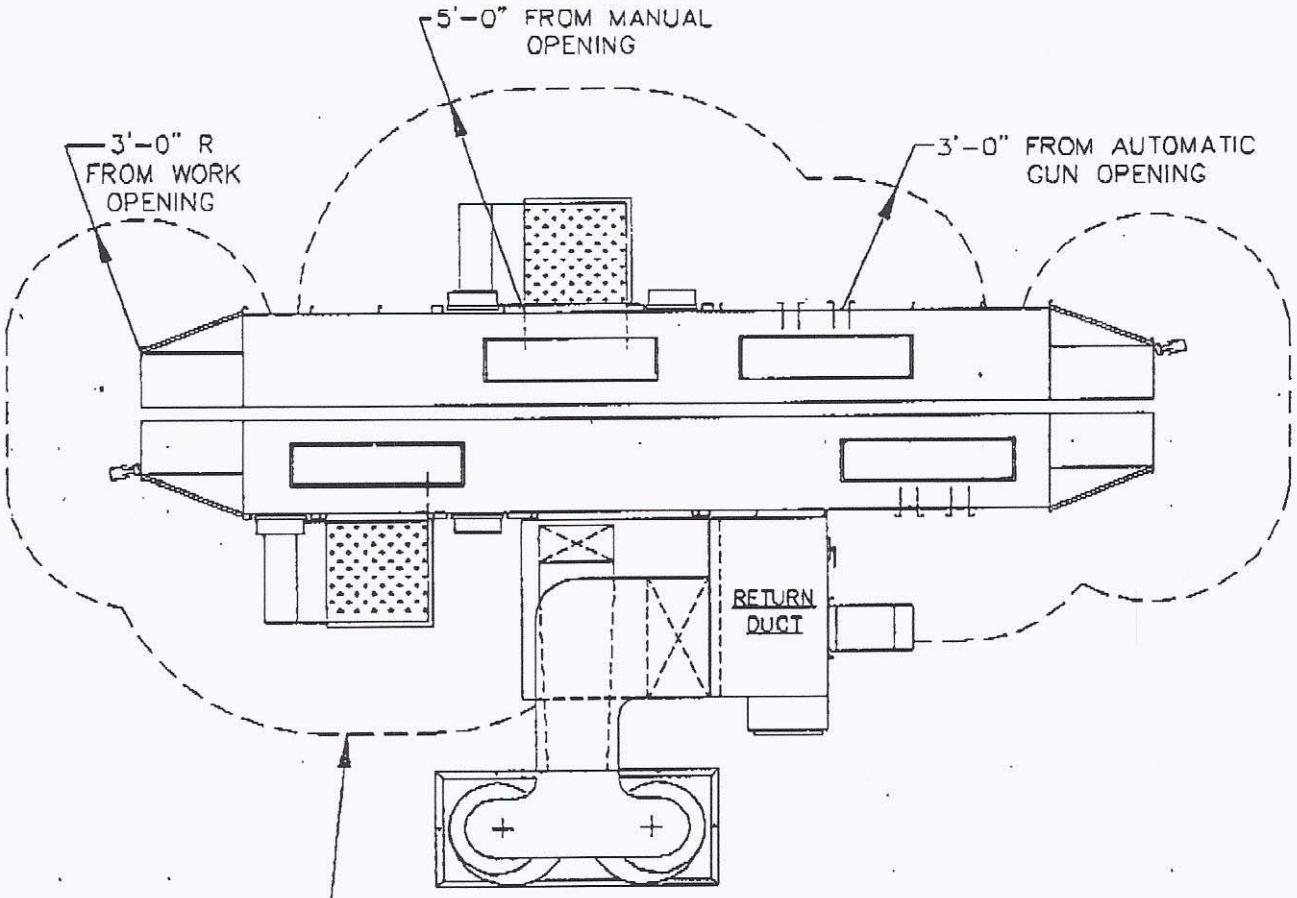
WAGNER RECLAIM



AREAS ENCLOSED BY DASHED LINES ARE CLASS II, DIVISION II, GROUP "G" AREA OF N.E.C. DIMENSION OF AREA TO BE IN ACCORDANCE WITH N.F.P.A. 33, SPRAY APPLICATION 1982.

