

SITE - PREP

Lo Pro Model 327S-HP





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FOOTING RECOMMENDATIONS

Adequate footings must be provided prior to set-up of plant. See plant assembly drawing, for column loadings, obtain a soil test and consult a professional Engineer for foundation design.

IMPORTANT:

BECAUSE OF THE RELATIVELY LARGE LOADS IMPOSED ON THE FOOTINGS, THE ALLOWABLE BEARING PRESSURE OF ALL UNDERLYING SOIL SHOULD BE DETERMINED AND OR CONFIRMED DUE FOOTING DESIGN. APPROPRIATE CONSIDERATION FOR SETTLEMENT SHOULD BE INVESTIGATED INCLUDING THE POSSIBILITY OF A SOFT COMPRESSIBLE LAYER OF SOIL BENEATH THE TOP LAYER OF SOIL, AND ANY OTHER SOIL CHARACTERISTICS THAT MIGHT CAUSE **EXCESSIVE** EXCESSIVE SETTLING OR THE LACK OF SETTLEMENT. ADEQUATE UPLIFT RESTRAINT COULD CAUSE A DANGEROUS CATASTROPHE WITH COSTLY STRUCTURAL DAMAGE.

The customer is required to furnish steel leveling plates of no less than 3/4" x 10" x 10" material for each column required. If plant is to be permanently located CON-E-CO recommends installation of additional footings and piers to accommodate future expansion of bins.

NOTE: Portable footings may be used, if a reputable professional engineer is consulted for design of the portable footings.



SPECIAL BRACING REQUIREMENTS

CON-E-CO structural supports, are designed for normal wind and adequate foundations. It may be necessary in some locations to provide additional bracing in order to comply with the design criteria of local codes for hurricane force winds or seismic loadings.

CHARGING RAMPS AND BUILDING

Charging ramps and buildings should be free standing and not dependent on the plant for structural support. CON-E-CO assumes no responsibility for damage to a plant caused by a charging ramp or building.

WATER REQUIREMENTS

The plant water may be obtained from city systems, well or surge tank. A minimum flow rate of approximately 100 to 150 GPM is advisable in order to maintain batching speed. CON-E-CO water meter will operate with much lower flow rates if required, approximately 30 GPM for 2" meter or 50 GPM for 3" meter. CON-E-CO recommends that a maximum pressure of 150 PSI not be exceeded. (The CON-E-CO water meter will handle water at temperatures ranging from 32 degrees F to 200 degrees F.) See Page 2 showing without (Location will work with waterline location. shown or CON-E-CO furnished water pump.)

GENERAL NOTES

CON-E-CO Structures are all designed to be mounted on level, rigid foundations. All foundations, permanent or temporary, must not allow more than 1/2" differential settlement or uplift between columns during or after repeated wind and/or live loads. Foundation loads are shown from specific plant configurations in site preparation drawings supplied by CON-E-CO. Added accessories such as cement silos, water tanks, conveyors, and dust control systems which are not shown on the plant's site preparation drawing cause higher stresses on the plant and larger foundation loads and/or uplifts. Consult CON-E-CO before adding anything to a plant not shown on its site preparation drawing.



PJC Series Silo Filter Vent

MAINTENANCE & OPERATION

OPERATION

The CON-E-CO Pulse Jet Cartridge Series Silo Filter Vents are designed for continuous operation and cleaning.

CARTRIDGE CHAMBER

Contaminated air enters from the bottom of the cartridge chamber and flows from the outside toward the inside of the cartridges, leaving dust particles on the outside of the cartridges. Clean air exits through the top.

CARTRIDGE CLEANING

Cleaning of the cartridges is done one row at a time. Pulse jet valves are mounted on a manifold on the filter vent and control air to the blowpipes located above the rows of pulse jet cartridges. Holes in the blowpipes centered over each cartridge opening direct air downward through a venturi into the cartridges.

