DIVERSIFIED STORAGE SYSTEMS
(888) SILO-SYS (888) 745-6797

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	Hydraulic
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 simi-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 moister contamination. The silo has a work platform to allow operator safe access to the top of the silo to assist with bag loading.

1135 E. Wooley Rd. Ph # 805-247-0418
Oxnard CA, 93030 Fax # 805-247-0246

www.CementSilos.com

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 **TARGET** 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.

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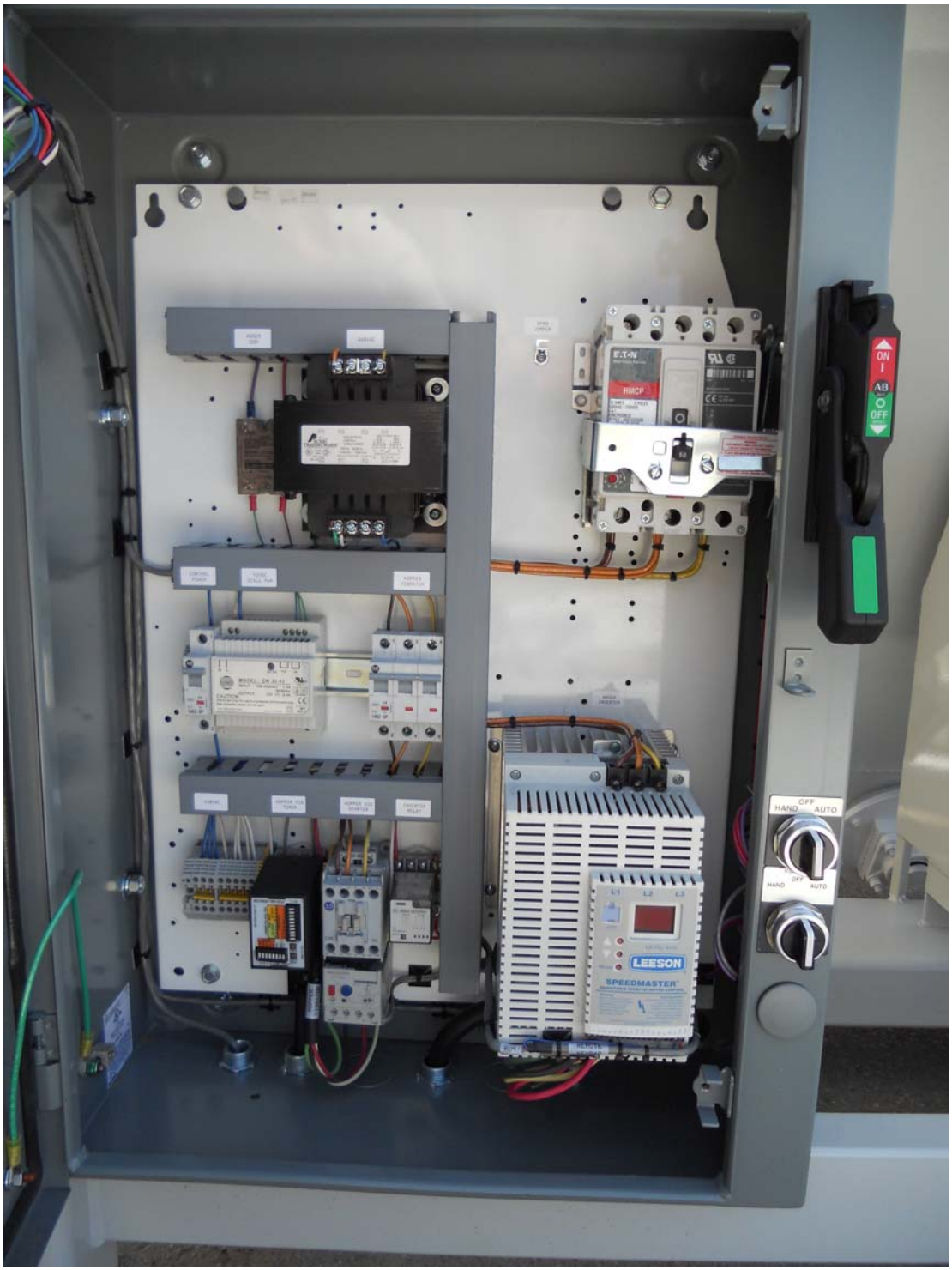

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Variable Speed Control Instruction

This silo is equipped with a Leeson variable speed drive.

