SPECIFICATIONS FOR A SELF-CONTAINED, PICK-UP MOUNTED, AIRPORT AND HIGHWAY MARKING MACHINE

2000-AS

GENERAL.

1. The specifications submitted herewith are intended to describe and define the minimum requirements of a self-contained, fleet side pickup truck or flat bed truck mounted road marking machine ("The Unit").
2. The Unit shall be capable of applying lines of varied widths from 3" to 6" and the spaces between the lines variable from 0" to 6".
3. The guns shall be equipped with electro-air control valves to be under separate, accurate, and positive control at all times.
4. The Unit shall be capable of applying all types of traffic paints, at application speeds up to 10 mph without any change to the spray head assembly. The machine shall be capable of applying conventional fast dry and waterborne marking materials.
5. The Unit shall be a one-man or two-man operation. In a one-man operation, the driver shall control all electronic controls from the cab of the vehicle. In a two-man operation, a second operator shall be positioned in one of the operator stations at the rear of the unit and shall have easy access to all controls. The marking machine will operate in its own lane of traffic to not impede traffic in the oncoming lane.
6. Weight: 2,200-2,500 lbs depending on equipment installed. (not including operator, paint, beads or cleaner).
7. Chassis Requirements: Payload capacity 5,000 lbs, generally a “one ton” chassis. Consult your truck supplier or manufacturer to verify GVW rating.

FRAME.

1. The Unit shall be built on a steel platform constructed of heavy-duty 7 gauge 5" channel iron with cross members for support.
2. The paint and pressure bead tanks shall be bolted to cross members of the frame for easy removal.
3. Lifting lugs shall be welded on the frame of the unit for lifting the unit. The lugs shall be placed to facilitate even distribution of weight.
4. Brackets will be provided to secure the unit to a flat bed style platform including four each brackets and 5/8” diameter grade 8 bolts, nuts and lock washers.
5. Dimensions: 120” Long X 48” Wide X 60” Tall (excluding carriage assembly) Dimensions can vary with addition of optional equipment.

POWER UNIT/ENGINE.

1. The power unit shall be powered by 20 gross horsepower industrial/commercial grade, twin cylinder gasoline engine, Honda GX630 or equal.
2. The engine shall be equipped with a 12 volt electric system with a 15 amp charging system.
3. The power unit shall be equipped with an oil level dip stick, a gearator oil pump and replaceable canister type oil filter.
4. The engine will be with a key start switch and low pressure oil shutdown system.
5. The power unit shall be equipped with a minimum 10 gallon fuel tank of all steel construction with internal baffle.
6. The tank will be securely bolted to the main frame of the unit and feature a DOT approved vented cap assembly.
7. The engine will be equipped with an external 12VDC fuel pump and filter assembly.
8. A spark arresting quiet type muffler will be provided complete with extension pipe and rain cap.
9. The engine will be 50 state environmentally compliant.

COMPRESSOR.

1. The unit shall be a twin cylinder, two stage compressor with a free air delivery of 35.5 CFM at 1100 rpm at 100 pounds pressure.
2. The compressor shall have cast iron cylinders with aluminum head and crankcase for fast heat dissipation. Deep fined inter and after cooler manifolds shall be provided.

3. The compressor shall be equipped with a constant speed head un-loader to maintain pressure in the system when no demand for air.
4. The compressor will be equipped with an oil sight level gauge, ball type main bearings and automotive sleeve type rod bearings with splash lubrication.
5. The compressor will be equipped with a replaceable air intake filter assembly.
6. The compressor shall be conveniently mounted on the unit for easy daily maintenance and access. The pulley and external belts of the compressor and engine shall be covered with a metal belt guard.
7. The compressor shall be equipped with a 15 gallon ASME air receiver complete with drain valve. The air receiver shall be positioned close to the compressor to help dissipate heat generated.

MATERIAL CONTAINERS. (Select one A-F)

General

1. The unit shall be equipped with two (2) pressure tank material containers, tested to a working pressure of 110 psi.
2. Each material container shall be equipped with a removable lid assembly with solvent resistant gasket held in place by over-the-center clamp and screw assemblies with forged steel wing head bolts.
3. Unit equipped with 25 & 30 gallon paint tanks will be equipped with a 10" lid held in place with four over the center clamps. Units equipped with 60 gallon tanks will be equipped with a 15" lid held in place with 6 over the center clamps.
4. Each container shall be equipped with a pressure gauge, safety relief valve and drain cock.
5. Each tank shall be equipped with a 3/4" ball valve and 3/4" plumbing lines from the material containers to the strainers.

A. 25 gallon non code, carbon steel construction with 10" lid assembly.*

B. 30 gallon, non code, carbon steel construction with 10" lid assembly.*

C. 60 gallon, non code, carbon steel construction with 15" lid assembly. *(requires 60" wide frame)

D. 25 gallon non code, stainless steel construction with 10" lid assembly.

E. 30 gallon non code, stainless steel construction with 10" lid assembly.

F. 60 gallon non code, stainless steel construction with 15" lid assembly. (requires 60" wide frame)

*recommend for oil based paints only.

BEAD DISPENSING EQUIPMENT.

1. The Unit shall be equipped with a one carbon steel pressure bead tank, tested to a working pressure of 110 psi.
2. The bead tank lid shall have a minimum diameter of 10" and shall be held in place by four (4) over-the-center clamp and screw assemblies with forged steel wing head bolts.
3. The bead tank shall be equipped with a moisture trap with metal bowl, air pressure regulator, gauge, pop off valve and air bleed jet.
4. A full steel skirt shall be provided around the bottom of the tank for flush mounting to the platform.
5. Pressure bead hoses with a minimum diameter of 1-1/4"" ID shall be provided to convey the beads from the bead tank to a bead distribution manifold located at the rear of the Unit. Pressure bead hoses from the distribution block to the bead guns shall be 3/4" ID.
6. The pressure on the bead tank shall be fully adjustable from the rear operators' position via an air regulator and related gauge.
7. Units equipped with 25 & 30 gallon paint tanks shall be equipped with a 300 lb pressure bead tank, units equipped with 60 gallon paint tanks shall be equipped with 750 lb pressure bead tank.

CLEANING EQUIPMENT.

1. A six gallon steel cleaner tank with a maximum working pressure of 110 psi shall be provided.
2. Units specified with carbon steel paint tanks shall be equipped with a carbon steel cleaner tank and black iron plumbing
3. Units specified with stainless steel paint tanks shall be equipped with a stainless steel cleaner tank and stainless steel plumbing.
4. The cleaner tank will be equipped with an adjustable atomizing head to force atomized cleaner thru the spray gun for tip flushing.
5. The cleaner tank will also be plumbed to force 100% cleaner from plumbing below the paint tank thru the spray gun to flush lower plumbing while maintaining paint in the tank(s).
6. A check valve shall be provided to prevent paint from backing up into the cleaner system.
7. The cleaner tank shall be equipped with screw type filler cap, air regulator, ASME pressure relief valve.
8. The tank shall be equipped with a drain valve with whip hose to drain tank away from machine.
9. A dusting gun shall be provided with 12' of hose and three way valve for dusting of the carriage with atomized cleaner or compressed air. The unit will be equipped with an air quick disconnect and blow gun with extension.