Cleaning of the cartridges is accomplished by a jet of air directed downward into the cartridges. The jet of air is short duration, high velocity and directs enough air volume to reverse the flow of air for a very short time to dislodge the dust from the outside of the cartridge.

AIR PRESSURE

Air pressure at the manifold (located on the filter vent) should be maintained at 90 to 100 psi. Less than 90 psi will reduce cleaning efficiency: Greater than 100 psi will cause excessive cartridge wear.

CONTROL

The pulse jet valves are controlled by an adjustable solid state timer board. (See timer instruction for technical and programming instructions) This timer board controls several functions as described below:

ON TIME Pulse duration: Time that a pulse jet valve is open

ON TIME less than 100 milliseconds will result in ineffective bag cleaning ON TIME greater than 200 milliseconds will result in excessive air usage

OFF TIME Time between pulses:

Reducing the "OFF TIME" will keep the cartridge cleaner and decrease cartridge

life.

Increasing the "OFF TIME" will allow more dust cake and increase cartridge life.

INITIAL SETTINGS

The filter vent timer control should initially be set as shown below. These settings should give the best balance of cleaning efficiency, air efficiency and cartridge life for most common applications.

ON TIME

150 milliseconds 30 seconds









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FIELD OPERATION

Recommended operation of a PJC Series Silo Filter Vent

Pulse (Cleaning) Operation: The cleaning cycle of the filter vent should be activated whenever material is being loaded into silo/bin. Cleaning operation should continue for approximately five to ten minutes after loading operation has finished.

Blower Operation (if equipped): If the silo filter vent is equipped with a blower the blower will need to be activated during loading operation. Blower can be turned off once loading has been completed. To load a silo/bin with a blower on the filter vent the blower does not need to be activated to load but it will increase the speed at which loading takes place.

FILTER CARTRIDGE MAINTENANCE

The filter vent cartridges should be removed and inspected for tears or excessive buildup of material.

A visual inspection of the discharge air from the silo vent at the time a cement or flyash truck is unloading should be made on a daily basis. If it appears that dust is escaping the filter cartridges they should be removed for a visual inspection.

Filter vent equipped with a magnehelic gauge: A silo filter vent may be equipped with an optional magnehelic gauge to measure resistance to air flow through the cartridge filter media. If the filter vent is equipped with a magnehelic gauge the normal pressure should be observed and recorded at the time that a load of cement is being delivered. Normal pressure will vary between delivery trucks because the CFM of the blowers may differ. Therefore gauge pressure for a given blower CFM needs to be recorded. After several recordings from trucks of a given CFM, a normal pressure will be determined. After the normal pressure is determined, the gauge pressure should be checked (at the time a truck is unloading) on a weekly basis to determine if the pressure is abnormally high or low (2 inches of water above or below the established normal pressure).

If the magnehelic gauge indicates a pressure out of the normal range as described above, the filter cartridges should be removed for a visual inspection.

Regular inspection of the filter vent should be at a maximum of six month interval. General inspection of wiring, condition of door gaskets and caulked connections should be made. Also the filter cartridges should be removed for a visual inspection at this time.

SPARE PARTS

Parts should be ordered from manufacturer to insure compatibility. If parts are needed, obtain serial number from the name plate and call the factory. A complete detailed record of the vent is on file at CON-E-CO.

SAFETY INFORMATION

This CON-E-CO dust collector, like other industrial equipment, must be operated and maintained in accordance with our instructions and sound engineering practices. The user of this equipment must always be aware of the physical and chemical properties of the dust particles being collected. Materials or processes presenting such hazards must be identified by the user.











PJC Series Batcher Filter Vent

MAINTENANCE & OPERATION

OPERATION

The CON-E-CO Pulse Jet Cartridge Series Silo Filter Vents are designed for continuous operation and cleaning when batcher is being discharged.

CARTRIDGE CHAMBER

Contaminated air enters from the bottom of the cartridge chamber and flows from the outside toward the inside of the cartridges, leaving dust particles on the outside of the cartridges. Clean air exits through the top.

