



The Choice of Asphalt Professionals Worldwide

6561 Bernie Kohler Drive • North Branch, MI 48461

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KM 8000 TEDD SPECIFICATION

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COMPLIANCE TO SPECIFICATIONS

The bidder shall indicate 100% compliance by checking “YES” or non-compliance by checking “NO” for each line item of specification. Any space left blank shall be considered non-compliant. Any deviation from the specification, or where submitted literature does not fully support the meeting of specifications, must be clearly cited in detail, in writing, by the bidder and submitted with the bid. NO verbal interpretations will be accepted! In addition NO deviations below “minimum” specifications as written will be accepted.

“BIDDING REQUIRMENTS SECTION”

SECTION		SPECIFICATION DETAIL
SECTION 1 <u>GENERAL</u>	1.1	This specification is to describe the asphalt hotbox reclaimer unit designed to manage up to four (4) tons (8,000 lbs) of plant asphalt road mix.
	1.2	The unit is designed as a trailer and the hotbox is permanently affixed to the trailer framework.
	1.3	The unit offers the user the ability to maintain hot mix asphalt or cold patch material at workable temperatures for up to seventy two (72) hours continuously.
	1.4	Unit also offers to the user the option to “reclaim” virgin hot mix asphalt from ambient storage temperature to usable hot mix form.
	1.5	The unit offers the ability to safely maintain temperatures that accommodate standard “cold patching” materials.
	1.6	The heating unit is an efficient use of fuel and controlled by an electronically controlled thermostat.
	1.7	Operator must be able to maintain load temperature between 50-350 degrees Fahrenheit.

SECTION 2 <u>DIESEL</u> <u>CONTROLS</u>	2.1	The unit is to include a sealed weather resistant NEMA Type 4 control panel.
	2.2	The NEMA Type 4 control panel dimensions measure 12” x 10” x 8”.
	2.3	The control panel incorporates an Allen-Bradley Programmable Logic Controller (PLC) and Allen Bradley 2” Human Machine Interface (HMI).
	2.4	The control panel monitors and controls heating temperatures from 50-350 degrees F.
	2.5	The control panel allows for monitoring, tracking and logging of data.
	2.6	The control panel incorporates an on-delay burner start up on a 0-168 hour adjustment.
	2.7	The control panel will display real time voltage with accuracy of +/- 3%.
	2.8	The control panel incorporates an hour meter with a resettable run time and a Non-Resettable total runtime.
	2.9	The control panel is to display real time asphalt load and combustion chamber temperatures.
	2.10	The diesel burner will be controlled digitally with the PLC and HMI systems.
	2.11	Burner and controls shall be mounted on the front exterior wall of the storage bin.