PAINT FILTRATION.

1. Two 3/4" NPT "Y" type strainers will be provided, located on each main paint line from each paint tank.
2. The strainer will be positioned on the rear of the unit for easy access and cleaning. Strainers located on the deck of the truck or under the tank shall not be permitted.
3. The strainer shall feature a removable stainless steel screen with 1/8" perforations to catch all foreign material and skins.
4. The strainer cap will be equipped with a replaceable gasket.
5. A ball valve will be placed in the line directly in front of the strainer to isolate the strainer for cleaning while maintaining paint and pressure on the paint system.
6. The cleaner system will be plumbed to flush lower plumbing, strainers and spray guns while maintaining paint in the tank(s).
7. Units equipped with carbon steel paint tanks will be equipped with a cast iron strainer, units equipped with stainless steel paint tanks will be equipped with stainless steel strainers minimum grade 304.

GUN CARRIAGE

1. The spray gun and bead gun carriage shall be electrically welded, all-steel construction.
2. One 3.00 x 5 all-pneumatic swivel wheel shall maintain the paint and bead guns at the same relative position above the pavement at all times.
3. The swivel wheel pivot point shall be spring loaded with an adjustable tensioning nut.
4. The carriage shall be of parallel scissor-type construction and equipped with a safety hook to lock the carriage in the up position for safe over-the-road travel.
5. The pivot points on the carriage will be equipped with replaceable oil impregnated bushing and hardened axles.
6. A 3' x 9" pneumatic air cylinder shall be provided for automatic power lift to raise and lower the spray gun carriage from the road surface.
7. The gun carriage will be installed on a 24" adjustable tube assembly to accommodate varying chassis heights.
8. The carriage will be quickly adjustable in 3" increments by removing a hardened bolt, nut and lock washer assembly.

OUTRIGGER ASSEMBLY

1. The gun carriage shall be attached to an outrigger that can trail from either the right or left rear side of the truck.
2. The outrigger shall be easily positioned to either side of the truck by pulling a pin and pivoting the outrigger by means of a center pivot bearing.
3. The outrigger will be equipped with two 1-1/4" pillow block bearings firmly bolted to the main frame of the unit acting as the main pivot point.
4. The outrigger will feature a structural steel bumper with a UMHW liner to prevent the outrigger from sagging

when changing from center to edge line positions.

OURTRIGGER STEERING:

1. The outrigger will be equipped with manual rack & pinion steering assembly.
2. A 1” gear rack will be welded to the internal tube of the outrigger, roller chain not acceptable.
3. A hand wheel, approximately 12” in diameter will be provided to turn the gear rack assembly to position the outrigger.
4. The outrigger will be adjustable approximately 42”.
5. The hand wheel will be easily accessible from either operator’s station.

PAINT AND BEAD GUNS.

1. The Unit will be equipped with two (2) automatic, diaphragm-operated, high capacity KC-598NBSSF paint striping guns, no exceptions.
2. The spray guns shall be internal mix, non-bleeder with large porting for application of VOC compliant paints.
3. The guns shall be equipped with stainless steel fluid tip and needle with orifice openings of not less than 1/4" I.D.
4. The spray gun shall feature a tip flush capability by the operator by turning a three way valve at the console. Guns requiring isolation of the paint supply for flushing shall not be permitted.
5. The spray gun shall feature a hardened satellite air cap, no exceptions.
6. Each paint gun shall be controlled electrically by individual electro-air valves.
7. The guns shall be capable of spraying conventional and waterborne materials as well as premixed paint and reflective beads.
8. The guns shall be adjustable in line width from 3" to 8". Spacing between the guns shall also be adjustable.
9. The unit shall be equipped with two (2) KC-600 diaphragm operated, high capacity pressure bead guns. One (1) pressure bead gun shall be mounted directly behind each paint gun.
10. The bead guns shall be capable of being operated or simultaneously with the associated striping guns.
11. The bead guns shall be equipped with an adjustable shroud to insure placement of beads on paint line.

ELECTRONIC SKIPLINE CONTROLLER

1. The Unit shall include one Mark 40 D skipline controller system.
2. The controller system shall be solid state, micro processor controlled and programmable.
3. The controller system shall consist of an operator's control panel located at operator's position that includes all the necessary components and controls for programming, pattern selection, and gun control.
4. The control unit shall include one (1) two-line 32 character LCD display with adjustable contrast, one (1) five-position push button programming panel, and nine (9) heavy duty military specification (MIL-S83731) toggle type switches with silicon rubber seals to prevent entry of contaminants.
5. Toggle switch contacts shall be silver-to-silver and all metal parts shall be corrosion resistant to ensure long service life and shall provide the following functions: master power, bead on-off, carriage lift/aux 1, auxiliary skip pattern/aux 2, gun control for each striping gun (skip-off-solid) and reset-hold (master gun on-off).
6. Programming the controller shall be possible through easy, menu driven procedures. All programming information shall be retained regardless of whether power is maintained.
7. Paint/skip cycle - 0 - 999.9 feet. Two preset cycles shall be programmable and selected by the cycle auxiliary cycle switch. A quick edit feature shall allow simple adjustment to the skip cycle while painting is in process.
8. Begin paint/skip. The controller shall be programmable to start with either the paint or skip portion of the cycle.
9. Calibration. Calibration of the unit shall be programmable and simply achieved by driving a known distance and adjusting the displayed distance value.
10. Bead delay (if purchased). Delay between the paint and bead gun on and off shall be programmable to assure full coverage by means of a mounting distance factor. Striping vehicle speeds shall not affect full bead coverage. Bead delay shall be factory preset and operator adjustable.
11. Solenoid timing calibration. Solenoid timing delay shall be programmable to adjust for the reaction time of different solenoids and control hose lengths. Solenoid shall be factory preset and operator adjustable.
12. Pattern change preset. The controller shall be programmable for three (3) different pattern change modes: immediate, smart and trigger.
13. The Hold-Run-Reset control shall allow the operator to conveniently move through intersections and to permit retracing of old patterns.