To operate and change the drive speeds follow the below instructions.

To operate:

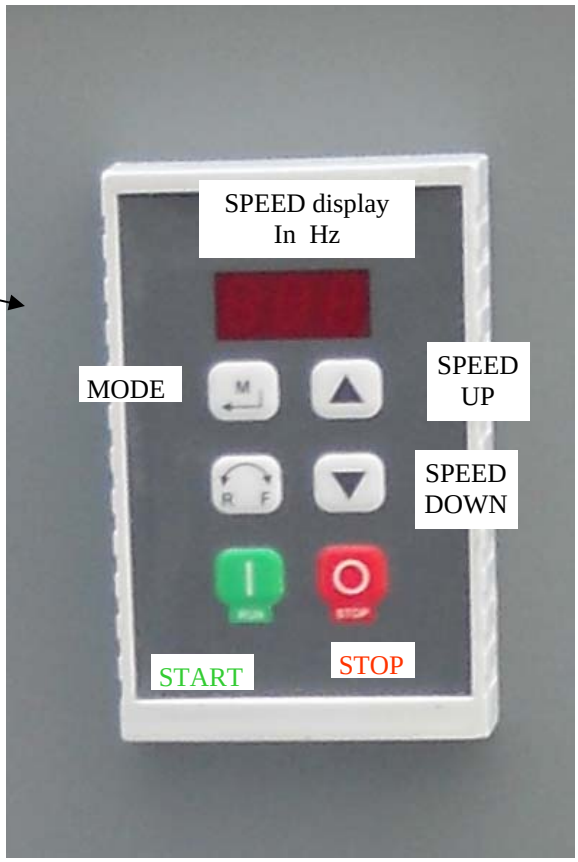
Auger switch on electrical panel is in the hand position.

Then use the remote
To START/STOP.

To change speed (Hz) use the UP/DOWN arrows.

The mode button is for programming and should not be touched.

The R/F button is disabled.



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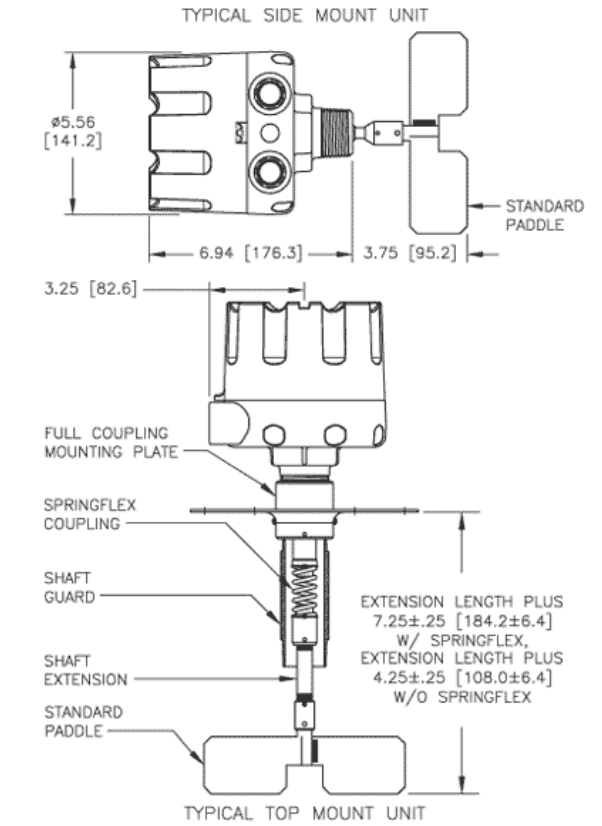
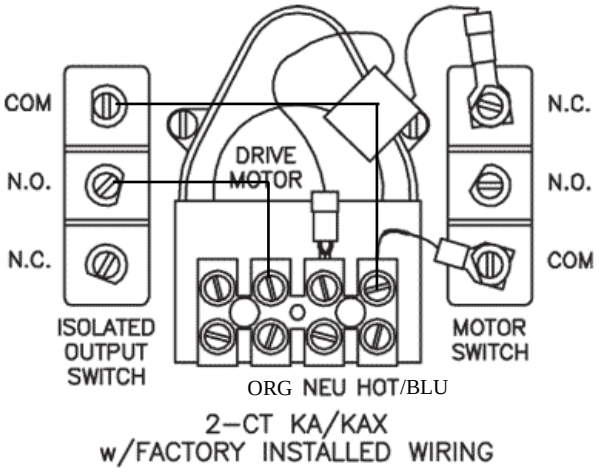
High Level Indicator