RECOMMENDED N.E.C. ELECTRICAL COMPLIANCE FOR POWDER EQUIPMENT

Wagner Systems Inc. 700 High Grove Boulevard Glendale Heights, IL 60139-9998 Telephone (630) 924-7460 Facsimile (630) 924-7459

WAGNER-RECLAIM

December 7, 1994

Re: Proposal #94-4063-A

Gentlemen:

We are honored to submit the following quotation of the WAGNER-RECLAIM™ Powder System for your consideration and invite you to an installation near you.

WAGNER-RECLAIM CyMod™ INTEGRATED CYCLONE POWDER BOOTH SYSTEM*

The CyMod System will now make it possible for companies to install powder equipment with a collection system flexible enough to adapt to any future needs. Previously the buyer had to choose between a ***Cartridge*** or a ***Conventional Cyclone*** booth. This dilemma is solved with the innovation of the CyMod System which can be outfitted with either type of powder recovery process. The users can configure the system to satisfy their powder recovery requirements now and in the future.

The efficiency of a Cartridge Booth with the Flexibility of a Cyclone Booth...No More Scrapping Low Volume Colors

The CyMod Integrated Powder Booth system is an innovative design which combines the efficiency and compactness of a cartridge filter booth with the flexibility of a cyclone booth. The CyMod is especially designed for the custom coater using one or two major colors and a multitude of low volume and special colors which can be recycled.

The most efficient usage of high volume colors is with cartridge filter collectors for each color. These roll-away dedicated color Quick-Change™ Collectors allow for nearly 100% usage of the coating and contamination-free color change since there is no duct work to clean. The Quick-Change Collector recycles the powder directly to the integral gun feed hopper with the shortest powder path in the industry.

The Ideal Booth for Just In Time (JIT) Finishing Systems

The CyMod™ Cyclone Module gives the custom coater the flexibility of changing color in the middle of a color run to spray another color which is not recycled and again then return to the previous color without cleaning the cyclone or duct work. While one operator is loading the second color and cleaning the powder guns, the other operator quickly flushes the over spray inside the spray enclosure into the cyclone inlet and changes the booth airflow. This minimizes the loss of recycled powder of the first color. After spraying the second color the guns are changed back to the original color, the second color over-spray is flushed-out, and the booth is ready to resume recycling the original color.

* CYMOD DESIGN IS PATENTED

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POWDER RECYCLING PROCESS WITH THE CyMod™ POWDER BOOTH

The powder is sprayed into the booth enclosure by either manual or automatic spray equipment. As the air is drawn through the operator and work openings, it carries the powder over spray horizontally inside the enclosure, into the powder recovery system.

In ***Collector Mode,*** the powder is drawn thru the air and distribution baffles and deposited on the cartridge filter and is automatically dislodged by a reverse-pulse of compressed air. This momentary snap of air allows the powder to fall into the single, removable hopper under the cartridges where it mixes with the fluidized virgin and recycled powder. This unique, closed loop powder recovery system design ensures a consistent blend of powder deposition throughout the operation. The virgin make-up powder is loaded into the Collector through the load chute above the hopper. The chute also allows for the inspection of the powder level and fluidization in the hopper. The Integral hopper can be outfitted with either the Gun Feed Pumps or Recycle Pumps for transferring the recycle powder the External Gun Feed Hopper located at the rear of the Collector when the Rotary Screener is used.

In ***Cyclone Mode*** the powder over spray is drawn toward the collector and can be diverted in two distinct paths: directly into the Scrap Collector Module, where all powder overspray is scrapped, or through a very short duct into the Cyclone Module, where all the powder is separated from the air stream for reuse. The recycled powder is collected in a special powder receiver under the cyclone where it is continuously transferred to the Gun Feed Hopper. The exhaust air and powder "Fines" from the cyclone are ducted to the Scrap Collector Module for further filtering. The Scrap Collector Module is attached to the booth similarly to a Quick-Change Collector and has cartridge filters which, when pulsed, release the scrap powder into the internal bin. This powder is collected for proper disposal.

