SAFETY
INSTALLATION
OPERATION
MAINTENANCE



MANUAL

Distributor

Revision C
Revised 2016-01-12

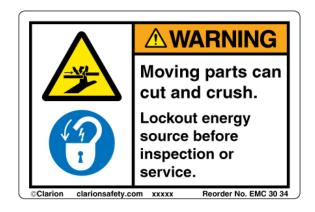
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I. Safety Information





SAFETY FIRST! The symbols shown above identify examples of the safety labels and signs to be found on Intersystems equipment. They are affixed to the equipment to warn of danger to persons and of possible equipment damage. These signs must never be removed, tampered with, painted over or obscured in any way. (See Page 4 for label locations). If labels are damaged or become unreadable, replacement labels are available from Intersystems. User must institute a continuing program to instruct all personnel in safe operating and maintenance procedures and to insure that all safety devices, guards, and covers are intact and operable and that all safety signs are legible.

DO NOT exceed the distributor's rating. A certified drawing or drawings furnished with the distributor gives its capacity in BPH (Bushels Per Hour). The drawing also specifies the encoder wiring diagram and operating speed of the spout and other pertinent data. Consult Intersystems before making any changes to the distributor or its operating environment; in particular, any change in the speed of the distributor drive. **CARELESS CHANGES COULD RESULT IN DEATH OR SERIOUS INJURY TO PEOPLE, AND/OR REDUCE THE PERFORMANCE AND SERVICE LIFE OF THE EQUIPMENT.**

NEVER PERFORM ANY SERVICE ON THIS DISTRIBUTOR OR ANY OTHER POWERED EQUIPMENT UNTIL ALL POWER HAS BEEN SHUT OFF AND LOCKED OUT SO THAT IT CANNOT BE RESTORED WITHOUT THE CONSENT AND KNOWLEDGE OF THE PERSON WHO INTERRUPTED POWER. Power includes electrical, fluid, mechanical (cable, belt, chain, shaft, etc.), or gravity where the load or part of the equipment is suspended. FAILURE TO OBSERVE ALL SAFETY PRECAUTIONS, INCLUDING THOSE DICTATED BY ORDINARY COMMON SENSE, CAN RESULT IN DEATH OR SERIOUS INJURY TO PERSONNEL, LOSS OF PRODUCT (distributed material), AND DAMAGE OR DESTRUCTION OF THE EQUIPMENT!

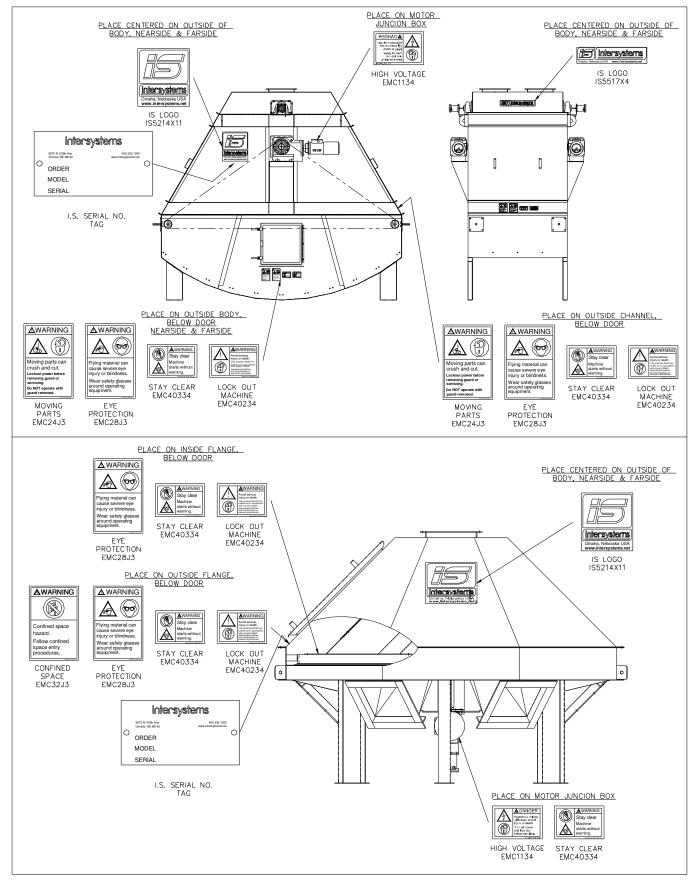


Figure 1-2, Safety Label Location

II. Installation & Startup

NOTICE

Thoroughly read Section I, regarding safety information before beginning installation and startup.

2.1 Receiving Inspection

Carefully inspect the shipment for damage as soon as it is received. Verify that the quantity of parts or packages actually received corresponds to the quantity shown on the packing slip. Report any damage or shortage to the delivering carrier as soon as possible. Intersystems' responsibility for damage to the equipment ended with acceptance by the delivering carrier. Refer to the bill of lading. Save all paperwork and documentation furnished with any of the distributor components.