14. The Advance-Retard switch shall allow the operator to adjust the point at which the paint/skip cycle will begin.
15. The Posi-Cycle feature, shall automatically adjust the cycle length after activating the Advance-Retard switch three times.
16. The controller shall be dust, water, and shock resistant. The operating range of the controller shall be from 30-125° F. Power shall be provided by the vehicles 12 volt supply. All cables shall be plug-in type and a weatherproof cover shall be included.
17. In the ready mode, the controller shall display the skip line cycle, vehicle speed, painting in process indicator, and pulsed signal input indicator simultaneously. All footage display, whether cycle or skip length, odometer readings, footage counter readings, or calibration readings are displayed to the nearest 1/10'. The controller shall be capable of metric display.
18. All programming and accumulated information, footage and odometer readings, and calibration settings shall be retained indefinitely upon power down (whether accidental or intentional) or removal of the controller from the vehicle. All information shall be stored in non-volatile RAM chips and do not require batteries to retain programmed information.
19. The controller shall perform a complete self-test upon power up and alert the operator of short circuits.
20. The controller shall be equipped with a low speed speedometer displaying operating speed in the LCD display.
21. The controller shall be equipped with digital footage counters to totalize number of feet painted with each spray gun. The footage counters shall be re-settable to zero.
22. The controller shall be equipped with a weatherproof vinyl cover to protect from moisture when not in use.

CONTROL PANEL.

1. The Unit shall be equipped with a metal control panel located on the rear of the unit within reach of the operator. The control panel shall have two (2) removable front panels and sliding side access doors.
2. The control panel shall be equipped with separate regulators and gauges for the striping gun atomization air, paint tanks and bead tank.
3. Regulators shall be non-corrosive, self-evacuating, and equipped with solvent resistant Buna N diaphragms and locking device.
4. Each air regulator shall have an associated 0-100 psi liquid filled pressure gauge and a main air pressure gauge 0-160 psi will be provided.
5. Each regulator shall have an associated brass three-way valve. Three way valves associated with paint and bead tank pressure will feature, "pressurize tank", "off" & "drain". Three way valves associated with atomize air for the paint guns will feature "non bleeder (off)", "tip flush", and "bleeder".
6. Regulators, gauges, and three-way valves shall be of panel mount type.
7. Air moisture separators shall be provided to filter all air prior to passing through the electro-air valves. A separate air filter shall be provided to filter all air to the glass bead tank.
8. All valves, regulators, gauges & switches shall be labeled on a common vinyl legend, with lettering laser cut in underside of vinyl so as to be impervious to solvents and ultraviolet sun. Individual labels or legends shall be prohibited.

PLUMBING AND HOSE LINES

1. All plumbing lines from the material containers to the "Y" strainer shall be ASTM specification 3/4" ID with unions, crosses, and tees liberally used throughout the plumbing installation to ensure convenient maintenance and cleanout.
2. A cross over manifold shall be provided for loading both tanks with a single color.

PAINT & CLEANER HOSES

1. All paint hoses leading from the manifold at the outlet of the "Y" strainer shall be a minimum of 1/2" ID with nylon core.
2. The hoses will be equipped with re-usable type fitting with female pipe swivels.
3. Cleaner hoses for flushing the spray tip shall be 1/4" ID nylon core with 1/4" reusable fittings.

CONTROL HOSES

1. All control lines to the striping guns and electro-air valves shall be not less than 1/4" ID solvent resistant tubing.

2. All control lines shall use push-lock reusable fittings.

HYDRAULIC HOSES

1. All hydraulic pressure hoses shall be rated at a minimum of 2,500 psi working pressure.
2. The hoses shall be equipped with a rubber cover resistant to tears.
3. The fittings shall be crimp on type with JIC ends, pipe fittings are prohibited.
4. Suction and return hoses shall be rated at 250 psi and equipped with crimp type JIC fittings.
5. Suction and return hoses with hose clamps are not permitted.

CONTROL SOLENOIDS

1. The unit will be equipped with KC-C5 electro-pneumatic control valves.
2. The control valves will control operation of paint guns, pressure bead guns and pneumatic carriage lift.
3. The control valves will be installed on a common bolt together manifold base complete with o-ring seals.
4. The solenoids shall be two position 4 way valves.
5. The valve shall have an operating pressure of 20-150 psi.
6. The valve shall have a three pin wire connector, waterproof with grommet.
7. The solenoid will have an LED light to indicate when operating.
8. The solenoid will have a manual test fire button to manually fire the solenoid.
9. The solenoid base and valve assembly shall be non corrosive aluminum.

GUIDE ASSEMBLY

1. The Unit shall be equipped with a removable, front mounted, adjustable pointer guide constructed of tubular steel.
2. The pointer shall be capable of pointing from both center & edge line positions. Conventional style chassis (pickups) may require a special long pointer bar for pointing from edge line side.
3. The pointer shall be installed on a 4” structural steel channel, with installation to chassis by others.
4. The pointer will collapse to a transport position to be within the limits of the vehicle.
5. A swivel road wheel will be provided with adjustable spring loaded road wheel.

PAINTING

1. The Unit shall be prime coated and finished painted Federal Highway Yellow unless otherwise specified.

WARRANTY

1. The manufacturer will guarantee all parts against defective material and workmanship for a period of one year after date of delivery and acceptance subject to the terms and conditions in the attached Manufacturer's Warranty.

PARTS, SERVICE AND MANUALS

1. The Unit shall include one (1) complete set of operator's manuals and repair parts lists.
2. The Unit's manufacturer shall maintain a complete inventory of all replacement parts.

TECHNICAL SERVICE

1. Services of a factory technician shall be supplied to the customer at the plant in Springfield, Ohio, for a period of one (1) day to instruct customer personnel in the operation and maintenance of the Unit.
2. On-site instruction is available for an additional charge.

PART NUMBERS:

PART NUMBER	MATERIAL CONTAINER	Bead Tank	Cleaner Tank	Frame Size
2000-AS/25NC*	**(2) 25 gal carbon steel construction, 10" lid**	**300#, 10" Lid**	**6 gal, carbon steel**	**48" X 120"**
2000-AS/30NC*	**(2) 30 gal carbon steel construction, 10" lid**	**300#, 10" Lid**	**6 gal, carbon steel**	**48" X 120"**
2000-AS/60NC*	**(2) 60 gal carbon steel construction, 15" lid**	**750#, 10" Lid**	**6 gal, carbon steel**	**60" X 120"**
2000-AS/25NCSS	**(2) 25 gal stainless construction, 10" lid**	**300#, 10" Lid**	**6 gal, stainless**	**48" X 120"**
2000-AS/30NCSS	**(2) 30 gal stainless construction, 10" lid**	**300#, 10" Lid**	**6 gal, stainless**	**48" X 120"**
2000-AS/60NCSS	**(2) 60 gal stainless construction, 15" lid**	**750#, 10" Lid**	**6 gal, stainless**	**60" X 120"**