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SECTION		SPECIFICATION DETAIL
SECTION 3 <u>DIESEL</u> <u>BURNER</u>	3.1	Asphalt storage compartment will be heated by a diesel fueled 12VDC KEM 101 Beckett burner.
	3.2	Burner rating is not to exceed 105,000 BTU.
	3.3	The diesel burner must be mounted to the hot box above the trailer frame within the chassis. Burners mounted even with or below the frame are unacceptable.
	3.4	Burner must be easily removed for maintenance by removing four (4) nuts and a fuel line.
	3.5	The burner is protected and enclosed by a cover keeping the unit and components out of weather and clear of road debris.
	3.6	The diesel burner will be equipped with an automatic electronic ignition system.
	3.7	The diesel burner will supply primary combustion air and fuel into the insulated (combustion) fire box during operation.
	3.8	It will be equipped with 100% safety shut down if burner ignition fails.
	3.9	In the event of a monitored abnormally high temperature in the combustion chamber the burner will automatically shut down for safety purposes and require the system to be recycled for a manual restart.
	3.10	Combustion chamber must be an integral part of the burner system and easily removed above the trailer frame.
	3.11	Combustion chamber is constructed of a one piece 1.5" ceramic refractory board.
	3.12	The heating system will be supplied power by a twelve (12) volt gel deep cycle marine battery maintained through the towing vehicle charging system
	3.13	A permanently mounted 110 volt/12volt battery charger is supplied for overnight charging.
	3.14	The heating system fuel supply tank shall be a minimum of 25 gallon capacity.
	3.15	The fuel tank will include a quick site fuel level indicator on top of the tank.
SECTION 4 <u>TRAILER</u> <u>DESIGN</u>	4.1	Trailer frame will be constructed of eight inch (8") @11.5# channel steel combined with six inch (6") @8.2# structural channel steel.
	4.2	All corners and fatigue areas will be gusseted.
	4.3	The trailer frame will include 2 1/2 "x ¼ wall square tube steel cross members.
	4.4	The upper frame directly beneath the hotbox will be fabricated with a minimum of four, six inch (6") @ 8.2 pound structural channel steel long members and three, six inch (6") channel steel@ 8.2 pound structural channel steel cross members to support frame and hydraulic scissors hoist.
	4.5	The trailer will have tandem, 7000# rated axles. 24", five (5) leaf slipper springs will be used for suspension.
	4.6	Wheels will be 16", white spoke rims and ST235/80R16 tires with a minimum load rating of 3520# each.
	4.7	Twelve (12) volt DC electric brakes will be provided on all wheels.
	4.8	Front leveling jack will be 7000 pound minimum capacity with 15" adjustable pad.
	4.9	Towing eye will be solid forged steel, 20,000 pound rated, with minimum three inch (3") interior diameter and height adjustment from 18" to 30".
	4.10	Overall standard dimensions are 216" x 96"x 84"
	4.11	Safety chains will be permanent attached 3/8" Class III with grab hooks.
	4.12	Trailers are compliant with USHTSA, FMCSA, and FMVSS requirements.
	4.13	Trailers are certified by North American Trailer Association (NATM).
	4.14	The front frame of the trailer will enclose the triangular utility area measuring a minimum of 12 sq. ft.



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SECTION	SPECIFICATION DETAIL	
SECTION 4 CONTINUED.	4.15	3/16" (#3) braced expanded steel grating (meets deflection requirements of Federal Specification RR-G-661-B) will be the flooring of the utility area.
	4.16	4 permanent attached hooks located inside of the trailer frame offer safety securing devices for tools and equipment during travel.
TRAILER DESIGN CONTINUED	4.17	The fenders will be a minimum of 11 gauge steel "diamond" floor plate for slip resistance and rigid enough to be used as a work platform.
	4.18	Protective tail light pockets will be an integral part of each fender.
	4.19	The structural diamond plate fender platforms shall enable the operator to reach and clean half of the hopper from each side of the unit, eliminating the need for the operator to reach completely across the machine, thereby minimizing the potential of injuries and compensation-related liabilities
	4.20	The structural fender platforms shall be complete with built-in steps. The structural fender platforms shall also serve as the mounting location for the flush, grommet mounted stop, turn and tail lights. In the interest of degradation caused by heat, no DOT required lighting is to be mounted in the rear wall of the asphalt storage box.
	4.21	In the interest of structural integrity and so as to completely eliminate structural fatigue caused by condensation and rust, the trailer frame long members shall be constructed from 8" channel iron. For this reason box tube construction, which is prone to internal corrosion, shall be not be accepted.
	4.22	The channel iron members of the trailer shall be completely and continuously welded on both sides so as to leave no joints or seams exposed.
	4.23	The scissor hoist will be a minimum of 16,000# lifting capacity.
	4.24	The hoist will be operated by means of a 12 volt electric pump with integral oil reservoir and push button operator with a 10 ft. cord.
	4.25	The push button controller will have a lockable storage box to prevent unauthorized access.
	4.26	A radio controlled hydraulic dump feature will allow the operator to safely operate dump from as far as a 15' radius.
	4.27	The hotbox reclaimer box will dump up to a minimum of 52 degrees.
	4.28	The hotbox reclaimer box will have a manual prop rod built into the trailer frame.
	4.29	Combination LED stop/tail lights and marker lights will be properly located and wired with not less than sixteen (16) gauge UL approved wiring.
	4.30	Two (2) 6" oval LED stop tail, turn lights will be mounted at the far outside rear facing on the fenders.
4.31	Four (4) 4" round LED stop tail, turn lights will be mounted at the rear cross member of the trailer frame.	
4.32	Two (2) 1" LED red vehicle presence lights will be mounted at the rear widest point on the fenders.	
4.33	Two (2) 1" LED amber vehicle lights will be mounted at the forward and widest point on the fenders.	
4.34	Two (2) 1" LED amber vehicle presence lights will be mounted at the furthest forward and widest outside point of the vehicle.	



