

## ***PORTABLE Lo-Pro BATCHING SILO MANUAL***



Legal 8'-6" Wide Legal 13'-6" Tall Overall Length is 26'



### **Portable Lo-Pro Batching Silo**

- 800 CF. capacity (30 ton) \*\*Cement
- Low-Profile design.
- 10" screw conveyor 10cu. ft. per minute discharge capacity.
- 32HP Kohler Gas Motor.
- Loss weight batching computer.
- Cone fluidizer system with distribution tank.
- 4- speed jacks.
- Overload protection with high level alarm.
- Other options available

*\*\*Cement can weigh between 88-94 lbs. per cubic foot depending on how aerated it is.*

**Portable Lo-Pro batching silo**

The Standard DSS Low Profile Batching Silo is equipped with all the necessary equipment for operation. Electrical power to the panel and an air supply is all that is needed. The unique feature of this silo is it's low profile design. A crane is not required to set up this unit in the field.

Be sure to keep the silo as moisture free as possible. Foreign objects or hardened cement will cause the auger system to jam. Clean out holes are installed in the auger to free jammed material. If the silo is not to be used for an extended length of time it should be cleaned out completely, as not to have hardened material dislodge into the auger system upon resumption of use. The auger system is designed to start under a full load, if some problem occurs jam gates are installed at the auger inlet points so material can be shut off from the auger in emergency situations. Keep the bearings greased (do not over grease) and check the lubricant level in the gear box, as it is not to run dry. Running dry will cause major damage to power transmission unit. Keep the auger discharge free of cement build up. Remove the boot sock occasionally and free any hardened materials. Neglect causes the drive to be over worked and could cause the motor to burn out.

The silo is equipped with a belle style dust collector. Be sure to check the dust socks for excess build up of cement. . The socks need to be checked to make sure they stay on the holders and the cleanout compartment cleaned out properly. Neglect may cause damage to the dust socks or possible damage to the silo. Care of these units depends on how much they are used.

The silo is equipped with an emergency pop-off valve. If the socks or air transfer system would plug, the valve would lift up relieving the pressure. The valve is adjusted by DSS but may need further adjusting on site. **DO NOT OVERTIGHTEN.** Do not over fill the silo. Over filling of this unit could cause a hazardous situation. The air transfer system will plug and the pop-off valve may also be rendered unable to function, causing the dust collector to break loose or the top to be forced open or possibly off. **BE CAREFUL NOT TO OVERFILL**

These instructions are a guideline to setting up a Diversified Storage System 800c.f. (200Brrl) lo-profile silo.

**DO NOT FILL THE SILO WITH PRODUCT UNTILL THE SCALE HAS BEEN ENERGIZED AND CALIBRATED**

**Equipment Required:**

1. Concrete pad or suitable foundation.

**Specifications:**

The size of the silo - the 200c.f. silo weights 12,000lbs empty , it is 8'-6" wide. It is 26' in length and 13'-6" tall.

1. There are four leveling jacks, one on each corner.
2. The foundation needs to be fairly level.

**Foundation** - The silo needs a suitable foundation able to withstand the weight of the silo fully loaded, that can be up to 88,000 lbs, depending on the product. It can be a concrete foundation or compacted dirt with steel freeway plates over top. Local building codes and soil condition need to be followed when deciding on the foundation. **It is the customers responsibility to determine the proper foundation.**



Use the leveling jacks on each corner to level the silo. The silo must be level for proper accuracy of the load cells.

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### Collector Specifications

Total Filtration Area	150 Sq. Ft.
Air to Cloth Ratio (ACFM/Sq.')	2.5
Pressure Drop (in. H 2O)	6"
Air Capacity	375 C.F.M.
Outlet Area (Sq.')	.58
Cleaning Method	Shaker Plate
Vibrator (Air or Electric)	Rotary Style
Vibrator Air Consumption (High Press.)	8 CFM (Max)
Vibrator Power	120 V/ 1 ph
Duty Cycle	1.5 hours
Normal Operating Pressure	8 - 15 PSI *
Max Operating Pressure	20 PSI *
Over pressure relief settings	18 PSI *

