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It is the purpose of these specifications to describe a crack cleaning machine capable of thoroughly cleaning pavement cracks/joints suitable for proper crack sealing techniques to a minimum depth of one inch by means of vacuum (hand work may be needed to remove vegetation). Unit shall be a self-contained design that includes a vacuum system and compressed air system so hard to clean cracks can be air routed and vacuum cleaned in a single operation. This unit shall be the manufacturer's current production model.

	<u>Comply</u>	<u>Does Not Comply</u>
1. CONSTRUCTION		
A. The machine shall be a complete, self-contained unit of heavy-duty construction.	_____	_____
B. The unit shall be mounted on a rigid frame with suitable dimensions and mounting brackets for easy mounting to a standard flatbed truck or trailer.	_____	_____
C. All moving parts shall have safety guards and written warnings.	_____	_____
2. ENGINE		
A. The vacuum system shall be powered by a Kohler Command Pro gasoline engine capable of producing 27 HP (20.1 kW) at 3600 RPM.	_____	_____
B. A tachometer/hour meter shall be included.	_____	_____
C. The engine shall have a full flow oil filter and oil cooler.	_____	_____
D. A dual element air cleaner shall be installed on the engine.	_____	_____
3. AIR COMPRESSOR		
A. The air compressor system shall be a self-contained unit that runs independent of the vacuum system.	_____	_____
B. The air compressor system shall be powered by a Kohler Command Pro gasoline engine capable of producing 19 HP (14.17 kW) at 3600 RPM.	_____	_____
C. A tachometer/hour meter shall be included.	_____	_____
D. The engine shall have a full flow oil filter and oil cooler.	_____	_____
E. A dual element air cleaner shall be installed on the engine.	_____	_____

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F. The air compressor shall be an oil-injected rotary screw and must provide 100% duty cycle with continuous air flow of 32 CFM at 100 PSI, with a maximum of 150 PSI.	_____	_____
G. The compressor shall be driven by an auto-tensioned serpentine belt.	_____	_____
H. The compressor shall have an integrated thermal protection circuit that will shut the engine down if the compressor has gone into an over temperature state. It shall also include an audible alarm and amber warning light that indicate an over temperature state.	_____	_____
I. There shall be an oil separator tank/cooler that acts as an oil/air separator and air/oil cooler.	_____	_____
J. The oil separator tank/cooler shall have a lubricant level sight glass no smaller than 1-1/2 inch in diameter.	_____	_____
K. The oil separator tank/cooler shall have a replaceable spin on oil filter with safety bypass feature. It must also contain an integrated coalescing oil separator element.	_____	_____
L. The oil separator tank/cooler shall have a 12-volt activated fan for cooling the compressor oil.	_____	_____
M. There shall be a 200 PSI pressure relief valve for safety.	_____	_____
N. There shall be a 12-volt AGM battery with a minimum rating of 350 cold cranking amps for starting the engine and operation of the air/oil cooler fan.	_____	_____
O. There shall be a 0-200 PSI liquid filled pressure gauge to indicate air pressure in the system.	_____	_____
3. <u>DEBRIS HOLDING TANK</u>		
A. Capacity shall be 100 gallons with a latched and hinged dump door of not less than 16 inches (40.6 cm) in diameter.	_____	_____
B. The holding tank shall be designed to mechanically unload using a 12 volt electric/hydraulic power pack.	_____	_____
4. <u>BLOWER and SILENCER</u>		
A. The blower shall be a positive displacement rotary air blower capable of generating air flow of 437 CFM @ 3600 RPM and 16" HG.	_____	_____
B. Blower shall be belt driven.	_____	_____
C. The silencer shall be multi-chambered and equipped with a high frequency noise absorption device.	_____	_____
5. <u>AIR FILTRATION SYSTEM</u>		
A. The unit shall be equipped with a 3 stage filtering system consisting of a cyclonic separator, main cartridge filter, and a HEPA rated filter.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
B. The cyclonic separator shall be made of steel with a barrel and cone shape design, 3 inch (7.62 cm) side inlet, 3-1/2 inch (8.89 cm) top exhaust outlet and a 4 inch (10.16 cm) bottom opening for large particles to drop out of the air flow.	_____	_____
C. The main filter cartridge shall be a pleated, spun bond polyester filter and shall be washable and replaceable. Filter shall have 19,600 square inches of filtering surface and have a minimum MERV 14 efficiency rating.	_____	_____
D. The HEPA panel filter shall be 10 inch (25.4 cm) long by 18 inch (45.7 cm) width by 5.91 inch (15 cm) depth and rated for 500 cfm.	_____	_____
E. The HEPA filter shall be cable of removing at least 99.97% of any airborne particles with a size of 0.3 microns.	_____	_____
<u>6. CYCLONE COLLECTION PAIL</u>		
A. The cyclone collection pail shall hold 975 cubic inch (15977 cubic cm) of particles before needing to be emptied.	_____	_____
B. The cyclone collection pail shall include a quick release system to easily remove, empty and re-install the cyclone collection pail.	_____	_____
C. The cyclone collection pail shall include a handle for transporting the pail from the machine to a waste receptacle.	_____	_____
D. The cyclone collection pail shall be designed so that a plastic liner can used for the removal of collected debris.	_____	_____
<u>7. HOSE AND BOOM</u>		
A. The unit shall be equipped with a minimum 3 inch (7.62 cm) diameter suction hose attached directly to the vacuum wand.	_____	_____
B. The hose shall include a "cab over" section of ridged 3 inch (7.62 cm) tubing to facilitate easy use from the front, sides or the rear of the unit.	_____	_____
C. The boom shall rotate 360 degrees.	_____	_____
D. The boom shall include a 72 inch (183 cm) adjustable extension tube for extended support of the vacuum hose.	_____	_____
<u>8. VACUUM WAND</u>		
A. The suction wand shall be made of steel and ergonomically designed for operator comfort.	_____	_____
B. The vacuum head shall be 9.85 inches (25 cm) wide by 7.48 inches (19 cm) long.	_____	_____
C. The suction wand shall consist of 4 swivel caster wheels for ease of maneuverability. The wheels shall be height adjustable.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
D. The handle of the wand shall be jointed for immediate adjustment of operator height and changes in pavement surfaces and crack structure.	_____	_____
E. The wand shall include three built-in high velocity air nozzles for air routing of cracks.	_____	_____
F. The wand shall have replaceable seal brushes. The brushes shall be made of abrasion resistant nylon and galvanized steel backing.	_____	_____
G. The wand shall have a compressed air filter for removing water. It shall be made of aluminum with a sight glass and be rated for 110 SCFM @ 100 psi and a maximum pressure rating of 250 psi.	_____	_____
9. <u>FUEL SYSTEM</u>		
A. The unit shall be equipped with a 20 gallon (75.7 L) minimum size gasoline tank equipped with fuel supply shutoff valves.	_____	_____
B. Both the vacuum system and the compressor system shall operate from this tank.	_____	_____
C. The tank shall be manufactured from unbreakable, shatterproof, nonmetallic, materials.	_____	_____
D. The tank shall be safely strapped to the frame by means of a formed steel strap.	_____	_____
10. <u>BATTERY</u>		
A. The unit shall be equipped with a 12-volt battery capable of starting the engine and operating the hydraulic power pack unit. The battery shall have a minimum rating of 580 cold cranking amps.	_____	_____
B. The battery shall be housed in an enclosed box that is weather resistant and heavy duty.	_____	_____
11. <u>SIZE AND WEIGHT SPECIFICATIONS</u>		
A. The shipping weight is approximately 2360 lbs. (1070 kg). The overall length is 9 feet 8.23 inches (295 cm), width is 5 feet 11.64 inches (182 cm), and height is 6 feet 7.64 inches (202 cm).	_____	_____
12. <u>TRAINING</u>		
A. An authorized, factory-trained representative will be made available for a full day of "on the job" training at a facility designated by the bidding agency.	_____	_____
B. At this training session a complete operational, mechanical and safety overview will occur. The CD manual and startup video will be viewed and discussed with all concerned personnel.	_____	_____
13. <u>MANUALS</u>		
A. An instruction manual containing warranty information, safety	_____	_____