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SECTION		SEPECIFICATION DETAIL
SECTION 5 <u>ASPHALT STORAGE BIN</u>	5.1	The asphalt storage bin will hold a capacity of four (4) tons of material.
	5.2	The storage bin measures 64" x 72" x 56" from base of bin to peak.
	5.3	The design offers gravity feed of the material towards the shovel ports.
	5.4	The asphalt bin is constructed of four 12 gauge welded steel walls.
	5.5	The floor will be constructed of one solid piece of 12 gauge steel.
	5.6	A third wall of reflective aluminum is attached and located between the storage bin and the outer shell.
	5.7	2,300 degree Fahrenheit refractory ceramic insulation located between the reflective wall and bottom floor insulates the bottom of the unit.
	5.8	High temperature fiber glass insulation not less than two inches (2") in thickness insulates the exterior walls of the unit.
	5.9	The outer shell will be fabricated of reinforced 16 gauge steel.
	5.10	All seams will be a continuous weld.
	5.11	Interior gussets and supports welded at strategic points provide additional fabricating rigidity.
	5.12	When the unit is in the full dump position the full load must be able to be dumped. Units that cannot discharge the full load and require manual unloading in the dump configuration are not acceptable.
	5.13	The shovel deck platform is solid reinforced 11 gauge steel.
	5.14	Asphalt chambers must not have any vents or heat tubes running from front to back. As these tubes contribute to asphalt damaging or bridging in the chamber. Vent openings in the asphalt chamber will quickly fill up with asphalt and limit the transfer of heat likewise these units are unacceptable.
	5.15	Asphalt storage bin shall be constructed in a triangular polyhedron dual chamber manner to facilitate heat energy to the center of the load.

SECTION 6 <u>FILLING DOORS</u>	6.1	Two manual peaked top doors form the lid. Each door will be constructed of sixteen (16) gauge steel insulated with not less than three (3") inches of high temperature insulation to offer optimum efficiency.
	6.2	The two doors measure 32" x 72" and are 3.25" thick.
	6.3	Two cantilevered handles allow easy, one man lid opening and closing.
	6.4	The handles will be fabricated of square tubing and allow the user to open and close the unit from a ground standing position.
	6.5	The handles allow for the user to operate close to unit and out of danger of road traffic.
	6.6	A replaceable gas spring will be affixed to each door to reduce opening force as well as hold the door in the open position for filling.
	6.7	When open the doors open a minimum of 98" from peak to peak.
	6.8	The maximum opening force required will be no more than 15 lbs.
	6.9	Additional grab handles are located on the opposite sides of the lid.
	6.10	When in the open position, the lids creates a funnel designed large enough to easily maneuver the unit under standard asphalt stations (batch or silo type plants) for filling and open to protect the unit.
	6.11	Asphalt loading lids must be a continuous type hinge. Pillow block bearings hinges are not acceptable due to their failure rate.



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SECTION	SPECIFICATION DETAIL	
SECTION 6 CONTINUED. <u>FILLING DOOR</u> <u>CONTINUED</u>	6.12	The handle linkage shall be bolted to the box side and not require re-positioning the handle to operate or the use of body weight to counteract the weight of the door when opening or closing.
	6.13	When opening the doors the operator shall be positioned immediately and safely alongside the unit and in-line with the structural fenders, standing either in front of or behind them depending on which door is being actuated. Throughout the opening and closing of the doors the operator shall not be required to step away from the unit to operate the door handles.
	6.14	When in the open position, the door design shall serve to protect the burner, controls, and other related components and exhaust stack located in the front storage area from falling material during the loading process.
	6.15	The design of the loading doors must open from front to back protecting the trailer and enabling easy loading with frontend loaders from the side of units. No exception to this critical safety consideration shall be permitted.