The clean air is drawn through the volume control damper and into the fan inlet. The fan discharges the air through the Final filters back into the plant.

A Quality Finish Is Easy With The Rotary Screener Option

The booth can be equipped with the Rotary Screener System which filters and conditions the recycled/virgin powder mixture. The scrap powder is collected in a bucket for disposal. The Level control monitors the powder level in the External Hopper and alerts the operator when the powder level is low. The hopper is continually fed by transfer pumps at the recycle/virgin powder make-up hopper(s) when the Cyclone Module is used.

The Quick-Change Collector can be equipped with a dedicated Screener for a particular high volume color or when the quality and consistency of the coating is required. The Screener can be retro-fitted at any time.

The Rotary Screener is provided with the sieve clean-out adapter which facilitates the cleaning of the screener in minutes without the need of disassembly depending on the type of powder and colors being recycled.

WAGNER-RECLAIM™ POWDER BOOTH SYSTEM SPECIFICATION

POWDER COATING DATA

Number of Colors: Multiple
Type of Powder: Epoxy, Polyester, or Hybrids
Coating Thickness Desired: 1.5 to 3.0 mils on selected surfaces

ELECTRICITY

Power: 480 Volts, 3 phase, 60 Hz.
Lighting: 120 Volts from plant fused lighting panel
Ultraviolet Fire Detection System: Uninterrupted 120 volt source

COMPRESSED AIR

Consumption: 104 CFM Normal (110 Max) @ Constant 90-100 PSIG Air
Dryer: 125 CFM of air free of oil, condensation and particulate

PRODUCTION DATA

Product: AT & T
Work Composite Size: 1'-6" W x 2'-0" H
Work Hanging Centers : Varies with production
Conveyor Speed: 4 to 7 FPM
Type of conveyor: Enclosed Track
Top of conveyor to top of opening: 2'-0" H

BOOTH OPENINGS

Work Opening: 2'-0" W x 3'-6" H New Height.
Operator Spray Station: (2) 2'-0" W x 2'-0" H
Automatic Gun Station: (1) Slot per side, 4" W x 4'-0" H

COLLECTOR CAPACITY: 4,500 CFM with average 120 FPM through openings

Notice: The Wagner-Reclaim equipment is designed to work in an industrial environment. Wagner Systems does not specify any particular type of powder, formulation or particle distribution. However, the cyclone equipment is a particle classifier and will have a recycling efficiency which is dependent on particle size. Our experience with the Wagner-Reclaim cartridge filters is that they work with any standard commercially available powder.

TRADEMARKS OF A WAGNER-RECLAIM™ POWDER SYSTEM

The WAGNER-RECLAIM Powder Booth System is designed to be efficient, durable and affordable. A totally self-contained system which is custom engineered to improve operator performance and productivity while enhancing coating quality.

SYSTEM DESIGN FEATURES

* Innovative powder recycling has the shortest return and delivery path.....less wear on parts and powder
* Quick-Change™ collector permits color changes in just minutes.
* Light fixtures improve operator's ability to see what's being coated.
* Stainless steel Enclosures with catalyzed filler in the flat seams for extra fast, contamination-free color change.
* Compact design frees valuable floor space.
* Foam insulated intake and fan plenum for extra quiet operation.
* High Efficiency motor with high performance aluminum fan wheel.
* Integrated Booth Control Panel pre-wired to motor and controls.
* Equipment safety design meets or exceeds OSHA, NFPA, NEC, and FM Acceptance requirements.
* Horizontal airflow improves transfer efficiency and coating uniformity.
* Entire Booth system is factory assembled, wired and piped.