***Recommended for oil based paints only.**

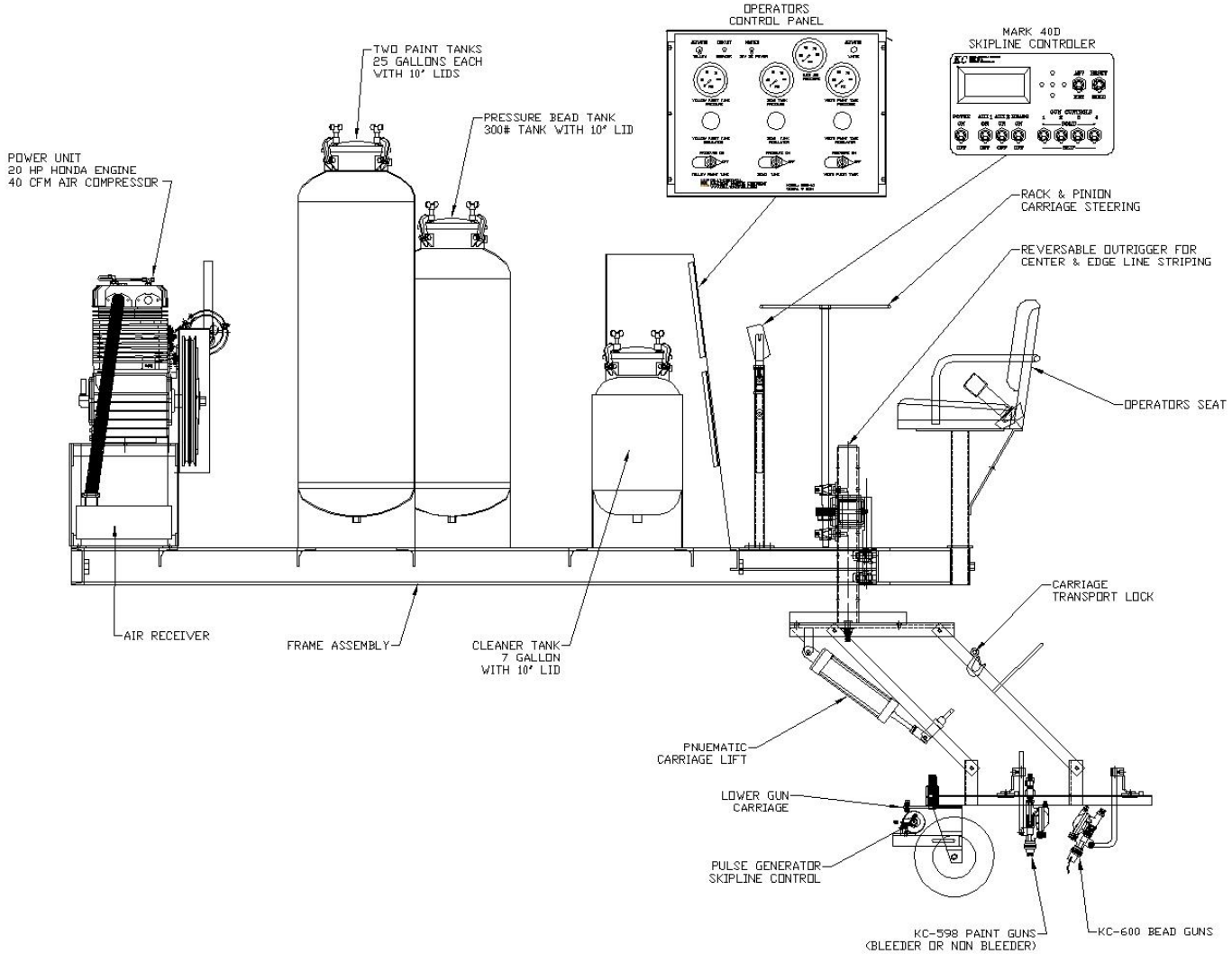
Optional Equipment

Material Containers	**AC-2000-AS-Code**	**ASME certification on paint tanks, pressure bead tank and cleaner tank. Applies to all configurations of tanks sizes and material construction.**
Compressor	**AC-2050**	The unit shall be a four cylinder, two stage compressor with a free air delivery of 67 CFM at 1100 rpm at 100 pounds pressure in lieu of standard. Recommended for high altitude operations.
Outrigger Steering	**AC-2060**	1. Hydraulic outrigger steering in lieu of rack and pinion. 2. The outrigger shall be equipped with a hydraulic power steering system adjustable to any position within a 36" operating range. 3. The outrigger shall be steerable from either the right or left rear operator's position by a conventional automotive-type steering wheel. 4. Hydraulic quick disconnects will be provided to quickly and easily change hydraulic hoses when moving outrigger from side/side. 5. The hydraulic power outrigger steering will provide smooth continuous movement of the outrigger without hesitation or jerk. 6. The hydraulic power outrigger steering will get hydraulic power from a separate hydraulic pump exclusively for the power steering belt driven from engine power unit.
Agitators	**AC-3040-1**	**1. Hand paddle agitator, 10" Lid.** **2. Each material container to be equipped with a hand paddle agitator with stainless steel shaft and two each plastic paddles.** **3. A hand crank shall be provided to stir the paint.**
	AC-2045-1	**1. Pneumatic drive agitator, 10" lid.** **2. Each material container to be equipped with a pneumatic drive agitator with stainless steel shaft and two each plastic paddles.** **3. The pneumatic drive motor will feature a gear drive reduction with direct coupled air motor.** **4. Each air motor will be equipped with an oil lubricator and needle valve to control**

		speed. **5. The pneumatic drive is to be operated prior to striping and turned off during striping operations.**
	AC-3200	**1. Pneumatic drive agitator, 15” lid..** **2. Each material container to be equipped with a pneumatic drive agitator with stainless steel shaft and two each stainless steel paddles.** **3. The pneumatic drive motor will feature a gear drive reduction with direct coupled air motor.** **4. Each air motor will be equipped with an oil lubricator and needle valve to control speed.** **5. The pneumatic drive is to be operated prior to striping and turned off during striping operations.**