Monitor's line of rotary paddle bin monitors consists of the most reliable, rugged and economical point level control sensors available for detection of dry bulk materials. These easy to install units are proven performers in a wide variety of bulk materials. Monitor's paddle units can be used to eliminate bin overflow, maintain a predetermined material level, indicate plugging of conveyors and pneumatic lines or provide any of a number of level control functions. Unlike many other available paddle units, Monitor's paddle level indicators incorporate a feature that automatically shuts off the motor of the unit when the paddle is in a stalled position, which both extends the life of the motor and minimizes maintenance.

The operation of Monitor's paddle level control products is quite simple. The unit is installed through the wall of the vessel, so that the paddle protrudes inside the vessel. A small electric motor drives a paddle which rotates freely in the absence of material.

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

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 in^3 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 *

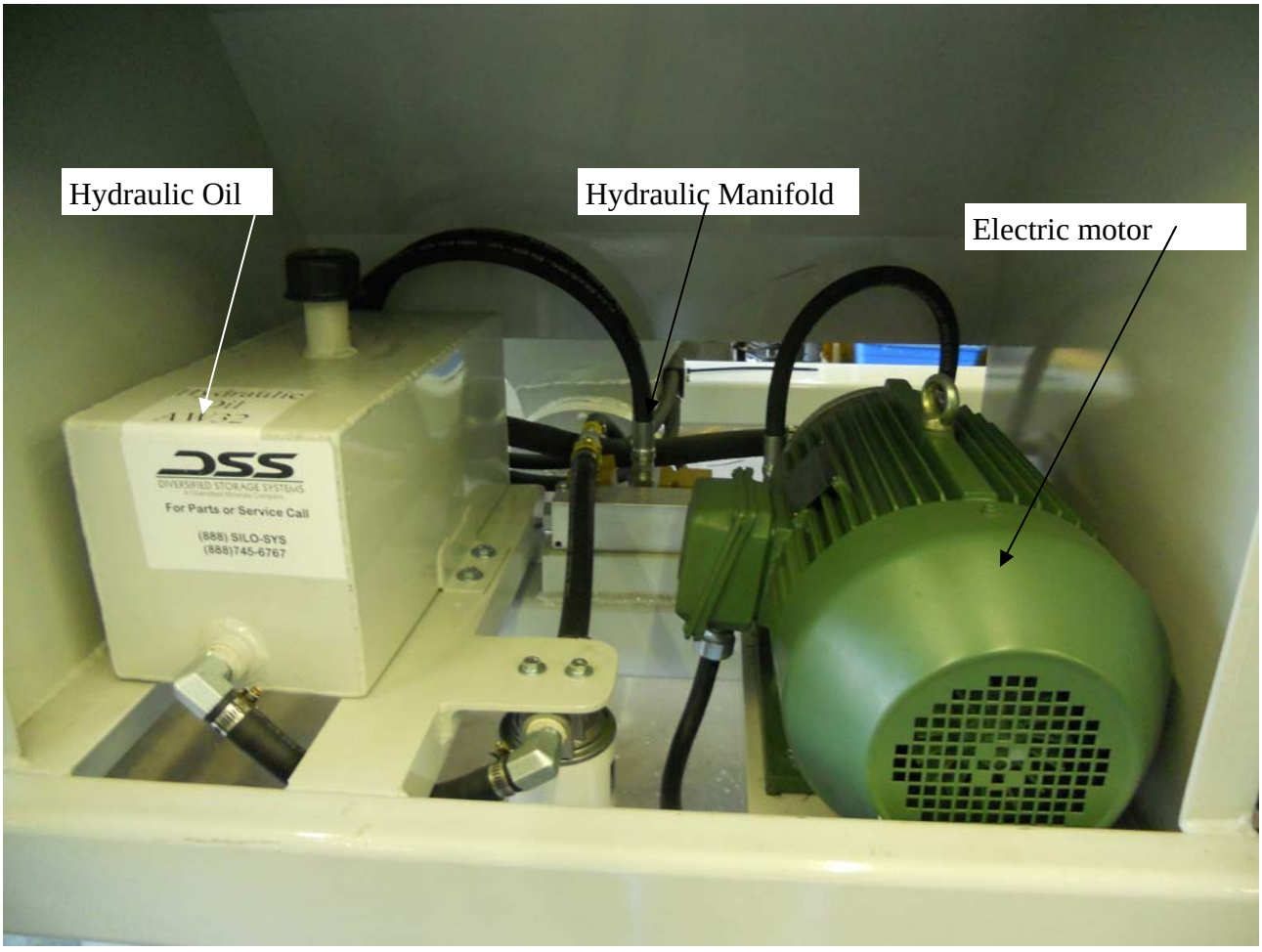
NEMA / (IEC) Frame Size	Rated Speed - RPM					
	10000	6000	3600	1800	1200	900
Up to 210 incl. (132)	**	2700 Hrs.	5500 Hrs.	12000 Hrs.	18000 Hrs.	22000 Hrs.
Over 210 to 280 incl. (180)		**	3600 Hrs.	9500 Hrs.	15000 Hrs.	18000 Hrs.
Over 280 to 360 incl. (225)			* 2200 Hrs.	7400 Hrs.	12000 Hrs.	15000 Hrs.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

