PROPOSAL SPECIFICATION:	**20061122-070919**
AUTOMATIC BALING PRESS MODEL:	HRB-CENTURION 200HP; 13/9
GENERAL LAYOUT DRAWING:	3A-14155 (LH/RH); 3A-14156 (LH/LH) 3A-14153 (RH/LH); 3A-14154 (RH/RH)
APPLICATION:	Paper stock, secondary fibers and solid waste. Aluminum siding sheet, clips, cans, skeletons and miscellaneous plastics.

A CAPACITY AND RATING:

A1	PRESS BOX DIMENSIONS:	60” wide x 27 ½” deep x 161 ½” long (1524 mm x 699 mm x 4102 mm)
A2	CHARGING BOX OPENING:	57 ½” wide x 105 ½” long (1448 mm x 2680 mm)
A3	HOPPER OPENING:	86” wide x 114 ½” long (2184 mm x 2908 mm)
A4	COMPRESSION CHAMBER SIZE:	39” wide x 29” deep x 60” long (991 mm x 737 mm x 1524 mm)
A5	BALE CHAMBER VOLUME	39 ft^3 (1.104 m^3)
A6	APPROX. EXPANDED BALE SIZE:	45” wide x 31”deep x 64” long (1143 mm x 787 mm x 1626 mm)
A7	APPROX. EXPANDED BALE VOLUME:	51.5 ft^3 (1.458 m^3)

A8 PERFORMANCE RATINGS @ 60 HERTZ (50 HERTZ) OPERATION:

A8.1	Corrugated; Input Density:	3.0 - 6.0 lb/ft^3 (48 - 96 kg/m^3)
A.	Density:	25 - 31 lb/ft^3 (400 - 497 kg/m^3)
B.	Bale Weight:	1250 - 1550 lb (567 - 703 kg)
C.	Tons/Hour with door:	22 - 37 tons/hr (20 - 33.6 tonne/hr)
D.	Tons/Hour w/o door:	24 - 42 tons/hr (21.8 - 38.1 tonne/hr)

A8.2 Solid Waste; Input Density:	7.0 - 12.0 lb/ft^3 (112 - 192 kg/m^3)
A. Density:	35 - 45 lb/ft^3 (560.6 - 720.8 kg/m^3)
B. Bale Weight:	1820 - 2340 lb (825.5 - 1061.4 kg)
C. Tons/Hour with door:	37 - 63 tons/hr (33.6 - 57.2 tonne/hr)
D. Tons/Hour w/o door:	43 - 75 tons/hr (39 - 68 tonne/hr)
A8.3 Newsprint; Input Density:	6.8 - 8.0 lb/ft^3 (108.9 - 128.1 kg/m^3)
A. Density:	28 - 36 lb/ft^3 (448.5 - 576.7 kg/m^3)
B. Bale Weight:	1375 - 1750 lb (623.7 - 793.8 kg)
C. Tons/Hour with door:	33 - 44 tons/hr (29.9 - 39.9 tonne/hr)
D. Tons/Hour w/o door:	38 - 51 tons/hr (34.5 - 46.3 tonne/hr)
A8.4 UBC Aluminum; Input Density:	1.5 - 4.5 lb/ft^3 (24 - 72.1 kg/m^3)
A. Density:	22 - 26 lb/ft^3 (352.4 - 416.5 kg/m^3)
B. Bale Weight:	1000 - 1200 lb (453.6 - 544.3 kg)
C. Tons/Hour with door:	10 - 30 tons/hr (9.1 - 27.2 tonne/hr)
D. Tons/Hour w/o door:	11 - 35 tons/hr (10 - 31.8 tonne/hr)
A8.5 Steel Cans; Input Density:	6.0 - 9.0 lb/ft^3 (96.1 - 144.2 kg/m^3)
A. Density:	34 - 49 lb/ft^3 (544.6 - 784.9 kg/m^3)
B. Bale Weight:	1550 - 2250 lb (703.1 - 1020.6 kg)
C. Tons/Hour with door:	32 - 58 tons/hr (29 - 52.6 tonne/hr)
D. Tons/Hour w/o door:	37 - 67 tons/hr (33.6 – 60.8 tonne/hr)
A8.6 Plastic; Input Density:	1.2 - 4.0 lb/ft^3 (19.2 - 64.1 kg/m^3)
A. Density:	23 - 30 lb/ft^3 (368.4 - 480.6 kg/m^3)
B. Bale Weight:	1250 - 1625 lb (567-737.1 kg)
C. Tons/Hour with door:	13 - 31 tons/hr (11.8 - 28.1 tonne/hr)
D. Tons/Hour w/o door:	14 - 35 tons/hr (12.7 - 31.8 tonne/hr)

