. _____

20. QUALIFICATIONS OF BIDDERS

- A. No bid will be considered unless the bidder can meet the following conditions: _____

- B. Bidder must have a parts/service location and keeps a sufficient stock of parts on hand at all times. _____
- C. The equipment offered is a stock model chassis that meets the requirements of the specifications without material changes or modifications. _____
- D. The model is regularly advertised and sold by the manufacturer. _____
- E. The bidder has been engaged in the sale and support of this make and model of equipment for at least twenty-four months. _____

ACCESSORIES (X if to be included):

_____ 49749N – Window Mount Assembly
 The in-cab control system is meant to be hung on the “ROPS” (roll over protection system) cage of the skid steer loader’s cab. Most brands of loaders have optional comfort system (heat and AC) that include window panels. Some brands place these window panels INSIDE the ROPS cage eliminating the ability to hang the in-cab control system. This Window Mount Assembly includes 4 large suction cups and provides a steel frame to hang the in-cab control system.

_____ 49757N – 12V Plug Adapter
 This machine requires 12VDC from the skid steer loader via a 12V power socket (aka “cigarette lighter plug”)... Some older loaders may not have this feature, so this adapter is a 2meter cable with the 12V power socket on one end and large battery clamps on the other.

APPROVED EQUAL

The approved make and model for this specification is a Crafcro EZ Patcher. Bidders offering to supply other than the approved make and model must supply a detailed description of the equipment being offered. Bidders offering to supply equipment other than the approved make and model shall also supply a list of references of who have successfully heated, mixed and applied Crafcro TechCrete, Mastic and Matrix through the equipment being offered. For the purposes of comparison, a separate list of all deviations to this specification must be attached to your bid document.

Prior to bid award an on-site demonstration of the equipment offered may be requested. All bidders offering other than the approved model listed will be required to provide an on-site demonstration to verify that their unit complies with all specification requirements before their bid is considered.

Failure to carry out the provisions noted herein is deemed sufficient reason to reject the bidder’s proposal.