Cimline™

Cimline ME3™
Detailed Specification

350 Gallon Mastic Unit
Trailer Melter/Applicator

Revision Date: 12/2020

1.0		Purpose:	Yes	No
	1.1	The mastic mixer must be able to safely melt and agitate all grades of mastic sealants and fiber modified mastic sealants. The machine must be capable of handling, heating, and mixing aggregate in a consistent process. The machine must be capable of starting at ambient temperature and bringing material to pouring temperature in less than two hours. The unit must have continuous sealant agitation to eliminate temperature stratification of mastic being applied. Complete operation manual, parts lists, and training video must be furnished with the unit. A factory-trained representative will be available for initial startup and training.		
	1.2	The equipment being bid must be new, current year production and meet the needs of this specification without modification. The model must be currently advertised, and have a working volume of not less than called for in this specification. Hybrid, one-off or prototype equipment is unacceptable.		
	1.3	These specifications are not intended to be restrictive, but are meant to describe the kind and size of unit desired to be purchased in detail. If bidder is basing the proposal on equipment other than what is specified in these bid documents and wishes the equipment to be considered as an "approved equal" they shall submit on a separate sheet, an item by item description of that which is proposed. The bidder's specifications must be complete and of sufficient detail to cover all items included in this bid specification and in a manner that allows a direct comparison. Any item not covered will be deemed as not meeting specifications. Such bidder shall also include, but not as a substitute for the above, any manufacturer's literature. In addition, if the bidder takes exception to any item they shall note this and describe in detail the exception and how the proposal is an "approved equal". Failure to carry out the provisions noted herein may be deemed sufficient reason to reject the bidder's proposal. Check yes if demonstration has been performed prior to bid letting.		

2.0		Basic Machine Requirements:	Yes	No
	2.1	Double jacketed boiler type material tank design.		
	2.2	Trailer mounted and rated for highway class use.		
	2.3	Diesel powered and diesel heated.		
	2.4	Minimum sealant working capacity of 350 gallons.		
	2.5	Dual insulated loading doors on curb side of machine.		
	2.6	LED sealed lighting including stop/turn and clearance lights.		

3.0		Melting System Minimum Requirements:	Yes	No
	3.1	The material tank must be of double boiler design and have a minimum working volume of 350 gallons. Working volume can be described as the maximum usable amount of sealant that can be contained in the material tank at one time and poured out of the outlet.		
	3.2	The material and oil tanks must be constructed of no less than 7 gauge (.179") steel. The oil tank must hold a maximum of 58 gallons of heat transfer oil (HTO) at ambient temperature. The oil reservoir will be surrounded by a 7 gauge (.179") air reservoir that will be filled with hot burner gases heating both the bottom and sides of the oil tank for best heat transfer.		
	3.3	Tank must be insulated on top, sides and bottom with a min. 1.5" ceramic or FBX insulation.		
	3.4	Full sweep horizontal direct driven reversible agitator design. Agitator shaft must include angled paddles for best mixing and dispensing.		
	3.5	Minimum 14 x 29 inch, insulated/angled loading door will be curbside and of "splash-free" design.		
	3.6	For safety, material loading height will be no more than 67 inches for proper lifting ergonomics.		
	3.7	For safety, unit must include a vented HTO expansion tank. Sealed expansion tanks will be considered a fatal deviation.		
	3.8	Diesel burner maximum of 340,000 BTU for best fuel efficiency and fastest heat-up.		
	3.9	The material tank will have a minimum capacity of 350 US gallons.		

4.0		Mastic Mixing System Minimum Requirements:	Yes	No
	4.1	Agitator forward/reverse will be mechanically controlled from a hydraulic directional control valve.		
	4.2	Agitator Speed will be controlled by a hydraulic speed control located in the hydraulic manifold.		
	4.3	For safety, agitator rotation will stop once the doors open and only resume once the doors are closed.		
	4.4	Placement chute to be heated with propane burner with regulator to adjust heat.		
	4.5	A propane burner heated tool box provide storage of standard iron tool and standard lute box placement tool.		
	4.6	Hand Iron size of 6" x 12" and lute box 8" x 10" x 3" deep.		
	4.7	For safety, rear discharge valve must have a spring and locking pin to prevent accidental discharge of material.		

5.0		Trailer Minimum Requirements:	Yes	No
	5.1	The melting unit will be trailer mounted and capable of being towed at safe highway speeds when fully loaded. The frame shall include minimum flat horizontal surface steel fenders to facilitate handling and loading of material blocks. All lighting will be LED.		
	5.2	The frame is to be constructed of minimum 6" 8.2 pound gusseted channel iron for safety and strength.		
	5.3	A 2-1/2" towing ring that has 14" of adjustment in setting up and down		
	5.4	Minimum 10 gauge flat horizontal surface steel fenders to facilitate handling and loading of material blocks.		
	5.5	A weight appropriate adjustable screw jack must be provided.		