EASE OF OPERATION

* Conveniently placed controls permit fast, easy operation of booth, loading of powder and working of guns.
* Automatic and manual gun controllers are located where the operator needs them for maximum control and efficiency.
* Caster mounted systems are designed for complete mobility of all components. The Base can be equipped with an optional Booth Mover.
* All hoses and tubing are installed in special troughs to minimize clutter and easy cleaning of floor around booth.
* Only the normal process controls are in view of the operator. All other controls are located inside panels.
* The operator spray stations are sized for the required touch-up requirements. We understand the needs of the operator and design the booth air flow capacity for optimal efficiency.

WAGNER-RECLAIM POWDER BOOTHS ARE DESIGNED TO MEET YOUR NEEDS AND WITHIN YOUR BUDGET

POWDER RECOVERY EQUIPMENT
WAGNER-RECLAIM CyMod™ INTEGRATED CYCLONE POWDER BOOTH SYSTEM

The **WAGNER-RECLAIM™** Powder Booth is a custom designed with (2) automatic spray stations and Powder Booth System specifically tailored to meet the coating requirements and fit in the designated space and complement the entire finishing line.

ITEM **DESCRIPTION**

A **WAGNER-RECLAIM CyMod POWDER BOOTH:** 4,500 CFM Capacity

Booth Overall dimensions: 9'-3" W x 6'-2" H x 21'-0" L

Overall Height to the Top of the Cyclone: ~~13'-0"~~ 2 10' Foot Towers

POWDER BOOTH DESIGN FEATURES:

(1) ***Booth Enclosure:*** Stainless steel tunnel with clear plastic roof and side panels for interior lighting, sloped entrance/exit vestibules, rigid flat floor, self supporting slotted roof for conveyor hook.

(2) ***Operator Spray Station:*** 2'-0" W x 2'-0" H Opening

(2) ***Automatic Gun Spray Station:*** (1) Slot per side, Polypropylene

(2) ***Operator Platforms:*** Staircase and safety handrails

(1) ***Fan Plenum Assembly:*** Fan housing and final filters

(1) ***Integrated Booth Control Panel:*** 480 V/3 Ph/60 Hz wiring

(1) ***Powder Screener Controls:*** Mounted on the booth panels
(1) ***System on/off Controls***
(1) ***Level Control System:*** Low Level Alarm

(4) ***Booth Fluorescent Fixtures:*** (4) Roof mounted

(1) ***Booth Pneumatic System:*** Air valves and manifold pre-piped

(1) ***Booth Perimeter Manifold:*** 1/4" IPS compressed air taps

(5) ***Blow-Off Gun Assembly:*** Spray stations and collector

(1) ***Booth Interlocks:*** UV System, Automatic guns and conveyor

(1) ***Conveyor Emergency Stop:*** Located by one Manual Station

EQUIPMENT PRE-ASSEMBLY:

* ***Factory Assembly:*** Complete booth assembled prior to shipping
* ***Paint:*** White Epoxy on non-stainless, Orange on platforms
* ***Factory wiring:*** All motors, control panels and switches
* ***Factory Air Piping:*** Pulse system, manifolds and controls

POWDER COLLECTION AND RECYCLING EQUIPMENT

CYCLONE POWDER COLLECTION EQUIPMENT FOR ALL COLORS

ITEM	DESCRIPTION

B **CyMod Collector and Cyclone Module:** 4,500 CFM capacity with:

(1) ***Cartridge Filter Collector:*** Collector for the "Scrap" powder discharged by the Cyclone. The Integral Discharge and Intake duct work for connecting to the Cyclone Module and to the Collector are roof mounted.

(1) ***OSHA Safety Vent Assembly:*** Mounted on Collector Roof.

(1) ***Segregation Damper:*** Damper is closed by the U.V. system or manually by the operator when the system is in "Scrap" Mode.

(1) ***Scrap Powder Bin:*** Collects scrap powder from disposal.

(1) ***Hopper Vent:*** Vents External Gun Feed Hopper to Collector Ductwork.

(1) ***Integral Dual Cyclone Assembly:*** Cyclone(s) on a caster mounted structural frame with intake/outlet duct work.