Paint & Bead Guns	**AC-2010-4**	**Additional KC-598-NBSSF paint gun includes spray gun, gun hanger, gun post, fluid hose, KC-C5 actuation solenoid and hoses. Note, standard compressor will operate two guns simultaneously. Simultaneous operation of a third paint gun requires a compressor upgrade.**
	AC-2130	**Timed beads, separate solenoid supplied to control pressure bead gun. This insures the entire painted line is covered with beads.**
Hand Paint and Bead Guns	**AC-1010-2-SS**	**Hand paint gun, Binks model 2100 with 25' of fluid and air hose.**
	AC-1040	**Hand bead gun with 25' bead hose.**
Intercom	**AC-2000**	**Intercom system, model 78C with two each voice activated head sets. Drivers headset shall be a single ear and rear striper operators shall be a dual ear.**
	AC-2000-1	**Intercom system, model 78C with two each voice activated head sets. Drivers headset shall be a single ear and rear striper operators shall be a dual ear. Includes communication capability with other two way radios**
Paint Loading	**AC-2060-1**	**Loading pump, 1" NPT air operated diaphragm pump, aluminum construction with two each 1" x 10' loading hoses with quick disconnect fittings. A stinger shall be provided to draw paint from a standard drum. Pump mounted to unit location determined by customer. Recommended for oil based paints only.**
	AC-2060-2	**Loading pump, 1" NPT air operated diaphragm pump, stainless construction with two each 1" x 10' loading hoses with stainless quick disconnect fittings. A stinger shall be provided to draw paint from a standard drum. Pump mounted to unit location determined by customer. Recommended for latex/ waterborne paints only.**
	AC-2061	**Two wheeled cart for loading pump (cart only).**
Storage Cart	**AC-2098**	**Cart assembly, four each heavy-duty leg that bolt to channel iron frame. Legs equipped with wheel for moving the unit on hard surface floor.**
Paint Heating System	**AC-2070-1 (oil based paint)**	1. The Unit shall be equipped with a propane fired, rapid recovery paint heating system with a capacity of not less than 65,000 BTU. 2. The heating system shall be complete with gas regulator, adjustable thermostat, and solenoid operated ignition system. The ignition system shall be explosion proof with waterproof electrical connectors. The thermostat indicator light and control switches shall be installed in a box and mounted near the operator. 3. The heating system shall include a propane cylinder of not less than 30 pounds capacity with DOT approval. 4. The heating system shall include two (2) heat exchangers with a minimum heating surface area of 24 square feet. The exchangers shall be dual pass carbon steel with copper tubes. 5. The heating system shall include a 12-volt DC driven circulating pump with a capacity of not less than 12 gallons per minute. The paint heating system shall have the capacity to raise the temperature of the paint a minimum of 40 degrees F to a maximum temperature of 120 degrees F. 6. The heating system shall include a heating solution expansion tank, water temperature thermostat and marking material temperature gauges. The temperature probe for the marking material shall be located in the paint line leaving the heat exchanger. 7. Thermometers, gauges, and controls shall be located in a central position so the operator can make adjustments. 8. Requires 60" wide frame for additional equipment. 9. Paint Heating System adds approximately 1,000 lbs to the weight of the unit.
	AC-2070-2 (latex paint)	1. The Unit shall be equipped with a propane fired, rapid recovery paint heating system with a capacity of not less than 65,000 BTU. 2. The heating system shall be complete with gas regulator, adjustable thermostat, and solenoid operated ignition system. The ignition system shall be explosion

		proof with waterproof electrical connectors. The thermostat indicator light and control switches shall be installed in a box and mounted near the operator. 3. The heating system shall include a propane cylinder of not less than 30 pounds capacity with DOT approval. 4. The heating system shall include two (2) heat exchangers with a minimum heating surface area of 24 square feet. The exchangers shall be dual pass of all stainless steel construction. 5. The heating system shall include a 12-volt DC driven circulating pump with a capacity of not less than 12 gallons per minute. The paint heating system shall have the capacity to raise the temperature of the paint a minimum of 40 degrees F to a maximum temperature of 120 degrees F. 6. The heating system shall include a heating solution expansion tank, water temperature thermostat and marking material temperature gauges. The temperature probe for the marking material shall be located in the paint line leaving the heat exchanger. 7. Thermometers, gauges, and controls shall be located in a central position so the operator adjustment. 8. Requires 60" wide frame for additional equipment. 9. Paint Heating System adds approximately 1,000 lbs to the weight of the unit.
Other Options		
	Laser Pointer	**Laser guidance system, projects green dot on pavement surface for guidance. Available in manual and electronic adjustment.**
	Strobe Light	**Amber strobe, 12VDC mounted on pole.**
	Directional Arrow-board	**Directional arrow-board with brackets to mount to rear of frame, 24" X 48" with electronic tilt feature. Requires power from chassis.**
	Vacuum Bead Loading System	**Vacuum bead loading system including vacuum pump, bead loading hose and combination bead barrel & bag splitter.**
	Trailer	**Optional trailer to mount the 2000-AS.**
	Night Lights	**Night lighting package, 12VDC requires power from chassis.**
	Hose Reels	**Self rewinding hose reels for hand paint and hand bead guns.**
	Stencil Rack	**Stencil racks, customized to meet your requirements. Requires a 60" or 72" wide frame.**
Training	**On Site Training**	**Factory direct technician for a period of one working day to instruct your personnel in the operation and maintenance of the unit.**
Spare Parts	**2000-AS Minor**	**Common replacement parts for 2000-AS**
	2000-AS Major	**Replacement parts inventory recommended for export sales.**
Crating	**Crating**	**Domestic crating charge includes removal of gun carriage and wood runners for placing the unit on an open sided LTL carrier. The unit cannot be loaded in a van body.**
	Export Crating	**Complete enclosed wooden crate with heavy-duty 4" treated wood sub-frame for picking the unit up with a standard forklift in either direction. The approximate dimensions of a standard 2000-AS (48" wide frame) are 144" long X 72" wide X 77" tall. See attached drawing.**