Daily Checks:
1. Hydraulic Oil
2. Hose

Weekly Service:
1. Check over lines and fittings.



Service
1. Change Hydraulic Oil ever 500 Hours (Hydraulic Oil: AW-32)
2. Check hydraulic filter change with oil

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	DPCO	5016 coupling chain
14	1	DPCO1	5016 - 1" chain coupling sprocket
15	1	DPCO112	5016 - 1 1/2" chain coupling sprocket
16	1	HY1	Housing
17	1	HY10	253T-8-8 Brass fitting
18	2	HY11	2111-08-08-B
19	1	HY13	10 HP Engine Bracket
20	1	HY15	2 Bolt flange Char-Lynn
21	1	HY17	5 gal Reservoir
22	1	HY2	Pump for 10HP SS
23	1	HY20	Hose set assembly for SS One complete set
24	1	HY22	Long Element Filter
25	1	HY23	Spider
26	1	HY24	1" Love Joy Coupling
27	1	HY25	4" Love Joy Coupling
28	1	HY27	Relief Valve
29	1	HY29	Solenoid Valve
30	1	HY3	8.25 Gal Gas Tank with gauge
31	4	HY30	weld on 1/2" Pipe clamp
32	1	HY32	3/4" Filter Head
33	1	HY4	Header Block
34	1	HY6	6400-08-12-0 Adapter
35	1	HY7	6801-08-08-NWO
36	2	HY8	3474-NWO-08-08 Adapter
37	1	HY9	6804-08-08-08-NWO Adapter
38	38	1	OIL1 10W30 Motor Oil

PARTS LIST

Ln #	Qty	DSS Part #	Description
42	5	SC2	4 Conductor Load Cell Cable
43	1	SC-R411	Rinstrum 411 Scale Indicator,
44	1	DPM10	10 HP 480v motor T215
45	1	ELPN-3	10" x 8" metal backing for box
46	1	ELPN1214P	14" x 12" back panel
47	1	ELPN1214SW	14" x 12" box swing panel kit
48	1	ELPN14128W	14" x 12" x 8" window panel box
50	1	HY41	Coil for solinoid
58	4	FI112-WC	1 1/2" cap weld
59	2	HCQ8	2-10" clamps Bag House Quick Release
60	1	ELP-52	Blue lighted toggle switch 12volt
61	10	OIL3	Hydraulic Oil