SECTION 7 <u>SHOVELING</u> <u>PORTS</u>	7.1	Two (2) shoveling ports are located at the rear of the unit to provide for unloading material. Enabling multiple operators to perform simultaneously.
	7.2	The shovel ports must be large enough to accommodate standard use asphalt shovels.
	7.3	The doors will be fabricated of welded sixteen (16) gauge steel with a 1" minimum high temperature insulation enclosed inside the doors.
	7.4	The doors travel in a sliding track which is equipped with a safety latch feature to keep shovel doors open during use.
	7.5	Each shovel port is to be a minimum of 16" high by 20" wide.

SECTION 8 <u>SHOVEL</u> <u>BRACKETS</u>	8.1	The shovel brackets are located on the passenger side of box; they are a holster type design to aid in the storage of shovels.
	8.2	The brackets will be permanently attached and capable of securing not less than two (2) standard asphalt type shovels during travel.

SECTION 9 <u>PAINT</u>	9.1	All pieces exposed shall be properly coated.
	9.2	All raw materials used in the manufacturing process will be new and unused and properly coated with an industrial equipment primer and industrial equipment paint coating.
	9.3	KM International chrome yellow will be the primary coating color.

SECTION 10 <u>WARRANTY</u>	10.1	The manufacturer will, for a period of twelve (12) months from the invoice date, repair or replace any serviceable or consumable parts determined by a KM International representative to be defective.
	10.2	All components, with the exception of the previously listed twelve (12) month warranted parts, will be covered under this warranty for a period of twenty-four (24) months.
	10.3	The trailer frame components, hotbox body and workmanship is warranted for a period of five (5) years from the invoice date.
	10.4	This warranty applies only when the claim is approved and repaired by a KM International representative.
	10.5	This warranty applies only when the equipment is used for its intended purpose and properly maintained.



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SECTION		SPECIFICATION DETAIL
<u>OPTION 1: HEATED TACK TANK</u>		
<u>HEATED TACK TANK</u>	1.1	Thirty (30) gallon capacity tank will be supplied to transport and heat asphalt tack coatings.
	1.2	Interior, gravity feed designed tank will be of continuous welded fourteen (14) gauge steel.
	1.3	The bottom surface of the interior tank will be insulated with high temperature refractory ceramic insulation and stainless steel shield promoting convection/conduction, preventing overheating material.
	1.4	The outer shell of the tank shall be fabricated of sixteen gauge steel, all welded seems.
	1.5	High temperature insulation along with a third wall of reflective aluminum shall be attached to the outer shell to aid in heating efficiency.
	1.6	A one inch (1") on/off ball type valve with spout will be supplied to draw the material.
	1.7	The lid will be a weather resistant enclosure attached by hinge with lockable latch.
	1.8	The heated storage unit will be bolted on with not less than 3/8" hardware and removable if required.
	1.9	A 10,000 BTU propane gas vapor burner will provide heating for material.
	1.10	Convection heating will transfer energy to the tank and material.
	1.11	The burner will be thermostatically controlled from fifty five to one hundred seventy five (55-175) degrees Fahrenheit.
	1.12	Power to operate the gas control is supplied by a 750 MV power pile generator with 100% safety shutdown.
	1.13	A 9V electronic igniter provides manual pilot ignition.

<u>OPTION 2: SPRAY TACK UNIT</u>		
<u>SPRAY TACK UNIT</u>	2.1	A positive displacement, iron gear pump with built in pressure relief valve will provide the ability to spray 3 GPM of tack coating.
	2.2	The pump will be fully self-contained and supplied with an application wand and 15 feet of hose.
	2.3	The 3/4" roper pump will be driven by a 5.5 HP Honda gasoline engine.
	2.4	The piping will be complete with a valve and hose for flushing the suction piping, pump, hose, and wand after each use.
	2.5	This option requires the purchase of the Heated Tack Tank Option.

