

1500 SuperSax Silo Operating Manual



Silo Specifications

Silo Weight (empty)	4,500 Lbs.
Silo Size	170 Cubic Feet
Silo Capacity	15,000 Lbs. (7 1/2 tons)
Dimensions	9'H X 8'-6"W X 14' L
Discharge Height	5' to 8'
Conveyor Type	7" Screw Conveyor
Conveyor Drive	Chain drive
Power	10hp 480v elec. motor
Control Power	12V DC
Scale Type	Electronic Load Cell (4)
Scale Controller	Rinstrum 411
Batch Software	Loss-weight (DSS)

Silo Description

SupersaX silo system is a portable self-contained silo designed to store dry bulk products (cement) to be used on job sites or in plant applications. The design has many features that make the **SupersaX** silo system a must need in applications where semi-bulk or super sacked products are used. The silo can store up to 15,000 Lbs. of bulk product to be metered out using our exclusive loss-weight batching system. This allows the operator the precise control for batching product into a mixer or a process. The silo has adjustable legs to allow for ease of transport and proper discharge height under the conveyor. Filling the silo is done by using a forklift to lift the product over hatches on top of the silo. These hatches are designed for quick access and water tight to prevent moisture contamination. The silo has a work platform to allow operator safe access to the top of the silo to assist with bag loading.



Suersack 1500E

("Supersack 1500 has 170c.f. capacity)

Operating Instructions for silo with Rindstrom 411

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

To Run Discharge Auger Manually:

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

Checking Gross Weight in Hopper:

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

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

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

Press **ENTER**.

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.

Suersack 1500E

("Supersack 1500 has 170c.f. capacity)

Operating Instructions

To Run Discharge Auger Manually:

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

Running the Vibrator:

The vibrator is interlocked with the auger, it will only run if the auger is running.

Once the auger is on and running switch the vibrator to ON.

The timer in the panel will then cycle the vibrator ON/OFF

Maintenance Motor

Table 3-2 Service Conditions

Severity of Service	Hours per day of Operation	Ambient Temperature Maximum	Atmospheric Contamination
Standard	8	40° C	Clean, Little Corrosion
Severe	16 Plus	50° C	Moderate dirt, Corrosion
Extreme	16 Plus	>50° C* or Class H Insulation	Severe dirt, Abrasive dust, Corrosion, Heavy Shock or Vibration
Low Temperature		<-30° C **	

* Special high temperature grease is recommended (Dow Corning DC44). Note that Dow Corning DC44 grease does not mix with other grease types. Thoroughly clean bearing & cavity before adding grease.

** Special low temperature grease is recommended (Aeroshell 7).

Table 3-3 Lubrication Interval Multiplier

Severity of Service	Multiplier
Standard	1.0
Severe	0.5
Extreme	0.1
Low Temperature	1.0

Table 3-4 Bearings Sizes and Types

Frame Size NEMA (IEC)	Bearing Description (These are the "Large" bearings (Shaft End) in each frame size)					
	Bearing	OD D mm	Width B mm	Weight of Grease to add * oz (Grams)	Volume of grease to be added	
					in ³	tea- spoon
56 to 180 incl. (63 to 112)	6206	62	16	0.19 (5.0)	0.3	1.0
210 incl. (132)	6307	80	21	0.30 (8.4)	0.6	2.0
Over 210 to 280 incl. (180)	6311	120	29	0.61 (17)	1.2	3.9
Over 280 to 360 incl. (225)	6313	140	33	0.81 (23)	1.5	5.2
Over 360 to 449 incl. (280)	6319	200	45	2.12 (60)	4.1	13.4
Over 5000 to 5800 incl. (355)	6328	300	62	4.70 (130)	9.2	30.0
Over 360 to 449 incl. (280)	NU319	200	45	2.12 (60)	4.1	13.4
Over 5000 to 5800 incl. (355)	NU328	300	62	4.70 (130)	9.2	30.0
Spindle Motors						
76 Frame	6207	72	17	0.22 (6.1)	0.44	1.4
77 Frame	6210	90	20	0.32 (9.0)	0.64	2.1
80 Frame	6213	120	23	0.49 (14.0)	0.99	3.3

* Weight in grams = .005 DB

Note: Not all bearing sizes are listed. For intermediate bearing sizes, use the grease volume for the next larger size bearing.

Maintenance Motor

Lubrication Procedure

Be sure that the grease you are adding to the motor is compatible with the grease already in the motor. Consult your Baldor distributor or an authorized service center if a grease other than the recommended type is to be used.

Caution: To avoid damage to motor bearings, grease must be kept free of dirt. For an extremely dirty environment, contact your Baldor distributor or an authorized Baldor Service Center for additional information.

With Grease Outlet Plug

1. With the motor stopped, clean all grease fittings.
2. Remove grease outlet plug.

Caution: Overgreasing can cause excessive bearing temperatures, premature lubrication breakdown and bearing failure.

3. Add the recommended amount of grease.
4. Operate the motor for 15 minutes with grease plug removed. This allows excess grease to purge.
5. Re-install grease outlet plug.