(1) ***Powder Receiver with Transfer Pump Assembly:*** Continuously transfers the recycled powder to the Gun Feed Hopper.

(1) ***OSHA Safety Vent Assembly:*** Mounted on Discharge Duct.

FACTORY PRE-ASSEMBLY OF THE POWDER BOOTH EQUIPMENT

The WAGNER-RECLAIM™ Powder Booth equipment is shop assembled into major assemblies, wired and piped. This will significantly reduce the installation time and costs. The Purchaser is invited to see the assembled booth in our shop prior to shipping.

* **SHOP BOOTH ASSEMBLY:**
  - Enclosure tunnel has plastic roof/wall panels installed, all seams filled with catalyzed caulk and stainless acid cleaned. The operator opening have a unistrut channel on one side for hanging the manual gun console. Hooks are provided for guns.
  - Duct, fan box & final filter plenum lined with acoustical foam for quieter operation
  - Collector shipped with integral hopper installed
  - Operator platforms, bases and hoppers and Cyclone Assembly
* **SHOP WIRING: PER NFPA 33, CLASS II, DIV. 2**
  - Control panel mounted and pre-wired on booth assembly
  - Power wiring to fan motor from the booth control panel
  - Control wiring to air flow switched, solenoids and controls
  - 120 Volt dust-proof junction box at powder gun control panel
  - Wiring to the Sieve control, switches and Level Controller if provided
  - Power & interlock wiring from booth panel to Auto Gun cabinet
  - UV Detector cable wiring to the Booth Control Panel
  - Wiring of conveyor emergency stop and fluorescent lights
* **SHOP PNEUMATIC PIPING:**
  - Wrap around compressed air manifold under booth floor
  - Color coded tubing to components and controls
  - Blow-off gun at each spray station and Collector load chute
  - Poly tubing for gun feed hopper, guns and sieve if supplied
  - Quick-disconnect air coupling from booth to Collector
  - Individual gauges and regulators on each roll-away Collector

SHOP PAINT: Epoxy on steel assemblies, safety orange on Control Panel

FIELD INSTALLATION REQUIREMENTS BY PURCHASER

The equipment can be installed by the customers operators and the maintenance personnel. The installation of the booth requires 3 days. During the start-up of the equipment, our factory Technician instructs your crew on the details of maintenance and operation of the equipment. The operation, trouble shooting and coating training session is provided as the equipment is started and parts coated. The WAGNER-RECLAIM technician installs powder guns & hoses.

* Unloading, moving booth and electrostatic equipment in place
* Installation of booth Enclosure, Fan Plenum and Base Legs
* Installation of Air Dryer and piping from compressor source
* Compressed air to pneumatic control panel inlet from air dryer
* Positive earth grounding to booth, base track and gun consoles
* Electrical power wiring the following:
  - Booth control panel and fluorescent light fixtures
  - Connecting gun consoles to pre-wired 120 V. junction boxes

WAGNER-RECLAIM *2010™* POWDER APPLICATION EQUIPMENT

The WAGNER-RECLAIM™ Powder Booth will feature the Wagner-Reclaim 2010™ automatic and manual powder coating system. The WAGNER-RECLAIM powder application system is the most advanced design available with built-in standard features not offered in other gun designs.

The Wagner-Reclaim 2010™ Automatic powder coating system combines the latest equipment technology: operator friendly design, precision and reliability, uncompromising safety features. The ultra-efficient Airmatic automatic gun has unique features and many nozzle attachments to tackle the most challenging of coating tasks. The integrated high voltage generator is field serviceable for lower service costs and reduced down-time and the most efficient, compact and safe installation.

The booth will be equipped with (4) Automatic and (2) Manual guns. The automatic guns are arranged (2) per side of the product and are Fixed Mounted. The cabinet with the gun controllers is mounted at the entrance of the booth. The operator can make powder cloud adjustments from there without having to go inside the booth and change deflectors.