A8.7 Non-Ferrous; Input Density:	3.0 - 6.5 lb/ft^3 (48.1 - 104.1 kg/m^3)
A. Density:	33 - 52 lb/ft^3 (528.6 - 833 kg/m^3)
B. Bale Weight:	1500 - 2400 lb (680.4 - 1088.6 kg)
C. Tons/Hour with door:	20 - 50 tons/hr (18.1 - 45.4 tonne/hr)
D. Tons/Hour w/o door:	22 - 56 tons/hr (20 - 50.8 tonne/hr)

* NOTE: Performance Rates and/or Production Rates are subject to Material Input Density, Feed Rates, and other Variables of Production outside the control of HWMG, Inc.

B COMPONENTS:

B1 ELECTRIC MOTORS:

B1.1 Main Motor:	Two (2) 100 HP, 1750 RPM, 208-220/440 volt 3Ø, 60 Hertz, protected enclosure. [Two (2) 75 kW, 1500 RPM, 415 volt 3Ø, 50 Hertz, protected enclosure.]
B1.2 Cooler Motor:	One (1) 10 HP, 1175 RPM, 208-220/440 volt 3Ø, 60 Hertz, protected enclosure. [One (1) 7.5 kW, 1000 RPM, 415 volt 3Ø, 50 Hertz, protected enclosure.]
B1.3 Cooler Pump Motor:	One (1) 30 HP, 1750 RPM, 208-220/440 volt 3Ø, 60 Hertz, protected enclosure. [One (1) 22 kW, 1500 RPM, 415 volt 3Ø, 50 Hertz, protected enclosure.]

B2 ELECTRICAL CONTROL SYSTEM:

B2.1 One (1) NEMA XII control panel to include reduced voltage starting of main motor and across-the-line auxiliary motor starters for 440 to 600 volt (380 to 415 volt) power with overload protection, circuit breaker, control circuit transformer and cycle control system wired to terminal strips. Special starting requirements are available at additional cost, for other voltages.

B2.2 One (1) operator's station enclosure to include oil tight control switches and signal lights, wired to terminal strips. Fault diagnostics, baler status information and operational prompts are displayed via an operator interface terminal.

B3 HYDRAULIC SYSTEM:

B3.1 MAIN PUMPS, FLOODED SUCTIONS:	672 gpm (2544 lpm), 3500 psi (241 bar) Peak System Pressure

B3.2 VALVES: Cartridge & Spool Type

B3.2.1 Individual relief valves protect each pump from overload pressure.

B3.2.2 Directional valves are electrically controlled and hydraulically operated.

B3 HYDRAULIC SYSTEM: (continued)

B3.3 CYLINDERS: Harris or equal

B3.3.1 FIRST COMPRESSION: 13” (330 mm) bore, 232 tons (210.5 tonnes)

B3.3.2 BALE EJECTOR: 9” (229 mm) bore, 111 tons (100.7 tonnes)

B3.3.3 COMBO DOOR: 7” bore (178 mm), 67 tons (60.8 tonnes)

B4 FILTERING AND COOLING SYSTEM:

B4.1 The 120 gpm (454 lpm) kidney loop circuit is filtered by replaceable cartridge type micronic filters.

B4.2 Standard cooling system is oil to air heat exchanger.

B5 AUTOMATIC TIE-OUT: Accent 470 Strapping System for tying 11 or 12 AWG wire. Other models and strapping systems are available as options.

C OPERATION:

C1 There are three modes of operation: Manual, semi-automatic and automatic repeat. Manual operation is provided primarily for set up and maintenance purposes. In the semi-automatic mode, material is gathered manually by pushbutton. The gatherer ram is positioned after sufficient material is compressed. The auto-eject function button then indexes the bale through the tie-out chamber. The ejector and gatherer then retracts fully, and machine is ready for next baling cycle. Automatic repeat mode is normally synchronized with conveyor or other automatic methods of charging material and handling finished bales.