5.6	To insure towing mobility in both forward and reverse directions, the melter shall have a dual leaf spring axles system and be rated at a GAWR (Gross Axle Weight Rating) of 14,000 lbs		
5.7	Electric brakes on all four wheels, emergency breakaway switch, radial tires, and two 3/8" x 4 foot long safety chains with slip hooks will be included.		
5.8	Oval LED stop, tail, and turn lights will be included. Clearance lighting will also be LED. A lighted license plate bracket will be attached to the fender.		
5.9	The lighting harness will be woven loom with weather proof connectors at all lights. The trailer harness shall use a junction box at the front to allow easy changeover to different types of towing vehicle plugs. A seven (7) pin flat RV round plug will be included.		

6.0		Temperature and Flow Control Minimum Requirements:	Yes	No
	6.1	For mastic placement temperature quality, the material temperature will be measured inside of the Sealant tank using a thermowell to avoid damage to the thermocouple from the agitator.		
	6.2	The Display must have adjustable digital controllers with readout for heat transfer oil and the material. Control must have intervals no greater than 1 degree F and continuously monitor thermocouples. Controllers must be stowed in a weather tight operators box on curbside of machine.		
	6.3	The Control panel will contain a LED Status indicators for Burner. The control panel will also contain a volt meter to monitor the battery.		
	6.4	Digital controllers must display an error code and shut burner down should a thermocouple failure occur.		
	6.5	A hydraulic manifold system shall be provided with cartridge valves, which permit maintenance without hose removal. Hydraulic pressure relief valves included for protection of motor. Dial speed control are available for proper agitation and dispensing of mastic.		
	6.6	Additional analog gauges shall be included for Agitator and material pump pressure and backup material temperature.		

7.0		Engine, Burner and Hydraulics Minimum Requirements:	Yes	No
	7.1	The unit will be equipped diesel engine with spin-on type oil and fuel filters. It will be joined to the frame with rubber engine mounts to prevent vibration transfer. The management system will be located near the engine for ease of operation and maintenance. A self-igniting diesel fired burner will be included.		
	7.2	The unit will be equipped with a 3 cylinder direct injected, 19hp, Tier 4 Final, diesel engine. The engine will have spin-on type oil and fuel filters.		
	7.3	The engine will be protected by a Digital Engine Management System including integrated hour meter and also burner failure indicator lamp.		
	7.4	Auto Shutdown protection will be provided for alternator, oil pressure coolant temperature.		
	7.5	The exhaust will exit through a noise reduced cowl muffler.		
	7.6	The unit will include a min. 30 gallon Diesel fuel tank. The tank will incorporate a fuel fill cap with integrated fuel gauge. For Safety, hose type sight gauges are strictly forbidden.		
	7.7	The system will include separate dual spin-on type fuel filters with ball valve shut offs to simplify filter replacement and supply fuel to the burner and engine. Filters will be located near the fuel tank for ease of maintenance.		
	7.8	The min. 12 gallon hydraulic reservoir shall be equipped with a suction strainer and a return filter and a sight level with integrated temperature gauge.		

7.9	One 12 volt 324,000 BTU diesel burner will fire into an ceramic lined air chamber. The burner will have a self-contained electronic spark igniter and proof of flame protection. To minimize downtime the burner must be self-priming and be equipped with a fuel pressure gauge.		

8.0		Paint and Safety Decals Minimum Requirements:	Yes	No
	9.1	The unit shall be painted using safety green and black accents. It will be equipped with required safety decals and signage.		

9.0		Warranty Minimum Requirements:	Yes	No
	10.1	The manufacturer shall warranty the equipment for a period of one year. Engine must be covered for major components for a period of 2 years or 2000 hours. Bidder warranty policy must be included with bid submittal.		

10.0		Included Options: (if box is "X" items must be included)	Yes	No
		Engine Protection Canopy.		
		Single strobe, mounted on mast.		
		Dual strobe, mounted on mast.		
		Burner strobe light, (Lights when burner is engaged).		
		LED directional arrow stick, mounted with controller.		
		Tool box, mounted.		
		10 lb. fire extinguisher, mounted with bracket.		
		Spare tire, mounted on frame.		
		Optional 2 year warranty.		

11.0		Machine Upgrades: (if box is "X" items must be included)	Yes	No
		Skid mount air compressor: The unit will be a stand alone skid mounted air compressor with independent engine. Skid mount will fit into or onto standard truck beads and will have a boom with pivot to swing over truck cab to front of vehicle. Will include air hose and cold air lance.		

12.0		Air Compressor Heat Lance Upgrade: (if box is "X" item must be included)	Yes	No
		Integrated heat lance upgrade: As an upgrade to the skid mount air compressor, the unit shall include an integrated heat lance package including the following: 50ft of 1/2" air line and 1/4" gas line. A heat lance with regulator and a rack for a 40 lb. propane bottle.		