

# FALCON ASPHALT REPAIR EQUIPMENT

## Technical Specifications For

### Four (4) Ton Truck Mounted Portable Asphalt Hot Box & Recycler

#### 1. General

Item	Item Description	Compliance
A.	These specifications describe an asphalt recycler & hot box capable of: <ul style="list-style-type: none"> <li>• Heating and re-heating cold patch asphalt</li> <li>• Transporting hot mix, keeping it hot all day and holding hot mix asphalt overnight</li> <li>• Recycling asphalt chunks and millings</li> </ul>	Yes__ No__
B.	The asphalt recycler & hot box must be an air jacketed hopper with no moving parts	Yes__ No__
C.	Manufacturer or manufacturer's representative must provide a working demonstration of manufacturer's current equipment.	Yes__ No__
D.	Capacity: 4 Truck Mount	Yes__ No__

#### 2. Local Service Provider

Item	Item Description	Compliance
	Bidder must include the name of the local service provider responsible for parts and service Service Provider Name _____ Contact Name _____ Phone Number _____ Mileage from servicing dealer to end customer _____	Yes__ No__

#### 3. Hopper Construction

Item	Item Description	Compliance
A.	<b>WALLS</b> <ul style="list-style-type: none"> <li>• Hopper is of triple wall construction and has three parallel walls (inner, middle and outer)</li> <li>• Hopper floor and all four hopper walls are heated               <ul style="list-style-type: none"> <li>a) Hopper is heated by an air-jacket below the hopper floor and between the inner and middle hopper walls</li> </ul> </li> <li>• All walls must be of one-piece, seamless steel construction</li> <li>• All front and side hopper walls are parallel and angled (inner, middle and outer)</li> <li>• The tops of all three steel layers of the front and rear hopper walls are angled to create a 2" slope</li> <li>• Complete area between middle and outer walls is filled with 8 lb density, 2" mineral wool insulation</li> <li>• Top of hopper walls secured to each other with 10-gauge steel capping channel and side hopper walls secured to each other with 10-gauge steel corner molding, stopping hopper from losing its shape over time</li> <li>• Zip screws may not be used in the construction of the hopper</li> </ul>	Yes__ No__
B.	<b>BURNER BOX IS:</b> <ul style="list-style-type: none"> <li>• Located below the hopper floor</li> <li>• Constructed of 15.3# channel iron with dimensions of 10" high, 51" long and 34" wide</li> <li>• Insulated with 1" ceramic blanket on all four walls and the floor</li> </ul>	Yes__ No__

C.	<b>HOPPER FLOOR:</b> <ul style="list-style-type: none"> <li>Hopper floor is constructed of a single piece of ¼" plate steel that is a minimum of 34" wide and a minimum of 51" long</li> <li>The hopper floor is free of any steel wall or divider that partitions the hopper into compartments</li> </ul>	Yes__ No__
D.	<b>HOPPER HEAT DUCT</b> <ul style="list-style-type: none"> <li>A single, diamond shaped 10-gauge steel heat duct is welded from the front-hopper wall to the back-hopper wall</li> <li>Heat duct is continuously welded</li> <li>Heat duct is a minimum of 12" above the hopper floor</li> </ul>	Yes__ No__
E.	<b>DIMENSIONS</b> <ul style="list-style-type: none"> <li>Overall hopper frame length without the hook lift sub frame not to exceed 12 feet</li> <li>Overall hopper frame width not to exceed 83"</li> <li>Overall height is 75" with bi-fold doors open</li> <li>Width of loading doors with bi-fold doors open is 92"</li> </ul>	Yes__ No__
F.	<b>BI-FOLD HOPPER TOP LOADING DOORS</b> <ul style="list-style-type: none"> <li>Bi-fold steel loading doors are framed on square tubing with angle iron reinforced cross members</li> <li>The area inside loading doors is filled with insulation</li> <li>Doors are hinged to the hopper corners with bolt-on, 1 1/4" diameter 4-bolt pillow block bearings</li> <li>Two hydraulic cylinders with 2.5" bore, 1.5 " rod, and a 16" stroke</li> <li>Loading doors are bi-fold with two equal-size sections hinged together the entire length of the door and covered with a neoprene guard.</li> </ul>	Yes__ No__
G.	<b>HOPPER REAR MATERIAL METERING DOOR</b> <ul style="list-style-type: none"> <li>Rear hopper wall includes a single, fully insulated, guillotine-style, hydraulic unloading door</li> <li>Unloading door opening dimensions must be a minimum of 16" high and 33" wide</li> <li>One 2.5" bore, 1.5" rod and 16" stroke hydraulic cylinder</li> <li>Hopper floor asphalt guide allows asphalt to flow onto shoveling apron</li> <li>Detachable and fully adjustable shoveling apron attached to rear of unit</li> <li>Without removing the apron, it must be capable of being positioned to dump asphalt without contacting the apron.</li> </ul>	Yes__ No__
H.	<b>HOPPER HYDRAULIC CONTROLS</b> <ul style="list-style-type: none"> <li>Lever on curbside spool valve controls movement of loading doors (raise and hold to open, lower and hold to close)</li> <li>Lever on curbside spool valve controls movement of material door (raise and hold to open, lower and hold to close)</li> </ul>	Yes__ No__
I.	<b>HOPPER WIRING</b> <ul style="list-style-type: none"> <li>Plug-in connector to be 7-pin flat RV, 7-pin round or 6-pin round</li> <li>All wires shall be THHN, stranded, copper, and color coded and all wiring and enclosures shall be NEMA-3 rated</li> <li>Wiring connections shall be soldered, sealed in shrink-wrap, covered with high temperature corrugated loom and protected by steel conduit</li> <li>All wiring is external to the hopper walls</li> </ul>	Yes__ No__