The complete system will feature the following:

ITEM **DESCRIPTION**

C **WAGNER AUTOMATIC POWDER SYSTEM with:**

(1) ***Enclosure Cabinet:*** Control panel for electrostatic modules
(4) ***Automatic Gun Assembly:*** with the following components:
  (1) ***EPG-2010:*** Electrostatic/Pneumatic Gun Controller
  (1) ***PEA-C1:*** Automatic Electrostatic Gun: 100 kV Negative
  (1) ***PJ 2020PR:*** Powder Feed Pump with High efficiency Injector
  (3) ***Round Deflector:*** 18, 25, and 32 mm diameter cone
  (1) ***Flat Spray Nozzle:*** Adjustable width spray pattern
  (1) ***GMB-1000:*** Gun Mount Bar
  (1) ***LVC-30:*** Low Voltage Cable
(1) ***Assembly Hardware:*** Poly-tubing, hardware & cable ties
(1) ***Hose and Tubing Trough:*** Keeps hoses organized & off the floor
(1) ***Set of Powder Hose:*** High-flow clear hose for automatic guns

ULTRAVIOLET DETECTION SYSTEM

The interior of the powder booth is monitored for ultraviolet sparks and fire by two (2) ultraviolet fire detectors. The detectors are equipped with a special air shield which helps keep the lens clear of powder accumulation. The Control System which is pre-wired in the Booth Control Panel has pilot lights and buttons for monitoring and testing for detectors. The Detectors Control System warns the operator if a lens is dirty. If sparks are generated by dirty hooks, ungrounded parts or faulty guns, the Control System warns the operator with a buzzer. In the event of a spark hot enough to start a fire, or an actual fire, the Control System shuts off the Guns, Booth and Conveyor; while the fire alarm is energized to warn the operator.

ITEM	DESCRIPTION
D	**ULTRAVIOLET DETECTION SYSTEM:** Dedicated single Booth System
	(1) ***Control Circuit:*** Controls mounted in the Booth Panel
	(2) ***Detector with lens air shield:*** Mounted at work opening
	(1) ***Filter and regulator manifold:*** Booth Mounted

ROTARY SCREENER ASSEMBLY FOR ON-LINE POWDER CONDITIONING

The rotary sieve screener conditions the virgin and recycled powder by sifting and removing contaminants on a continuous line basis.

The sieve will yield savings in substantial reduced gun and venturi pump wear, consistent powder deposition, reduced coating film build, reduced product rejects and rework. The scrap powder and contaminants are discharged to the scrap receiver. The sieve has safety interlocks to prevent start-up if the unit is open.

ITEM	DESCRIPTION
E	**ROTARY SIEVE SYSTEM:** Booth mounted controls:
	(1) ***ROTARY SCREENER CONTROLS:***
	(1) ***Motor Controls:*** Starter and controls in booth panel
	(1) ***Level Control System:*** Low Level Alarm
	(1) ***Factory Assembly:*** Pre-wiring and piping of controls
	(1) ***ROTARY SCREENER MOUNTED ON THE BOOTH WITH THE FOLLOWING:***
	(1) ***Rotary Screener:*** Safety controls pre-wired and piped
	(1) ***Level Control Probe:*** The Probe monitors the powder level in the External Hopper. The Probe is inside a dry well for easy color change.
	(1) ***External Gun Hopper:*** Stainless, 200 lb. capacity
	(1) ***Separator Cyclone Assembly:*** Break-apart Cyclone and Vent
	(1) ***Scrap Bucket:*** Discharge hose assembly
	(1) ***Assembly Hardware:*** Item hoses and tubing
	(1) ***Set of Hoses:*** For Transfer Pumps and Separator Vent

TWIN TOWER REGENERATIVE HEATED AIR DRYER

The Air Dryer Assembly is designed to remove moisture and oil from the plant compressed air prior to the powder coating system. Compressed air contamination will cause damage to the powder system components, problems with handling and performance of the powder coating, equipment, down-time and rejected product.