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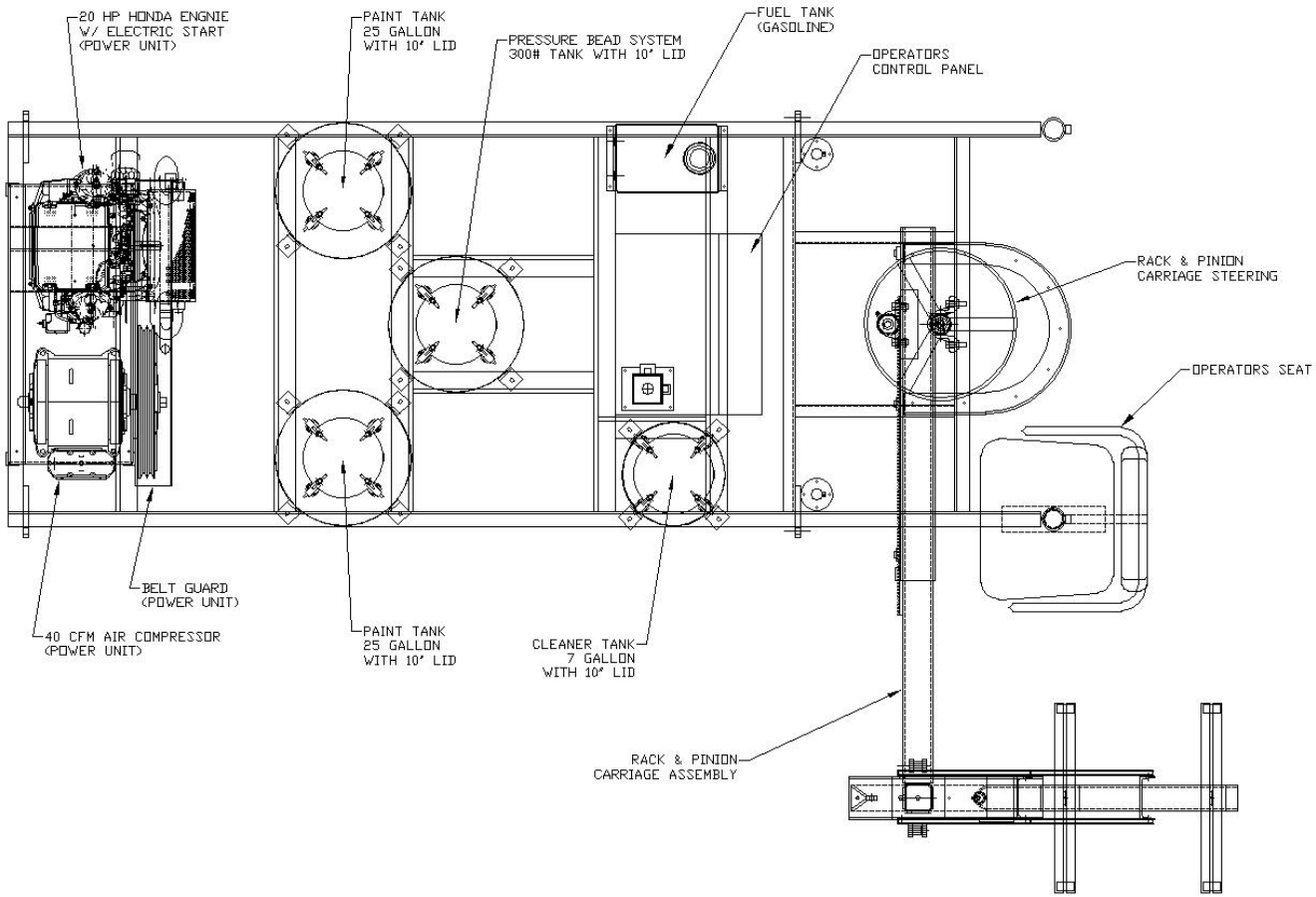

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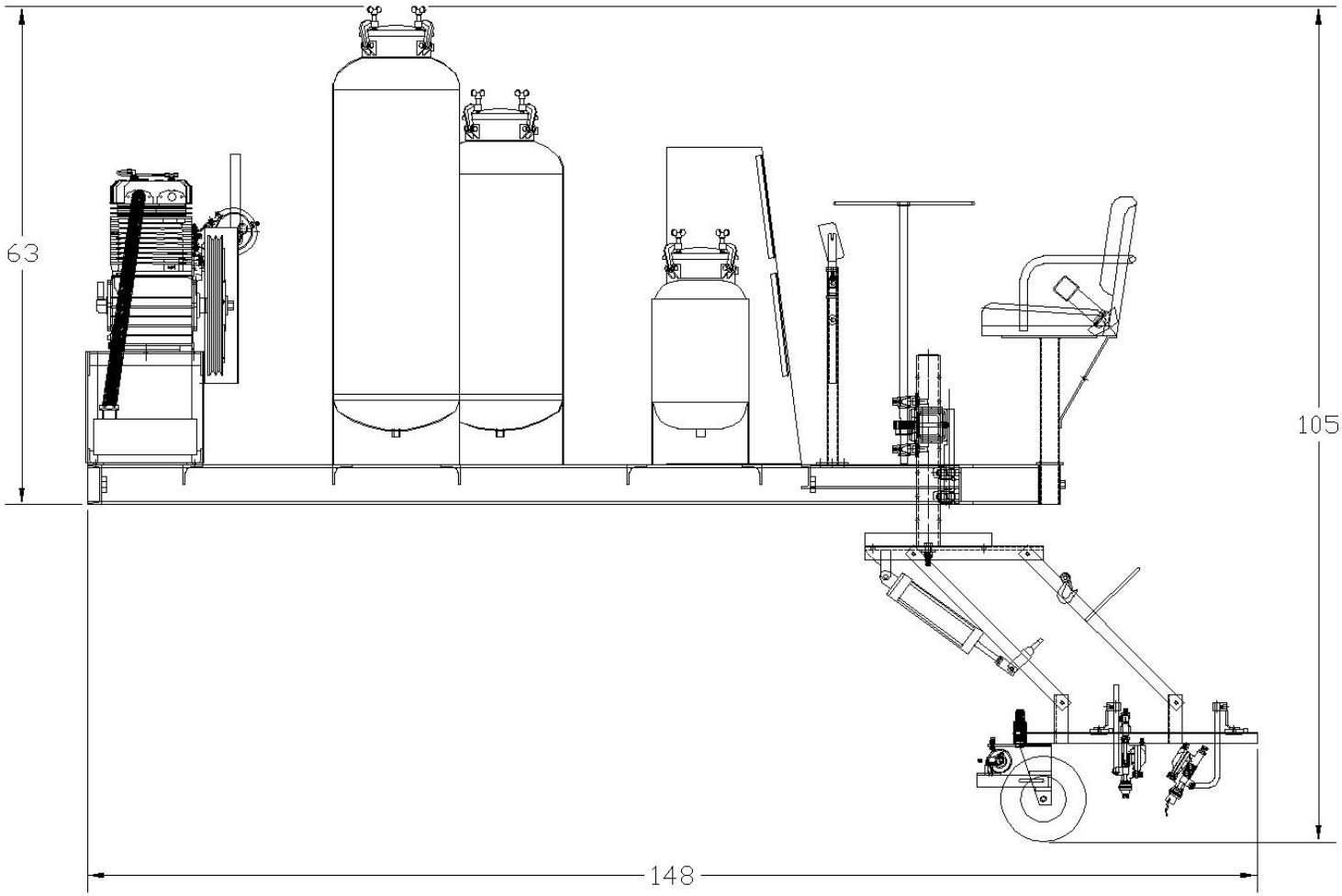
				DESCRIPTION: GENERAL DETAILS (TANKS)			
		DRAWN BY TLB	DATE 11-16-10	DWG NO./PART NO. SA-2000AS TOP LEVEL			
		APPROVED BY	DATE APPROVED	SCALE: NA	SIZE: A	PAGE #: 2 of 6	REV: ----