### Filter Bag Specifications

Filter Bag Count	18 Snap hung style
Replacement Filter Bag Model #	DC150snap
Dimensions	8" OD X 48" Height
Filter Area (Per)	8.33 Sq. '
Material Weight	9 oz. / Sq. Yd.
Fiber	100% Polyester
Construction	Spun/Spun
Permeability	25 c.f.m.
Mullen Burst Dry	500 PSI
Temperature Limit	275 Deg. F.
Efficiency (PM-10)	99.99%

### Vibrator Specifications

<b>Air Vibrator</b>	Model V-190
VPM @ 60 PSI	4200
CFM @ 60 PSI	7.5 CFM
Noise @ 60 PSI	70 db
Control	Manual
<b>Electric Vibrator</b>	Model 2P-75
Voltage/amps	115v/0.5 amp
VPM	3600
Noise	60 db.
Control	Auto/Manual

### Collector Performance (PM-Reg.)\*\*

0.0 - 0.5 Micron	99.98% Passing
0.5 - 1.0 Micron	0.02 % Passing
1.0 - 20.0 Micron	0.0% Passing

\*\* Typical Portland Cement is 44 Micron

### Mounting Options

Bin Vent Mount (Silo Top)  
 Base Mount (Optional Base Needed)  
 Trailer Mount (Portable Applications)

\* This style unit does not use magnahelic gauge. Dust Collector performance is measured by back pressure at load line.





When the paddle is impeded by material, the motor rotates within the housing which triggers two switches. The first switch is a “dry” electrical contact closure that is available to control a process function or alarm circuit. The second switch cuts the power to the motor, preventing a locked rotor condition, thus extending motor life. This also activates the signaling device which is wired through that same motor switch. When the material level drops, the loaded stretched tension spring returns the motor to its original running position and the unit is reactivated.



## Maintenance

***Motor:***

See Separate Kohler gas motor manual  
.

***Dust Collector:***

The dust collector socks should get a visual inspection once a month. Check for excessive build-up on the socks. Make sure the vibrator is working. If the socks are clogged they should be replaced. The overflow compartment below the dust collector should be checked on a weekly basis and cleaned out as needed. The compartment should be no more than half full of material.

***Auger:***

Bottom bearing and lube block needs greased every 40 hours of use.  
Top bearing needs to be greased every 200 hours of use

***Filling the Silo:***

Truck filling should not exceed 10-12 PSI. **DO NOT OVERFILL!**

# PORTABLE Lo-Pro BATCHING SILO MANUAL

## Dust Collector Timer

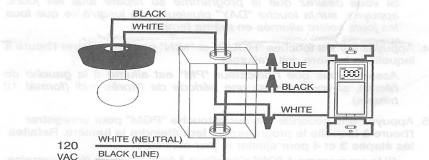


### PROGRAMMABLE WALL SWITCH MODEL T1033A - SINGLE POLE FOR LIGHTS AND MOTORS

THE MAXIMUM LOAD MUST NOT EXCEED :		
Resistive	20 A	Incandescent or halogen lighting, block heater, etc.
Inductive	20 A	Ballast equipped installations as : fluorescent or sodium lamp, etc.
Motor	1 HP	Pool filter, fan, etc.
Under 120 VAC / 60Hz		

#### INSTALLATION

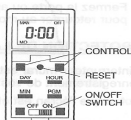
##### WIRING DIAGRAM



- 1 - Turn off the power at the circuit breaker to avoid electrical shock.
- 2 - Remove and disconnect the existing switch.
- 3 - Connect each wall switch lead to each circuit conductor as shown in above diagram.
- 4 - Restore power at circuit breaker.

#### POWER-ON

1. Lift up the bottom of the door using a small screwdriver.
2. Ensure that the ON/OFF switch is set to ON.
3. Press on the "RESET" button using a paper clip. On the display, 0:00 and MO should flash.



If there is nothing on the screen, test the following points :

- a) Maybe the ON/OFF switch located at lower part of the unit is not properly engaged in ON position. Push it to the right using a small screwdriver.
- b) If the wall switch controls a lamp equipped with an On/Off switch, care must be taken to keep the lamp switch in ON position.