ITEM	DESCRIPTION
G	***125 CFM TWIN TOWER REGENERATIVE HEATED AIR DRYER***
	(1) ***Air Dryer:*** -40°F dew point air outlet
	(1) ***System Filters and Piping:*** Pre-assembly of pre-filter, coalescing filter, after filter, gauges, indicators and bypass valves.
	(1) ***Pipe Manifold:*** Pre-piped with the manifold with inlet valves, exhaust valves exhaust mufflers, tower pressure gauges, purge flow indicator, check vales purge flow orifice, purge adjustment valve, and purge heater.
	(1) ***Timer Controlled cycle from tower to tower***

EQUIPMENT FOR ADDITIONAL COLORS

HOPPERS FOR ADDITIONAL COLORS

H ***EXTERNAL GUN FEED HOPPER:*** 120 lb. capacity for the virgin powder. The stainless steel, caster mounted hopper vents directly to the back of the Collector.

GUN MOTION EQUIPMENT FOR AUTOMATIC GUNS

ITEM **DESCRIPTION**

I ***GBO-1600 GUN BAR OSCILLATOR:*** 3" to 16" arc travel which simulates manual spray strokes, improves film build consistency and directs spray into the shadow and recess areas. The oscillator has variable speed, variable stroke, DC motor drive. The stroke speed is easily changed with a speed knob mounted on or near the oscillator.

OPTIONAL EQUIPMENT

AUTOMATIC GUN TRIGGERING SYSTEM

The **SPRA-MASTER™** system is designed to control the triggering of automatic guns in order minimize unnecessary spraying. The system consists of a compact microprocessor/controller and various time delay controls connected to a sensor array. The sensors initialize the system as a part enters the booth tunnel. After a time delay that can be dependant on conveyor speed and booth dimensions, the controller triggers the guns as the part travels into the selected coating range. The system detects line gaps and stops triggering during these gaps for further powder savings. The SPRA-MASTER can be used in conjunction with reciprocators to start and stop gun motion in addition to gun triggering.

ITEM **DESCRIPTION**

F **WAGNER-RECLAIM SPRA-MASTER™ GUN TRIGGERING SYSTEM**

(1) ***Photo-cell Array:*** Vertical three (3) zone control located at the entrance of the booth
(1) ***Spra-Master Control Module:*** Micro-processor controller with input/output relays
(1) ***Conveyor Encoder Module:*** Mounts on conveyor drive generates clock pulse for controller and part ID resolution assembly
(1) ***Assembly Mounting Hardware***

PRICE: PROPOSAL #94-4063-A SYSTEM WITH THE FOLLOWING:

ITEM	QTY	DESCRIPTION
A	1	CyMod Powder Booth Assembly: 4,500 CFM Capacity
B	1	CyMod Collector and Cyclone Module ~~2~~ 10' Foot Towers
C	1	Automatic Powder Application System: (4) Automatic Guns and (2) Manual guns
D	1	UV Fire Detection System: (2) Heads
E	1	Rotary Sieve and Level Control System
G	1	125 CFM Twin Tower Regerative Air Dryer
H	1	External Hopper: 120 lb. Capacity
I	1	Set Gun Bar Oscillators: Electric Drive, Booth Mounted
	1	Complete pre-assembly service: Complete assembly of the Booth and Gun equipment prior to shipping
	1	Complete shop wiring and piping service: Wiring of all electrical components piping of pneumatic controls
	3	Days of Start-up Service of the powder system
	1	WAGNER-RECLAIM Equipment on consignment for in house stock: (1) EPG-2010 Electrostatic Gun Controller (1) PEA-C1 Automatic Gun and Cable (1) Spare Parts Kit for Automatic Guns (1) SPK-3000 Spare Parts Kit for Powder Booth

1 ~~Model # 2010 Manual Gun Outfit Build~~ Airfluid direct Powder Hopper Feeder

COMPLETE BOOTH AND GUN SYSTEM $ 121,500.00

OPTIONAL EQUIPMENT

ITEM	QTY	DESCRIPTION	PRICE
~~F~~	~~1~~	~~Spra-Master Gun Triggering System~~	~~$ 4,000.00~~