CARTRIDGE CLEANING

A pulse jet valve is mounted on a manifold on the batcher vent and controls air to the blowpipe located above the row of pulse jet cartridges. Holes in the blowpipe centered over each cartridge opening direct air downward through a venturi into the cartridges.

Cleaning of the cartridge is accomplished by a jet of air directed downward into the cartridge. The jet of air is short duration, high velocity and directs enough air volume to reverse the flow of air for a very short time to dislodge the dust from the outside of the cartridge.

AIR PRESSURE

Air pressure at the manifold (located on the filter vent) should be maintained at 90 to 100 psi. Less than 90 psi will reduce cleaning efficiency: Greater than 100 psi will cause excessive cartridge wear.

CONTROL

The pulse jet valve is controlled by an adjustable timer (see electrical print) located in the plant service panel. The timer is installed to receive a signal from the limit switch located on the batcher discharge gate. When the discharge gate opens and the closed signal goes away the timer will send a signal to the pulse jet valve to pulse.

INITIAL SETTING

The timer should be set to 0.125 seconds.

ON TIME less than 100 milliseconds will result in ineffective bag cleaning ON TIME greater than 200 milliseconds will result in excessive air usage

BATCHER VENT CARTRIDGE MAINTENANCE

The vent cartridges should be removed and inspected for tears or excessive buildup of material.

A visual inspection of the discharge air from the batcher vent at the time of weigh up should be made on a daily basis. If it appears that dust is escaping the filter cartridges they should be removed for a visual inspection.

Regular inspection of the filter vent should be at a maximum of six month intervals. General inspection of wiring, condition of door gaskets and caulked connections should be made. Also the filter cartridges should be removed for a visual inspection at this time.









SPARE PARTS

Parts should be ordered from manufacturer to insure compatibility. If parts are needed, obtain serial number from the name plate and call the factory. A complete detailed record of the vent is on file at CON-E-CO.

SAFETY INFORMATION

This CON-E-CO dust collector, like other industrial equipment, must be operated and maintained in accordance with our instructions and sound engineering practices. The user of this equipment must always be aware of the physical and chemical properties of the dust particles being collected. Materials or processes presenting such hazards must be identified by the user.







SPECIFICATIONS FOR MODEL PJC-1200 CARTRIDGE DUST COLLECTOR ON THE LP327 D INCLUDES EFFECT OF DUCTING USED ON THE LP327 D WITH 15 HP 64 PBI 60 HZ SIZE 165 BLOWER

MODEL CON-E-CO-PCJ-1200

NUMBER OF CARTRIDGES 16
NOMINAL CARTRIDGE DIAMETER 8"
NOMINAL CARTRIDGE LENGTH 78"

TOTAL FILTRATION AREA

MIN. DESIGN EFFICIENCY OF DUST COLLECTOR

AIR TO CLOTH RATIO

1216 SQ. FT.

99.9%

5.5 TO 1.0

AIR TO CLOTH RATIO

BLOWER HP

STATIC PRESSURE DROP

5.5 TO 1.0

15 HP

7.2" (INCI

STATIC PRESSURE DROP

BLOWER CAPACITY

DISCHARGE AREA

DISCHARGE VELOCITY

DIRECTION OF AIR DISCHARGE

7.2" (INCHES OF WATER)
6750 C.F.M.