#### SETTING TIME AND DAY

Before starting programming, you have to set the hour format (12 hour & 24 hour). You can change the time format anytime from 24 hrs. to 12 hrs. and back. To do so, maintain MIN key press down as HOUR key is pressed and released. Then, release MIN key.

1. Set the day by using the DAY key. If the current day is Tuesday, press and release DAY key until TU indicator appears on the lower area of the screen.
2. Set the time by using the HOUR and MIN keys. For the 12 hour time format, if you are setting an afternoon or evening time, make sure that the PM indicator is turned on at left side of the screen.
3. Close the door or press on one of the "CONTROL" keys to return to normal operation.

#### OPERATING MODES

The wall switch has 2 operating modes : the MANual and AUTOMatic modes.

In the MANual mode, the wall switch is like any normal single pole switch. By pressing on the door, the user turns on and turns off the light. The display shows the MAN indicator as well as light state (ON or OFF).

The AUTOMatic mode executes in sequence (hourly) the user's recorded programs. To place the wall switch in this mode, press on the door for 3 seconds until AUTO appears on the screen. The display shows the active program number and the light state (ON or OFF).

To override temporarily the programming, press on the MODE button. The overridden state indicator will flash to show that this state is temporary. The override remains in effect until overridden again or until the next program is reached.

#### RECORDING THE PROGRAMS

The memory of this wall switch can hold up to 7 programs. Each program consists of a time ON (turn on) and a time OFF (turn off) which can be run for a single day or for everyday of the week.

**ATTENTION : Both ON and OFF programming sequences must be recorded.**

1. Open the door of the wall switch using a small screwdriver.
2. Press on the PGM key.

*The display will show the number 1 (program 1) on the lower right corner and the program state (ON/OFF) on the upper right corner. Note that the clock is replaced by -- : -- showing that the selected program is not activated.*

3. Press on the DAY key to select the day to which you want the light to turn on.

*If you want the program to be repeated each day of the week, keep pressing on DAY several times until every day of the week appears on the screen.*

4. Press on the HOUR and MIN keys to set the time to which you want the light to turn on.

*Make sure that PM indicator appears on the screen if you want an afternoon period (12 hour time format).*

5. Press a second time on PGM key to set the time for the light to turn off. Repeat steps 3 and 4 to set the time.

*If the program 1 ON is set for every day of the week, the program 1 OFF will automatically be set for every day.*

6. To enter programs 2 to 7, repeat steps 2 to 5.

*If you need only one program, just leave the others inactive. If you want to erase a program, select it by using the PGM key and then hold PGM key for 3 seconds. The program will be erased when the display will show -- : --.*

7. Close the door or press on one of the "control" keys to return to normal operation.

#### MEMORY BACKUP

This wall switch is equipped with a rechargeable battery which will protect your programs during a power shut down.

Note that the screen blanks during a power failure.

#### CHARACTERISTICS

Model : T1033A- SINGLE POLE  
 Supply : 120 VAC, 50 / 60 Hz  
 Load : 2400 watts resistive or inductive, 1 HP motor  
 Approvals : CSA & UL  
 Storage temperature range : -20 °C to 50 °C  
 Operating temperature range : 0 °C to 50 °C

#### WARRANTY

##### AUBE TECHNOLOGIES INC. ONE YEAR LIMITED WARRANTY

This product is warranted against material defects and workmanship in normal use for a period of one year, from the date of the original purchase from authorized dealers. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage.

This limited warranty is in lieu of all other warranties, obligations or liabilities expressed or implied by the company. In no event shall AUBE technologies inc. be liable for consequential or incidental damages resulting from installation of this product. Within this period, any product proven defective in normal use will be repaired or replaced, at AUBE's option, without charge for either parts or labour, provided that the defective product with the original sale receipt is returned to the original dealer or is shipped pre-paid, insured and addressed to :

AUBE technologies Inc., 705 Montrichard, Saint-Jean-sur-Richelieu, (Quebec), Canada, J2X 5K8

Fax: (450) 358-4650  
 service@aubetech.com  
 www.aubetech.com

If you have any questions concerning the installation or the programming of the wall switch, please call our technical assistance at (450) 358-4600 for the Montreal area or 1-800-831-AUBE for outside area between 8:30 AM and 5:00 PM, Monday to Friday.