#### 4. Heat System

Item	Item Description	Compliance
A.	<b>BECKET DIESEL BURNER</b> <ul style="list-style-type: none"> <li>Hopper heated by one 105,000 BTU maximum RW Beckett diesel burner</li> <li>Diesel burner fuel solenoid powered by a 12-volt system</li> </ul>	Yes__ No__

	<ul style="list-style-type: none"> <li>• Burner includes a cad cell (eye) to shut down the flow of fuel if the burner flame is not present</li> <li>• A pressurized pump controls the flow of fuel to the diesel burner</li> <li>• Diesel burner spark ignition system is powered by a 12-volt battery</li> <li>• Burner has automatic recycle on spark system and automatic shutdown safety system</li> <li>• Burner has inspection guard that is removable without the use of tools, while standing on the ground</li> <li>• Nozzle shall be .75 GPH</li> <li>• Diesel burner is engineered to continuously operate while the equipment is in tow and while the hopper is raised</li> </ul>	
B.	<b>DUAL BURNER HEATING PACKAGE</b> <ul style="list-style-type: none"> <li>• An additional diamond-shaped heat duct is welded inside the hopper from one side hopper wall to the other such that it intersects the front to back heat duct and forms one criss-crossing heat duct</li> <li>• An additional 90,000 BTU maximum RW Beckett diesel burner bolts to a second combustion chamber that bolts to the front hopper wall and directs heat into the criss-crossing ductwork inside the hopper</li> <li>• Additional combustion chamber is constructed of a one-piece, seamless, vacuum formed ceramic fiber that is 1" thick with an insulation rating for temperatures in excess of 2,000 degrees Fahrenheit</li> <li>• An additional 550 CCA 12-volt deep cell battery is mounted in a battery box on the trailer</li> <li>• Both hopper diesel burners are controlled by the same digital temperature controller and wall-mounted thermocouple</li> </ul>	Yes__ No__
C.	<b>BURNER COMBUSTION CHAMBER</b> <ul style="list-style-type: none"> <li>• Constructed of a one-piece, seamless, vacuum formed ceramic fiber that is 1" thick with an insulation rating for temperatures in excess of 2,000 degrees Fahrenheit causing a complete blending of fuel and air</li> </ul>	Yes__ No__
D.	<b>BATTERY</b> <ul style="list-style-type: none"> <li>• Two 550 CCA 12-volt deep cell batteries mounted in battery boxes on the trailer</li> </ul>	Yes__ No__
E.	<b>BATTERY CHARGER</b> <ul style="list-style-type: none"> <li>• A 12-volt marine grade battery charger is mounted on the trailer frame</li> <li>• The battery charger is hard wired to the unit's battery</li> </ul>	Yes__ No__
F.	<b>DIESEL EXHAUST</b> <ul style="list-style-type: none"> <li>• All exhaust produced by the diesel burner vents through a single chimney on the top of the front hopper wall</li> </ul>	Yes__ No__
G.	<b>DIESEL FUEL SYSTEM</b> <ul style="list-style-type: none"> <li>• Trailer has an in-line quick disconnect diesel fuel filter with a water separator, preventing burner failure</li> <li>• Hopper Diesel Burner Fuel <ul style="list-style-type: none"> <li>a) Diesel fuel tank has a capacity enough for holding hot mix and heating cold mix for three 8-hour shifts</li> </ul> </li> <li>• Fuel tank neck is welded into the fuel tank</li> <li>• Fuel tank includes lockable fuel cap</li> </ul>	Yes__ No__
H.	<b>VOLTAGE INDICATOR AND PROTECTION SYSTEM</b> <ul style="list-style-type: none"> <li>• Heating system must include a voltage indicator and protector controller to automatically prevent burner from operating below burner manufacturer's required voltage</li> </ul>	Yes__ No__
I.	<b>CONTROLS</b> <ul style="list-style-type: none"> <li>• Digital temperature controller mounted in NEMA-3 rated lockable electrical enclosure</li> <li>• Temperature controller is adjustable up to 300 degrees Fahrenheit</li> </ul>	Yes__ No__

	<ul style="list-style-type: none"> <li>• Burner stops running when the temperature setting on the digital controller is reached.</li> <li>• Controller re-fires the burner when the hopper temperature falls 10 degrees below the temperature set by the operator on the controller</li> <li>• Burner turns on/off with individual toggle switches (Toggle switches are labeled)</li> </ul>	
J.	<b>24-HOUR TIMER</b> <ul style="list-style-type: none"> <li>• A 24-hour timer is installed on the hopper that can be programmed to start the hopper burner(s) at a pre-set time</li> </ul>	Yes__ No__

## 5. Paint

Item	Item Description	Compliance
A.	Manufacturers standard paint color	Yes__ No__
B.	Two coats of epoxy primer and two coats of urethane finish are applied to all parts and entire unit	Yes__ No__
C.	Entire unit, including all bolt-on parts, are blasted prior to painting	Yes__ No__
D.	All accessory bolt-on parts are painted prior to assembly to chassis	Yes__ No__
E.	Non-steel parts are not painted. These components/parts are installed after the paint process is complete	Yes__ No__

## 6. Warranty and Delivery

Item	Item Description	Compliance
A.	Two-year warranty (Pass through warranties will not be accepted)	Yes__ No__
B.	Guaranteed five-year maintenance free combustion chamber	Yes__ No__
C.	Four-hour safety, operation and recycling instruction by a factory-trained technician required upon unit's delivery	Yes__ No__
D.	One Operator / Parts / Service Manual is included upon delivery and available on manufacturers website	Yes__ No__