KELLY-CRESWELL
2000-AS
REV C



TOLERANCES UNLESS OTHERWISE SPECIFIED: Angular ±2° Fractional ±1/16" .X= ±.1 .XX=±.01 .XXX=±.005 .XXXX=±.0015	CONFIDENTIAL THIS DOCUMENT, INCLUDING ALL INFORMATION HEREIN, IS THE EXCLUSIVE AND CONFIDENTIAL PROPERTY OF ERNEST INDUSTRIES. THEREFORE THIS DOCUMENT IS NOT TO BE COPIED, REPRODUCED, OR DELIVERED TO OTHERS WITHOUT THE EXPRESS WRITTEN PERMISSION OF ERNEST INDUSTRIES.	Kelly-Creswell 1221 Group Rd. Springfield, OH 45504 937-325-3678 KC Since 1937		TITLE: 2000-AS			
				DESCRIPTION: BASIC DIMENSIONS (TANKS)			
		DRAWN BY TLB	DATE 11/16/10	DWG NO./PART NO. SA-2000AS TOP LEVEL			
		APPROVED BY	DATE APPROVED	SCALE: N/A	SIZE: A	PAGE #: 3 of 6	REV: ----

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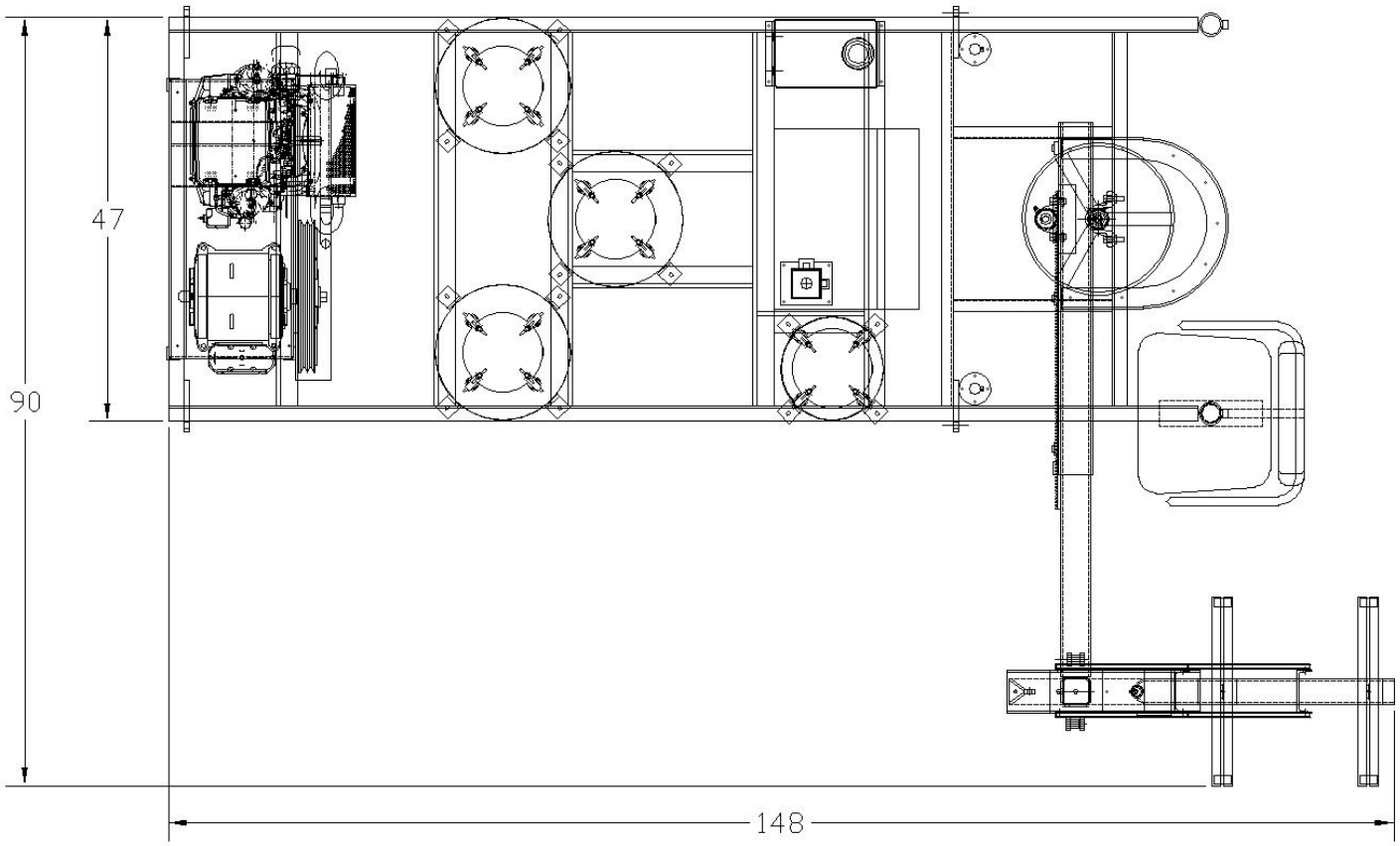
REV C



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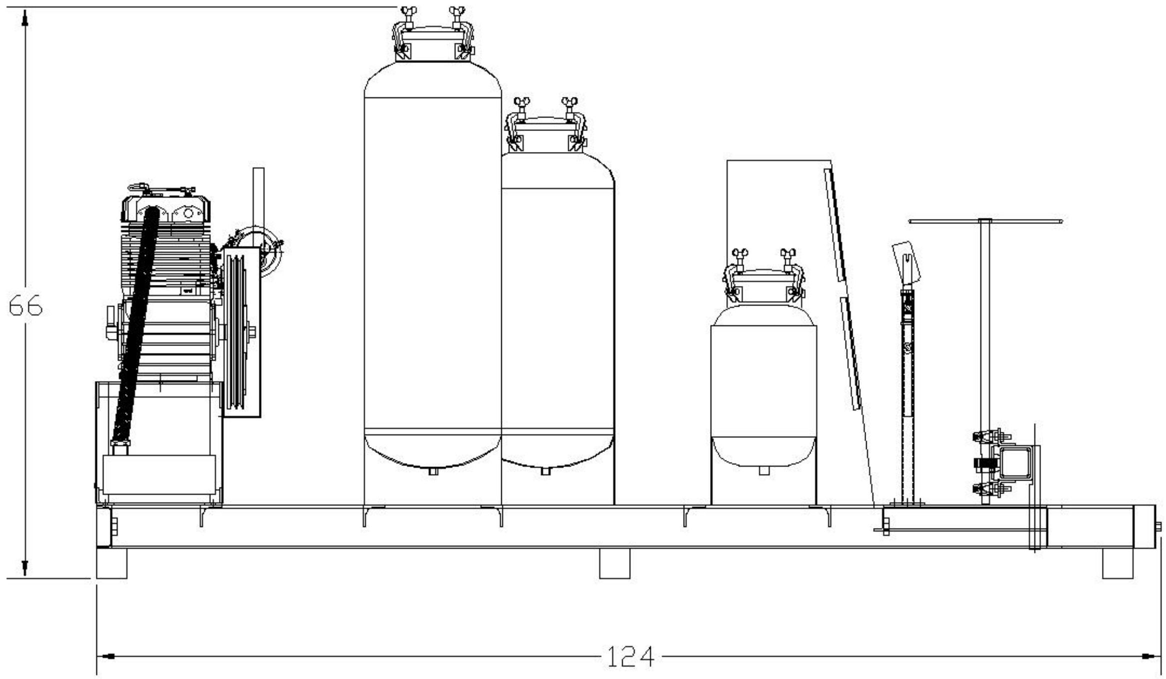
				DESCRIPTION: BASIC DIMENSIONS (TANKS)			
		DRAWN BY TLB	DATE 11/16/10	DWG NO./PART NO. SA-2000AS TOP LEVEL			
		APPROVED BY	DATE APPROVED	SCALE: N/A	SIZE: A	PAGE #: 4 of 6	REV: ----