09/16/05 400-033-001-B

### **Auger Details**

The 200LP is equipped with a 32HP Kohler Gas Motor and has a hydraulic drive.

The gas motor drives the hydraulic motor-the system has a chain drive to the auger.

80-18-2 drive sprocket

80-24-2 auger sprocket.

80 Chain

**\*\*Sprocket sizes vary depending on application.**



## **PORTABLE Lo-Pro BATCHING SILO MANUAL**



Scale Controller:

Power On/Off Switch

Indicator On/ Off Switch



### **Hand Held Remote:**

1. Push **BLACK** button is to start motor, Turn on scale head by flipping the **Power** switch to on.
2. Push **RED** button to turn off motor.
3. Push **GREEN** button to start batch.
4. Push **BLUE** button to pause batch.
5. Push **YELLOW** button to jog auger.

## **Low Pro Silo 200-S**

("Low Pro Silo 200-S" has 800 c.f. capacity)

# **Operating Instructions for silo with Rindstrom 411**

**First make sure scale head is reading zero, If not press tare.**

## **To Run Discharge Auger Manually:**

Turn **Hand/Off/Auto** (HOA) switch on panel to **Hand** position.

## **Checking Gross Weight in Hopper:**

Press and hold **TARE** button on scale until the weight is displayed "**Gross Indicator light on**".  
("Gross" is the weight of the product in the hopper.)

## **Setting Batch Weight:**

Press **TARGET** button, (displays previous weight.)

Press **OK** button to keep weight, or

Key in new batch weight (i.e. 400), then press **OK**, (displays new batch weight)

Press **OK**.

## **Starting Batch Cycle:**

### **Auto Mode:**

Turn **Hand/Off/Auto** (HOA) switch on panel to **Auto** position.

### **At the Scale:**

**Start Batch Cycle** - Press **START BUTTON**

(Note: there must be product in the hopper to start batch)

**Pause Batch Cycle** - Press **STOP** Button.

(To restart and finish batch cycle press **START** again, auger will stop at the end of the batch)

**Abort Batch Cycle** - Press **STOP** while auger is in the "**Stop Mode**" press **STOP** again to confirm.

## **Silo High Level Alarm:**

Silo will hold approximately 63,000 lbs. gross weight of cement. (Lighter weight materials, the silo gross weight capacity will be less.)

If the silo becomes full, the **RED HIGH LEVEL LIGHT** and horn will turn on. If high level horn goes on, press the **GREEN HIGH LEVEL RESET BUTTON** on silo panel. This will shut off the horn. Have the truck driver stop until there is enough room to hold the rest of the load. If silo is full the **RED HIGH LEVEL LIGHT** will stay on.

**Note:** Check baghouse often to prevent overfilling and damage to filters. Replacement filters can be purchased from DSS (805) 247-0418 ex 25.

### Motor Controls

This silo is equipped with a 32HP Kohler Gas Motor with Electric Start.  
The system has a Hydraulic drive with a flow control valve.