<u>OPTION 3: SOLVENT TANK</u>		
<u>SOLVENT TANK</u>	3.1	A seven (7) gallon capacity utility tank will be supplied for use with cleaning fluids.
	3.2	The tank will be manufactured of sixteen (16) gauge welded steel.
	3.3	A three quarter inch (3/4") plug at the bottom of the tank for draining solvent.
	3.4	The tank will be bolted on with not less than 3/8" hardware and removable if required.
	3.5	The tank will allow for standard asphalt shovels to be "dipped" for cleaning.

<u>OPTION 4: UTILITY HAND TORCH</u>		
<u>UTILITY HAND TORCH</u>	4.1	A 50,000 BTU hand Torch will be supplied.
	4.2	If this option is selected with the diesel fired option, it will be supplied with a stand- alone thirty (30) pound fuel cylinder.
	4.3	The torch will have connections located at the rear of the unit making it nearest to the normal working area.
	4.4	A manual lighting procedure will be required for ignition.
	4.5	On/off flow control type valve shall be attached to the torch.



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SECTION	SPECIFICATION DETAIL	
<u>OPTION 5: LIGHT BAR; DIRECTIONAL ARROWS AND CONTROLLER</u>		
<u>LIGHT BAR; DIRECTIONAL ARROWS AND CONTROLLER</u>	5.1	Arrow warning bar light are switched to allow the user to warn and/or direct the arrow left, right, bar or left and right.
	5.2	Light bar is a Soundoff signal Trafficmaster LED amber directional board with controller.
	5.3	Controller enclosure is mounted on the front exterior wall of hotbox.
	5.4	Dimensions for the directional arrow bar measure 42" x 2.75" x 1.75".
	5.5	The light bar includes two (2) warning patterns and six (6) arrow patterns.

<u>OPTION 6: STROBE LIGHT</u>		
<u>STROBE LIGHT</u>	6.1	Proper wiring and brackets will be provided for safety marking equipment.
	6.2	Safety Beacon Light (strobe) is a Soundoff signal 3000 series amber.

<u>OPTION 7: LOADING HOIST/WINCH & DAVIT 12V OPERATION</u>		
<u>LOADING HOIST/WINCH & DAVIT 12V OPERATION</u>	7.1	12 volt electrical operated loading winch and davit will be supplied and attached to the trailer. KM standard "Spitzlift" unit incorporates an aluminum davit platform frame with a belt type hoist
	7.2	The winch will have a capacity of 900 lbs.
	7.3	It will be located at or near the utility area of the trailer in order to aid with loading and unloading miscellaneous items.
	7.4	The winch and davit can be rotated in a 360 degree motion.
	7.5	Winch is operated by a handheld remote control with a reach of up to 10' in length.

<u>OPTION 8: LOADING HOIST/WINCH & DAVIT MANUAL OPERATION</u>		
<u>LOADING HOIST/WINCH & DAVIT MANUAL OPERATION</u>	8.1	Manually operated loading winch and davit will be supplied and attached to the trailer. KM standard "Spitzlift" unit incorporates an aluminum davit platform frame with a belt type hoist
	8.2	The winch will have a capacity of 900 lbs.
	8.3	It will be located at or near the utility area of the trailer in order to aid with loading and unloading miscellaneous items.
	8.4	The winch and davit can be rotated in a 360 degree motion.

<u>OPTION 9: TOOL RACK</u>		
<u>TOOL RACK</u>	9.1	The Tool Rack will be capable of storing up to six (6) implements in an upright position in the utility area.

<u>OPTION 10: SPARE TIRE -MOUNTED</u>		
<u>SPARE TIRE- MOUNTED</u>	10.1	Mounted spare tire will be 16", white spoke rim and ST235/80R16 with a minimum load rating of 3520#.

<u>OPTION 11: SPARE TIRE-LOOSE</u>		
<u>SPARE TIRE- LOOSE</u>	11.1	Loose spare tire will be 16", white spoke rim and ST235/80R16 with a minimum load rating of 3520#.