1.6 SQ. FT.
70.0 FT. / SEC.
HORIZONTAL

DISCHARGE SHAPE 11 1/2" X 20" RECTANGLE

OUTLET MOISTURE CONTENT IDEALLY ZERO
NORMAL OPERATING TEMP & PRESSURE AMBIENT
CLEANING MECHANISM PULSE JET

CLEANING MECHANISM PULSE JET FREQUENCY OF CLEANING VARIABLE

CARTRIDGE SPECIFICATIONS

CARTRIDGE DIAMETER 7 7/8 O.D.
CARTRIDGE LENGTH 78 3/4"
CONSTRUCTION PLEATED

FIBER SPUN BONDER POLYESTER

WEIGHT 8 OZ / SQ. YD. PERMEABILITY (.5" WATER) 24 CFM

DISCHARGE INTO BAGS

 CEMENT SILO
 INTO BAGS

 LB / HR
 .177 LB/YD³* ___YD³/HR

 GR / FT³
 .019 GR HR/LB FT³* ___LB/HR

FLYASH SILO

INTO BAGS

115 I BY D³ * YD³/H

LB / HR .115 LB/YD³ * ___YD³/HR .019 GR / FT³ * ___LB/HR

CENTRAL MIX

LB / HR .153 LB/YD³ * ___YD³/HR .019 GR / FT³ * ___LB/HR

TRUCK MIX

LB / HR

.281 LB/YD³ * ___YD³/HR

.281 LB/YD³ * ___YD³/HR

GR / FT³ .019 GR HR/LB FT³* ___LB/HR
OUT OF BAGS

FOR ALL OUT OF BAGS VALUES, MULTIPLY THE INTO BAGS VALUES BY .001

PLACT CONTROL SYSTEMS

PLACE SYSTEMS



SPECIFICATIONS FOR MODEL PJC-300S CARTRIDGE DUST CONTROL

MODEL CON-E-CO-PJC-300S

NUMBER OF CARTRIDGES 8

NOMINAL CARTRIDGE DIAMETER 8"

NOMINAL CARTRIDGE LENGTH 40"

TOTAL FILTRATION AREA 304 SQ. FT.

MIN. DESIGN EFFICIENCY OF DUST COLLECTOR 99.9%

AIR TO CLOTH RATIO 5.0 TO 1.0 (CEMENT)
CAPACITY FOR CEMENT 1,500 C.F.M. (RECOMMENDED MAXIMUM)

CAPACITY FOR FYLASH
DISCHARGE AREA

1000 C.F.M. (RECOMMENDED MAXIMUM)
.67 SQ. FT.

DISCHARGE VELOCITY @1500 C.F.M.

DIRECTION OF AIR DISCHARGE

38 FT. / SEC.

DOWN WARD

DISCHARGE SHAPE (2) 11/16 X 48" SLOTS (2) 5/8 x 30" SLOTS

NORMAL OPERATING DISCHARGE TEMP & PRESSURE AMBIENT
OUTLET MOISTURE CONTENT IDEALLY ZERO
CLEANING MECHANISM PULSE JET
FREQUENCY OF CLEANING VARIABLE