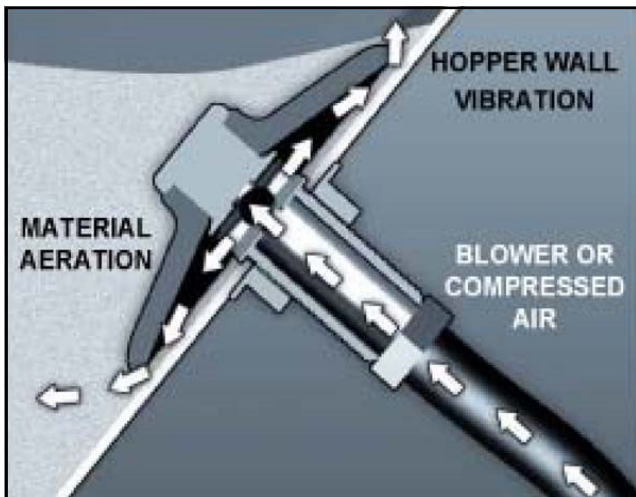
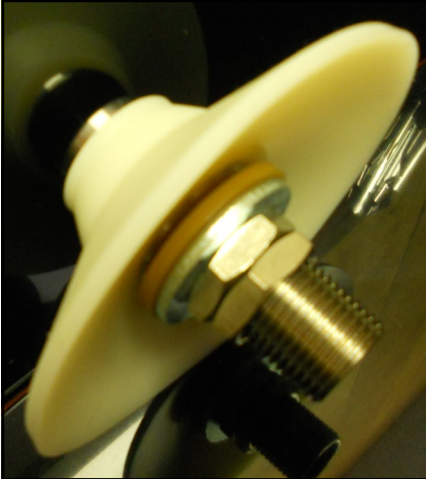
To operate:

Turn the ignition key to on, First Click  
set your throttle lever to half. Start the  
motor using the remote button

The Hydraulic flow control valve can be  
used to speed up or slow down the auger.  
**WE DO NOT RECOMMEND YOU  
CHANGE IT ONLY MOVE THE LEV-  
ER 1 NOTCH AT A TIME.**



## **PORTABLE Lo-Pro BATCHING SILO MANUAL**



**Aeration**—loosens product allowing it to flow – minimum back pressure puts energy where it is needed the most – in the silo.

**Directional Air Flow** – forces air to move along the bin wall, freeing product, assuring good clean-out.

**Gentle Vibration** – keeps product flowing, without allowing it to compact or plug.

**No Airline plugging**— Disk seals tightly against the silo wall and prevents airline plugging.

**Robust Design** — Will not tear if cut, pick up moisture and is unaffected by temperatures up to 350° F (170° C) and up to 120 psi.

**Material Compatible**— Silicone rubber standard in blue or white (both food grade/FDA approved), or black or white EPDM.

### BinFlow Specifications

Disk	4" Silicone Rubber
Stem	Stainless Steel
Air Feed Fittings	1/4" or 1/2" NPT
Installation Hole	7/8"
Length of Stem	1 5/8"
Airline Options	3/8" - 1/2"
Capacity	10—20 CFM @ 20—30 PSI

### BinFlo Applications

Silos, Bins, Hoppers, Rail Cars, Bulk Trailers

### BinFlow Performance

Spacing Influence @ 20 PSI	24" from Each
Spacing Influence @ 30 PSI	36" from Each
Max PSI	120 PSI



## **PORTABLE Lo-Pro BATCHING SILO MANUAL**

### **Parts List**

#### **Gas Drive**

32HP Kohler gas motor  
 80BS24- x 2" Sprocket  
 80BS18 x 2"  
 #80 Chain  
 9" x 17' -0 Auger RH Flighting  
 2" x 12 1/2" Tail Shaft  
 Bearing pack - 2" 4 bolt  
 UHMW Block  
 Grease block 2"  
 Chain Tensioner

M-32-KH-G  
 DP-S-8024-2  
 DP-S-80182  
 DP-CH-80  
 DPAU1017R  
 DPAU112TS  
 DPB2  
 DPB2U  
 BPB25B  
 DPTSTE5

#### **150sq. ft Dust Collector**

Electric Vibrator 2p75  
 8" x 48" Polyester Sock (18) D-741-s

V110  
 FLBG-2

#### **Additional Parts**

OLI VBI Fluidizer (12)  
 Monitor High Level Indicator KA 115-12  
 Foam Seal on 20" manway (top)  
 Foam Seal on Pressure relief valve  
 UHMW Block on Jam Gate  
 Rindstrom Scale  
 Load Cell

FU-VBI  
 EL-IND-12V  
 SP3-5  
 SP-50  
 WAM-UH  
 SC-RN411  
 SC30

#### **Electrical Parts**

Silo Serial # \_\_\_\_\_

Your parts may vary from above, Please have silo serial # available when ordering parts

**Parts can be ordered through DSS at (888) 745-6797**