	Comply	Does Not Comply
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instructions, as well as an operation guide shall be provided.

- B. The instruction manual shall also contain a complete parts list with detailed service and maintenance instructions.

14. WARRANTY

- A. The manufacturer shall warranty the equipment for no less than two years.
- B. A written manufacturer's standard warranty policy shall be provided in the Operator's Manual.

15. QUALIFICATIONS OF BIDDERS

- A. The bidder of this equipment must meet the requirements of the specifications without material changes or modifications to the equipment.

OPTIONS REQUIRED (X if to be included)

(Customer to insert quantity for each option required)

- _____ 60113 – Extra Main Cartridge Filter
- _____ 60992N – Extra HEPA Filter
- _____ 60957N – Extra 5-Gal Pail Liner (25 Count)
- _____ 60350 – Dual Axle Trailer with Storage Deck
- _____ Various Safety and Work Light kits. See brochure for more information.

Options for Trailer:

- _____ 20018 - 2 5/16 inch Ball Hitch
- _____ 20016 - 2 1/2 inch Pintle Hitch
- _____ 20014 – 3 inch Pintle Hitch
- _____ 20120 - Hitch Extension, 18"
- _____ 20140 - Hitch Extension, 28"
- _____ 20150 - Hitch Extension, 39"
- _____ 24227 - Truck Connector, 7 Pin Round RV Connector, Blade Terminals
- _____ 24183 - Truck Connector, 7 Pin Round Connector, Round Terminals
- _____ 24074 - Truck Connector, 6 Pin Round Connector
- _____ 23950N - Truck Connector, 5 Pin Flat Connector
- _____ 23119 – Cab Brake Controller
- _____ 23120 – Breakaway Battery w/ Charger
- _____ 26119 – Safety Hook w/ Latch (2 Req'd)
- _____ 26058 – 10# Fire Extinguisher
- _____ 26059 – Mounting Bracket for 10# Fire Extinguisher
- _____ 43520 – Spare Tire Kit