CARTRIDGE SPECIFICATIONS

CARTRIDGE DIAMETER 7 7/8" O.D.
CARTRIDGE LENGTH 39 1/4"
CONSTRUCTION PLEATED

FIBER SPUN BONDED POLYESTER

WEIGHT 8 OZ / SQ. YD. PERMEABILITY (.5" WATER) 24 CFM/SQ FT

DISCHARGE INTO CARTRIDGES

 CEMENT SILO
 INTO CARTRIDGES

 LB / HR
 .177 LB/YD³* ___YD³/HR

 GR / FT³
 .078 GR HR/LB FT³* ___LB/HR

 FLYASH SILO
 INTO CARTRIDGES

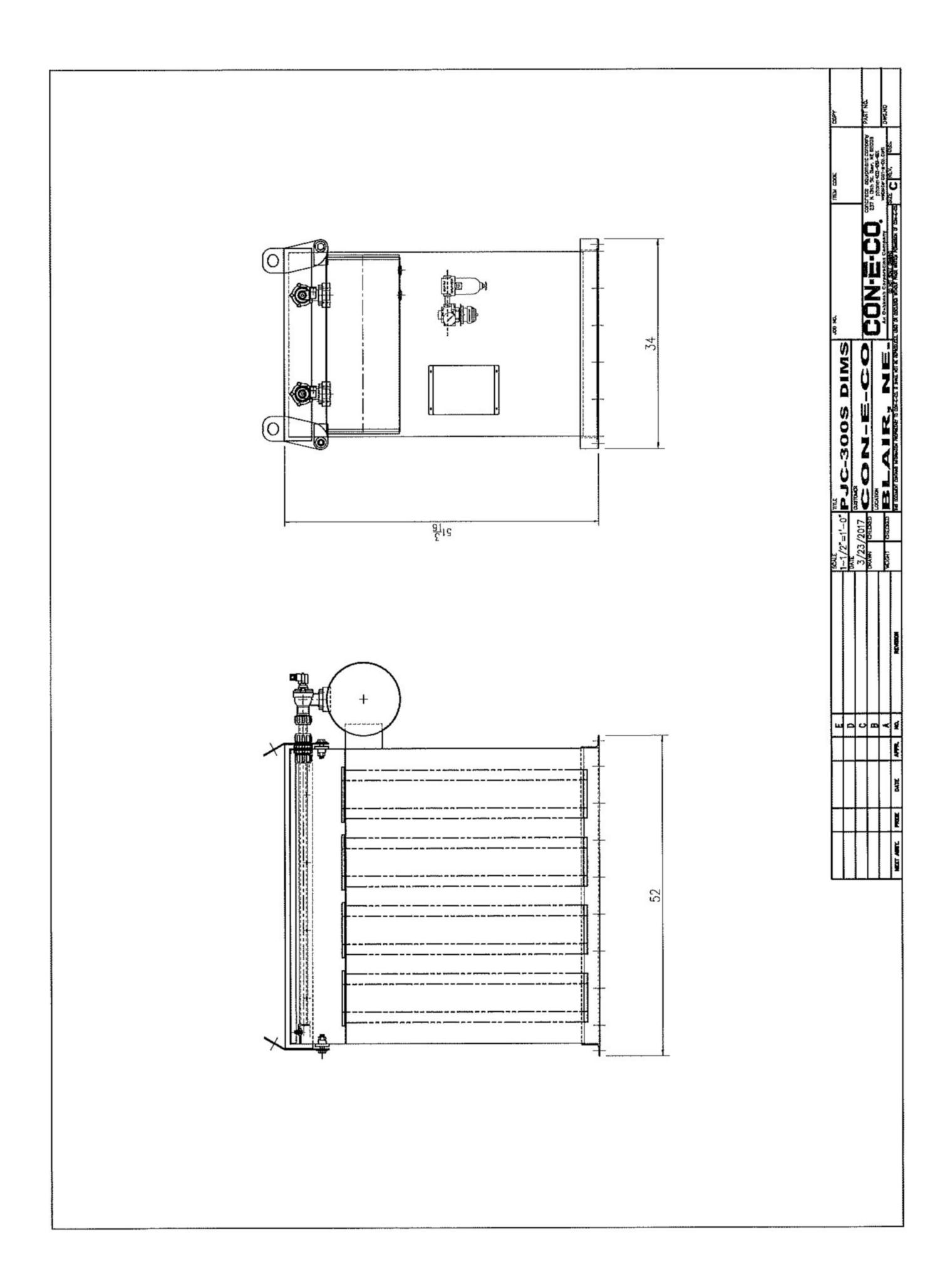
 LB / HR
 .115 LB/YD³* ___YD³/HR

 GR / FT³
 .117 GR HR/LB FT³* ___LB/HR

OUT OF CARTRIDGES

FOR ALL OUT OF CARTRIDGES VALUES, MULTIPLY THE INTO CARTRIDGES VALUES BY .001







SPECIFICATIONS FOR MODEL PJC-80 CARTRIDGE DUST CONTROL

MODEL CON-E-CO-PJC-80

NUMBER OF CARTRIDGES 12" NOMINAL CARTRIDGE DIAMETER 16" NOMINAL CARTRIDGE LENGTH 80.0 SQ. FT. TOTAL FILTRATION AREA MIN. DESIGN EFFICIENCY OF DUST COLLECTOR 99.9% 5.0 TO 1.0 (CEMENT) AIR TO CLOTH RATIO 400 C.F.M. CAPACITY FOR CEMENT .20 SQ. FT. DISCHARGE AREA 32.8 FT. / SEC. DISCHARGE VELOCITY @400 C.F.M. DOWN WARD DIRECTION OF AIR DISCHARGE 13/16" X 36" SLOTS DISCHARGE SHAPE