C2 The baling sequence is as follows: Loose material brought to the machine by conveyor or overhead surge bin may be charged on top of the first compression if it is forward, or directly in the box if the ram is fully retracted. Loose material, which is charged only on top of the first ram falls into the box automatically as a function of the baling cycle.

C3 At the start of a cycle the first compression ram extends fully forward. Any material extending above the ram is sheared off and gets mixed with the next charge of material. The ram continues to compress and retract until a sufficient charge to form a bale is pushed into the compression chamber. The ejector ram indexes the bale through the tie-out chamber. Both rams retract and one baling cycle is complete.

C3.1 At the start of an Automatic Cycle with door, the sequence is the same as automatic standard cycle except the bale door is closed. When a sufficient charge is pushed into the compression chamber, the bale door opens, the ejector ram indexes the bale through the tie-out chamber. Both rams retract, the door closes, and one baling cycle is complete.

C4 The bale release may be operated by push button in the manual or semi-automatic mode, and will retract automatically to allow ejection of an oversize bale, and return to normal position in automatic mode.

C5 A material selector switch is provided at the operator's control station to change the pressure sensing ranges and short stroke travel to compensate for varying material densities. Strap spacing can be set or adjusted by operator.

D CONSTRUCTION:

D1 The baler is designed for flat surface, reinforced slab installation.

D2 Major sub-assemblies are heavy plate and structural weldments of cellular construction, stress relieved before machining as required to design dimensions.

D3 Final assembly is bolted and keyed.

D4 The entire press box and ram wear surfaces are fitted with weld-on wear plates. The press box Bottom has weld-on grooved liners. The liner material is a hard, wear-resistant steel alloy.

D5 All rams are box type steel weldments, stress relieved and, as required, machined to design dimensions. The gatherer ram design aids in replacement of its bottom liners.

D6 Shear knives are securely seated in press frame and first compression ram. All four edges of the standard knives are designed for shearing. (Serrated knife beam & knives are optional}

D7 All pipe is electrically welded and securely anchored.

D8 Pipe flanges are steel, bolted type, with "O" ring gaskets.

D9 The baler is completely assembled, operated and tested before shipment.

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D10 Standard paint is Fast Dry Primerless.

D11 STANDARD SHIPPING WEIGHT: 57 tons (52 tonnes), approx.

E GENERAL:

E1 Layout and foundation prints show above grade dimensions and conditions. Below grade soil conditions, piers, piling, footings and associated components are matters of local determination for which our company can accept no responsibility.

E2 Our company's technical services are available on a free advisory basis to assist in determining the location and material flow conditions best suited to utilize the high production of our equipment.

E3 This proposal also includes the services of a qualified installation specialist for two (2) eight-hour working days. He will place the baler in operation and instruct your operator in recommended operating and maintenance procedures. (Transportation and sustenance outside the continental United States is for the purchaser's account.)

E4 Harris will not accept back charges in connection with installation or start-up of this machine unless prior approval is obtained in writing from authorized Harris personnel.

E5 Harris will not accept any charges for work performed on this machine during contracted warranty period unless prior approval is obtained in writing from authorized Harris personnel.

F EXPENSES ASSUMED BY THE PURCHASER TO COMPLETE THE MACHINE INSTALLATION:

F1 Freight from factory to destination.

F2 Preparation of foundation.

F3 Unloading and assembling of the baler.

F4 Securing baler to foundation.

F5 Wiring from power source to electric control panel, and wiring between conveyor (s) and baler control panel.

F6 Furnishing all fuses.

F7 Furnishing approximately 1900 gallons (7192 liters) of hydraulic oil for the hydraulic system.

F8 STRAPPING: 11 or 12 gauge, 220,000 psi (1,520 MN/m^2) round steel strapping or equal for use with the selected strapper.

G LIMITED WARRANTY:

This machine is covered under Harris warranty which is attached.

The provision of this specification shall apply unless specifically provided for otherwise in your proposal or contract.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.