2.2 Pre-installation Preparation

Before starting distributor installation, review this manual, the certified drawing(s) furnished with the equipment, and other applicable documents, including but not limited to, OSHA Regulations and the National Electrical Code.

Intersystems Distributors are designed to be supported at the support gussets. The distributor has not been designed to support other equipment such as cleaners, other distributors, spouting, etc. Separate structures must be provided for any accessory equipment.

Intersystems is the vendor of the distributor and certain of its optional accessories only, and does not assume responsibility for the installation. The installation recommendations contained within this manual are for consideration only. The user or installer will want to consult a civil or structural engineer regarding the design, construction, and supervision of the entire installation, including the support foundation and/or bracing system. The **MOST IMPORTANT** preparations are retaining a licensed engineer to plan the installation and a qualified millwright or contractor to mount the distributor and the accompanying equipment and structures.

2.2.1 Distributor Mounting

In the process of leveling the distributor, Intersystems recommends welding the distributor around its perimeter and at its lifting points before the connected spouts are in place and tightened.



INCORRECT ATTACHMENT OF LIFTING CABLES TO DISTRIBUTOR OR BRACING FROM AN ADJOINING STRUCTURE WILL RESULT IN SUPPORT FAILURE, COLLAPSE OF THE DISTRIBUTOR AND DEATH OR SEVERE INJURY TO ANYONE IN THE AREA. ATTACH ONLY AT DISTRIBUTOR SUPPORT/LIFTING POINTS.

NEVER attach any bracing directly to the sheet metal body. Sheet metal lacks the necessary stiffness and thickness for sound structural joints.

The engineer or contractor supervising distributor installation is ultimately responsible for determining suitable guying and/or bracing methods and materials.

2.2.2 Distributor Intake

The elevator discharge, spout, chute, screw conveyor, etc., that feeds material into the distributor MUST enter the inlet tube at a minimum angle of 45° from horizontal plane. This is to insure even distribution of material throughout the internal spout and to prevent clogging the inlet. A vertical section above the inlet equal to 1.5 X THE INLET DIAMETER HELPS THE MATERIAL FORM A VERTICAL FLOW AND MUST BE INSTALLED ATOP THE DISTRIBUTOR INLET. (e.g. 14" diameter inlet requires at least 21" of vertical flow). Without the vertical section installed, it will be difficult to achieve sufficient distribution of material to all distributor outlets.

DO NOT REST any spouting on top of the distributor intake as this may cause damage to the distributor and/or interfere with its functionality.

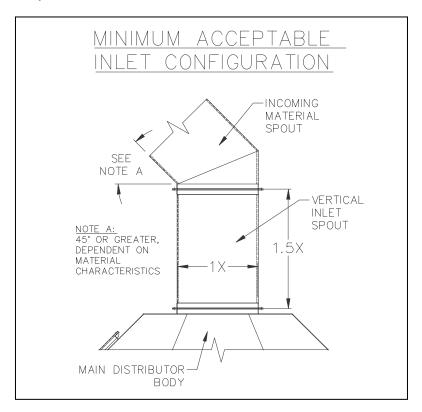


Figure 2-1, Minimum Acceptable Inlet Configuration

In nearly all installations, material enters the inlet tube at an angle. An inlet tube is to be attached to the distributor to allow material to enter from a more vertical direction. Grain will not flow through the distributor as designed if it is being fed at an angle.

2.2.3 Distributor Discharge

- A. Spouting to carry off the material must be sized so that its capacity equals or exceeds the maximum capacity of the distributor to prevent material plugging in the inner spout or in the incoming spout.
- B. The distributor IS NOT designed to support the weight of any accessory equipment. Spouting, cleaners, valves, etc. must have their own supporting structures.

2.2.4.1 Motor for Round Distributors

The motor used on round, or horizontally rotating, distributors is an INVERTER DUTY MOTOR. The distributor is designed to operate using a motor that operates at a frequency range of 4 Hz to 12 Hz. A Variable Frequency Drive (VFD) should be used to supply power to the motor at the correct frequency. An Intersystems control panel contains a VFD and is preset to supply power at the correct frequency. If an Intersystems control panel is not purchased then the customer is responsible for ensuring that the customer supplied VFD is set correctly. Refer to engineering for the correct frequency for each individual distributor.

2.2.4.2 Motor for Swing Style Distributors

The motor used on swing style distributors is a BRAKE MOTOR. The distributor is designed to operate using a motor that operates at full line voltage. A normally engaged brake on the motor is required to maintain location when power is not supplied. An Intersysems control panel contains REVERSING STARTERS and is preset to supply power at the correct overload current setting. If an Intersystems control panel is not purchased then the customer is responsible for ensuring that the customer supplied REVERSING STARTER is set correctly. Refer to engineering for the correct overload current for each individual distributor.