NORMAL OPERATING DISCHARGE TEMP & PRESSURE AMBIENT **IDEALLY ZERO OUTLET MOISTURE CONTENT PULSE JET** CLEANING MECHANISM **VARIABLE** FREQUENCY OF CLEANING

CARTRIDGE SPECIFICATIONS

12" O.D. CARTRIDGE DIAMETER 16" CARTRIDGE LENGTH CONSTRUCTION PLEATED FIBER

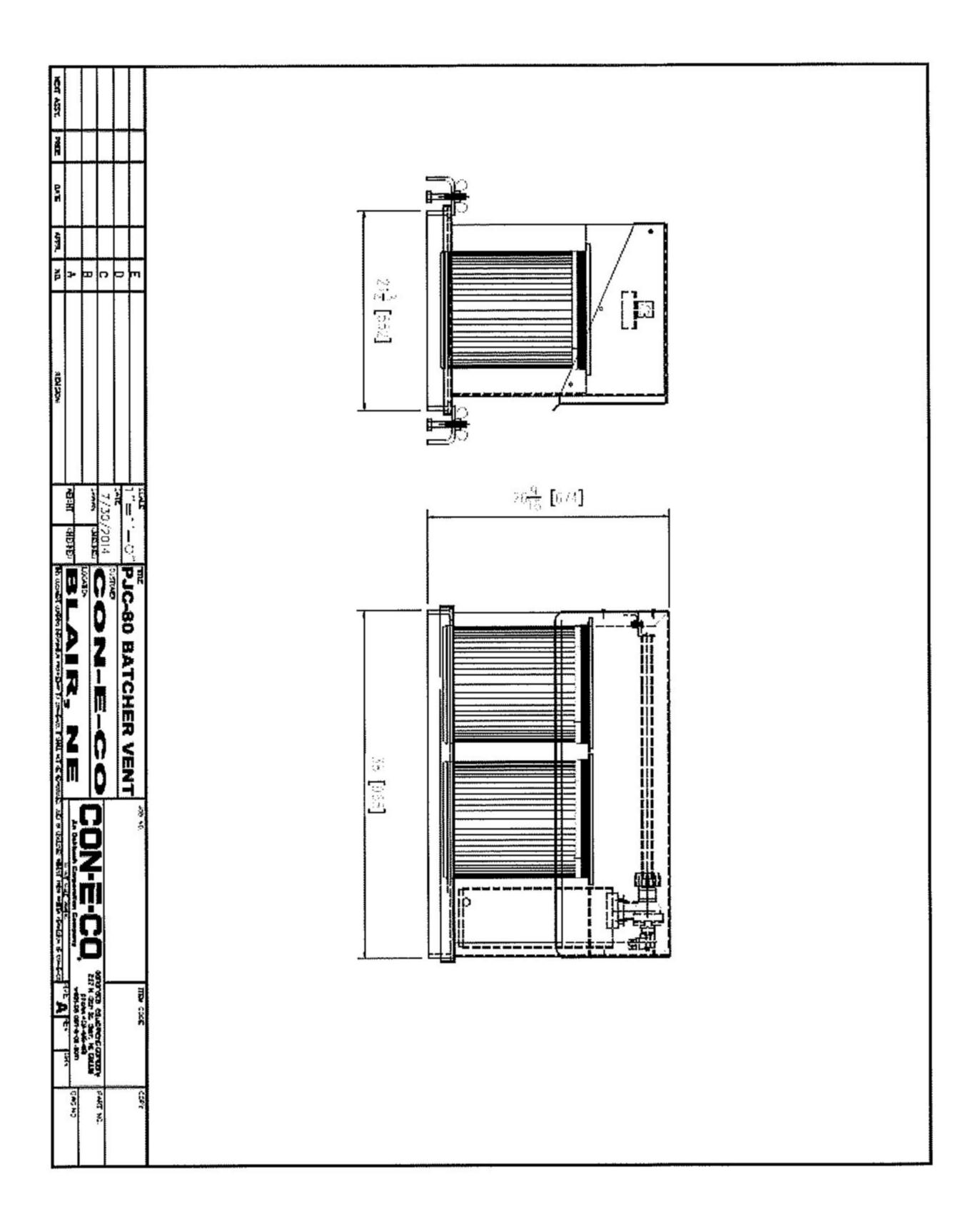
SPUNBOND POLYESTER 8 OZ / SQ. YD. WEIGHT 24 CFM/SQ FT PERMEABILITY (.5" WATER)

