Without Grease Provisions

Note: Only a Baldor authorized and UL or CSA certified service center can disassemble a UL/CSA listed explosion proof motor to maintain it's UL/CSA listing.

1. Disassemble the motor.
2. Add recommended amount of grease to bearing and bearing cavity. (Bearing should be about 1/3 full of grease and outboard bearing cavity should be about 1/2 full of grease.)
3. Assemble the motor.

Sample Lubrication Determination

Assume - NEMA 286T (IEC 180), 1750 RPM motor driving an exhaust fan in an ambient temperature of 43° C and the atmosphere is moderately corrosive.

1. Table 3-1 list 9500 hours for standard conditions.
2. Table 3-2 classifies severity of service as "Severe".
3. Table 3-3 lists a multiplier value of 0.5 for Severe conditions.
4. Table 3-4 shows that 1.2 in³ or 3.9 teaspoon of grease is to be added.

Note: Smaller bearings in size category may require reduced amounts of grease.

Maintenance Motor

Section 3 Maintenance & Troubleshooting

WARNING: UL rated motors must only be serviced by authorized Baldor Service Centers if these motors are to be returned to a flammable and/or explosive atmosphere.

General Inspection

Inspect the motor at regular intervals, approximately every 500 hours of operation or every 3 months, whichever occurs first. Keep the motor clean and the ventilation openings clear. The following steps should be performed at each inspection:

WARNING: Do not touch electrical connections before you first ensure that power has been disconnected. Electrical shock can cause serious or fatal injury. Only qualified personnel should attempt the installation, operation and maintenance of this equipment.

1. Check that the motor is clean. Check that the interior and exterior of the motor is free of dirt, oil, grease, water, etc. Oily vapor, paper pulp, textile lint, etc. can accumulate and block motor ventilation. If the motor is not properly ventilated, overheating can occur and cause early motor failure.
2. Use a "Megger" periodically to ensure that the integrity of the winding insulation has been maintained. Record the Megger readings. Immediately investigate any significant drop in insulation resistance.
3. Check all electrical connectors to be sure that they are tight.

Lubrication & Bearings

Bearing grease will lose its lubricating ability over time, not suddenly. The lubricating ability of a grease (over time) depends primarily on the type of grease, the size of the bearing, the speed at which the bearing operates and the severity of the operating conditions. Good results can be obtained if the following recommendations are used in your maintenance program.

Type of Grease

A high grade ball or roller bearing grease should be used. Recommended grease for standard service conditions is Polyrex EM (Exxon Mobil).

Equivalent and compatible greases include:
 Texaco Polystar, Rykon Premium #2, Pennzoil Pen 2 Lube and Chevron SRI.

- Maximum operating temperature for standard motors = 110° C.
- Shut-down temperature in case of a malfunction = 115° C.

Lubrication Intervals

Recommended lubrication intervals are shown in Table 3-1. It is important to realize that the recommended intervals of Table 3-1 are based on average use.

Refer to additional information contained in Tables 3-2 and 3-3.

Table 3-1 Lubrication Intervals *

NEMA / (IEC) Frame Size	Rated Speed - RPM					
	10000	6000	3600	1800	1200	900
Up to 210 incl. (132)	**	2700 Hrs.	5500 Hrs.	12000 Hrs.	18000 Hrs.	22000 Hrs.
Over 210 to 280 incl. (180)		**	3600 Hrs.	9500 Hrs.	15000 Hrs.	18000 Hrs.
Over 280 to 360 incl. (225)			* 2200 Hrs.	7400 Hrs.	12000 Hrs.	15000 Hrs.
Over 360 to 5800 incl. (300)			* 2200 Hrs.	3500 Hrs.	7400 Hrs.	10500 Hrs.

* Lubrication intervals are for ball bearings. For vertically mounted motors and roller bearings, divide the lubrication interval by 2.

** For motors operating in this speed range, contact Baldor for lubrication recommendations based on specific motor and application.



DIVERSIFIED STORAGE SYSTEMS

(888) SILO-SYS (888) 745-6797

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PARTS LIST

Ln #	Qty	DSS Part #	Description
1	1	VAF4	20" manway
2	1	VA3-6	3" Gate valve
3	4	ML-100 4K	4K Single-Ended Shear Beam Nickel Plated Tool Steel
4	1	SC20	Jun Box W/ Sum Card Stainless
5	1	ELRL-3	Relay DC
6	1	ELTS-4	10 pos #8 Terminal strip
7	1	ELF-3	In line ATO Fuse Holder
11	1	EL22-7	Start Stop Switch, momentary, 1black, 1red, 1no, 1nc,
12	1	DPAU5	7" x 10' auger for super sax
13	1	DPSP18	BS 18 1 3/8" sprocket
14	1	DPSP24	BS 24 1 1/2" sprocket
15	1	ELM 5	480v 5 HP TEFC motor
16	1	GB5	Baldor 5hp gear reduction
17	6	DPCH60	#60 drive Chain
18	1	ELPN 2	NEMA 3r #2 Pump Panel
19	1	ELTR	350va transformer 480v-120v
20			

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