KELLY-CRESWELL
2000-AS
REV C



LENGTH (INCHES)	124"
WIDTH (INCHES)	72"
HEIGHT (INCHES)	66"
EST. SHIPPING WEIGHT	2100 LBS

NOTES:

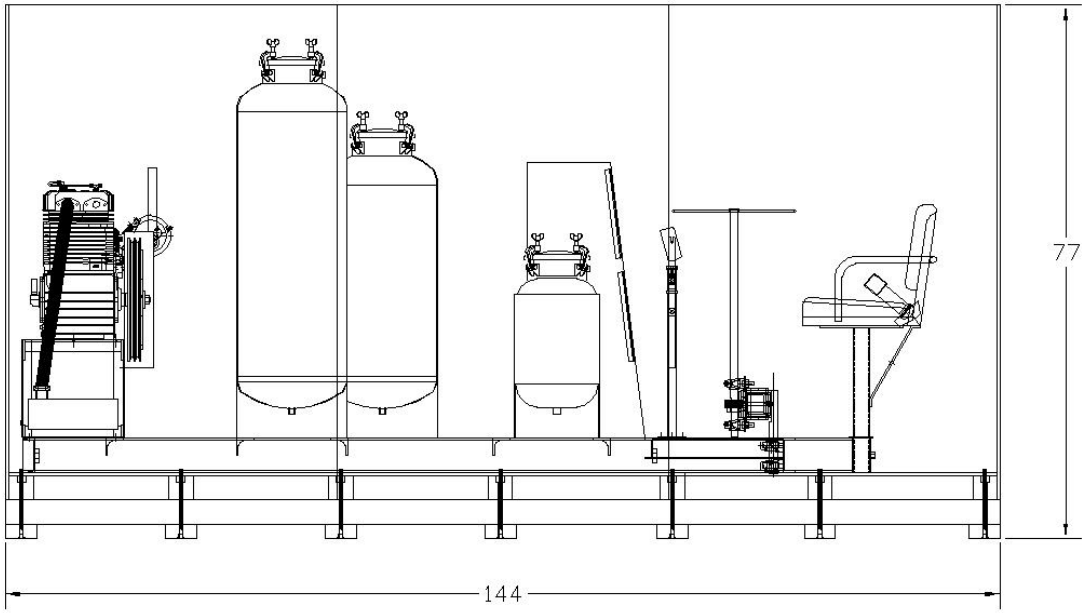
1- LTL SHIPMENT WITHIN UNITED STATES SHIPPED ON AN OPEN FLAT DECK TRAILER.

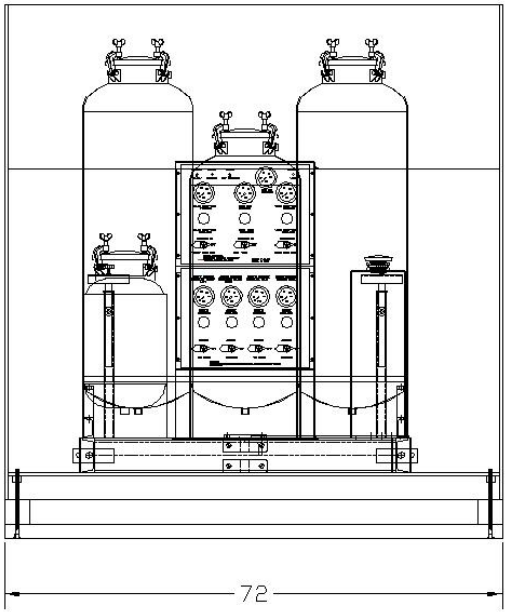
2- CARRIAGE ASSEMBLY REMOVED, CUSTOM FITTED, AND BRACED IN AVAILABLE SPACE ON THE UNIT

TOLERANCES UNLESS OTHERWISE SPECIFIED:
Angular ±2°
Fractional ±1/16"
.X= ±.1
.XX=±.01
.XXX=±.005
.XXXX=±.0015

Kelly-Creswell
1221 Groop Rd.
Springfield, OH 45504
937-325-3970
Since 1937

TITLE: 2000-AS			
DESCRIPTION: SHIPPING DIMENSIONS (TANKS)			
DRAWN BY: TLB	DATE: 11/16/10	DWG NO./PART NO.: SA-2000AS TOP LEVEL	
APPROVED BY:	DATE APPROVED:	SCALE: N/A	SIZE: A
PAGE #: 5 of 6	REV: ----		





LENGTH (INCHES)	124"
WIDTH (INCHES)	72"
HEIGHT (INCHES)	77"
EST. SHIPPING WEIGHT	2500 LBS
APPROX. CUBIC FEET	398 cu.ft.

NOTES:
1- FULLY ENCLOSED EXPORT CRATE OR OPEN FRAME SKID
2- CARRIAGE ASSEMBLY REMOVED, CUSTOM FITTED, AND BRACED IN AVAILABLE SPACE IN THE CRATE

TOLERANCES UNLESS OTHERWISE SPECIFIED:
Angular ±2°
Fractional ±1/16"
.X= ±.1
.XX=±.01
.XXX=±.005
.XXXX=±.0015

Kelly-Creswell
1221 Groop Rd.
Springfield, OH 45504
937-325-3979
KC Since 1937

TITLE: 2000 SERIES EXPORT CRATE					
DESCRIPTION: EXPORT CRATE DIMENSIONS					
DRAWN BY: TLB	DATE: 11/16/10	DWG NO./PART NO.: AC-2099 EXPORT CRATING			
APPROVED BY:	DATE APPROVED:	SCALE: N/A	SIZE: A	PAGE #: 6 of 6	REV: ----

KELLY-CRESWELL
2000-AS
REV C