ELECTRICAL REQUIREMENTS

It is very important to keep your electric utility company coordinated with your power requirements. The equipment listed below should be combined with other site loads such as area lighting, charging equipment, office HVAC, mixers, etc.

Setup for 460 Volt operation.

	Setup for	700	VOIL O	PCIG	LIVI	В н		· N. O. O. O. O. N. O.
CONCRETE BATCH PLANT Wire Size								
	ŀ	HP I	FLA	СВ	Str	Heater	Min	Normal
15	Cement 1 Feed A Cement 1 Feed B Cement Batcher Agg Incline Conv. Agg Batcher Belt L. P. Blower Air Compressor Water Pump Cust. Feed Screw Baghouse Blower Reclaim Blower Rotary Vane Feeder	20.00 20.00 20.00 20.00 15.00 5.00 15.00 40.00 15.00 6.70 0.75	32.61 27.00 27.00 27.00 27.00 21.00 6.10 21.00 21.00 52.00 21.00 8.10 1.60	60 60 60 45 15 45 90 45 20 15	#2 #2 #2 #2 #2 #2 #3 #1 #00	B40 B40 B40 B40 B32 B9.10 B32 B32 CC74.6 B32 B11.5 B2.40	8 8 8 10 14 10 10 6 10 14 14	8 8 8 8 4 10 4 6 4 8 12
	Total Connected +25% of Largest Motor Running Design Load +5 x Largest Motor Starting Design Load KVA Transf. Volt Drop= KVA Transf. Volt Drop=	192.45 40.00 5.48% 3.29%	292.41 13.00 305.41 260.00 565.41 Starting, Starting,	Starting and		yn 2.96%	Actual 243.33 450.47 when running when running	

ELECTRICAL REQUIREMENTS

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AUXILIARY DUST CONTROL Wire Size							
ł	HP	FLA	CB	Str	Heater	Min	Normal
Conveyor 1	20.00	27.0	60	#2	B40	8	8
Conveyor 2	20.00	27.0	60	#2	B40	8	8
Conveyor 3	20.00	27.0	60	#2	B40	8	8
Conveyor 4	20.00	27.0	60	#2	B40	8	8
Total Connected +25% of Largest Motor	80.00 20.00	108.00 6.75				Actual	
Running Design Load +5 x Largest Motor		114.75 135.00	Runni	ng Des	sign	91.42	KVA
Starting Design Load		249.75	Startin	g Desi	gn	198.98	KVA
113 KVA Transf. Volt Drop= 150 KVA Transf. Volt Drop=	6.45% 4.84%	•				when running when running	

GRAND TOTAL HP FLA									
Total Connected	272.45	400.41							
+25% of Largest Motor	40.00	13.00			Actual				
Running Design Load +5 x Largest Motor		413.41 260.00	Running Design		329.37	KVA			
Starting Design Load		673.41	Starting Design		536.52	KVA			
300 KVA Transf. Volt Drop= Note: This will create a	6.52% 9.79%	Starting, continuous	and s overload w/listed		when running.				
500 KVA Transf. Volt Drop=	3.91%	Starting,	and	2.40%	when running.				
600 KVA Transf. Volt Drop≍	3.26%	Starting,	and	2.00%	when running.				