2.2.5.1 Encoder with Optional Control Panel and VFD/REVERSING STARTER

All Intersystems distributors are supplied with a 4-20mA Explosion Proof Encoder. The Intersystems control panel is designed to work with these 4-20mA encoders. Refer to Installing the Distributor with Control Panel for installation procedures.

- A. The Intersystems control panel uses a PLC and the supplied ENCODER to determine the position of the inner spout. With this information the PLC controls the VFD or reversing starter, which in turn powers the motor.
- B. The Intersystems control panel contains the VFD/REVERSING STARTER therefore no further equipment is required except for field wiring.

2.2.5.2 Encoder without Optional Control Panel and VFD/REVERSING STARTER

An optional 12bit Gray Code encoder is available for purchase to be used independent of Intersystems' control panel. If the distributor is controlled by a control panel obtained independent of the distributor, those ordering the control panel must be aware of a number of requirements.

- A. The installer should determine the PLC and input card that will best work for their installation.
- B. The control panel provider shall be responsible for insuring the PLC and its input card is compatible with the provided 4-20 mA encoder and that the control panel can properly operate the distributor, or if the optional 12bit GRAY CODE encoder should be purchased instead.
- C. The PLC system must be able handle a resolution of at least 4,096 units per 360 degrees.
- D. A VFD is required to supply power at the correct frequencies to the inverter duty motor for rotary distributors and REVERSING STARTERS are required for supply power at the correct overload current to the brake motors for swing distributors.

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INTERSYSTEMS IS NOT LIABLE FOR ANY DAMAGES OR MALFUNCTIONS TO THE DISTRIBUTOR, SURROUNDING EQUIPMENT, OR PERSONNEL DUE TO INPUT FROM AN INDEPENDENTLY OBTAINED CONTROL PANEL!

2.3 Installing the Distributor

Installation of the distributor must not be started until the supporting structures and the guying anchors (if any are needed) have been completed and developed maximum strength.

NOTICE

REGARDLESS OF WHO INSTALLS THE EQUIPMENT OR THE METHOD OF INSTALLATION, THE DISTRIBUTOR MUST BE LEVEL! IF IT IS NOT LEVEL THEN IT IS LIKELY TO NOT OPERATE AS DESIGNED!

The distributor needs to be secured and mounted into place before the motor is supplied with power. There are two options when installing the distributor, installing the unit with the Intersystems control panel, and without the optional control panel. There are separate installation procedures based on which distributor is being installed. The four types are Full Round, Flat Back, Swing, and Double Swing. Distributors not being controlled by Intersystems control panels please refer to section 2.3.2. Instructions on how to HOME the distributor or to MANUALY JOG the inner spout can be found......

2.3.1.1 Full round and Flat Back Intersystems Control Panel Installation;

- A. Insure that the distributor is secured and mounted in place, and that the unit is level.
- B. Connect all field wiring to the unit as shown in the wiring diagrams on the CERTIFIED DRAWINGS. Check all wiring for proper connection and voltages. Note: The motor supply wiring and the encoder shielded cabling must be in separate conduit.
- C. Open the outside door to the distributor to help locate the center spout. Care should be taken and all safety measures should be in place to avoid unnecessary contact and exposure to dangerous situations.
- D. Turn on the power to the control panel.

2.3.1.2 Swing Style Distributor; Intersystems Control Panel Installation;

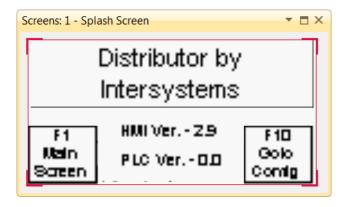
- A. Insure that the distributor is secured and mounted in place, and that the unit is level.
- B. Connect all field wiring to the unit as shown in the wiring diagrams on the CERTIFIED DRAWINGS. Check all wiring for proper fit and voltages. Note: The motor supply wiring and the encoder shielded cabling must be in separate conduit.

- C. Open the outside door to the distributor to help locate the center spout. Care should be taken and all safety measures should be in place to avoid unnecessary contact and exposure to dangerous situations. Never place any body part inside the distributor.
- D. Turn on power to the control panel.

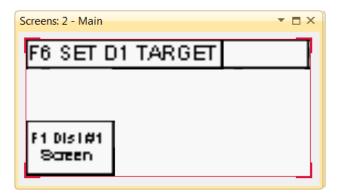
2.3.2 Distributor Control Setup and Homing Procedures:

2.3.2.1 Distributor Setup Homing and Operation (Rotary and flat back)

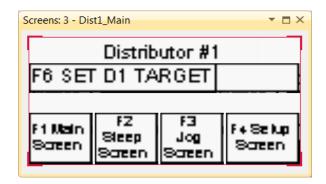
A. Upon powering up, the following screen will appear.



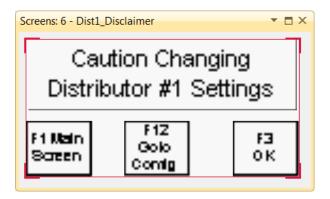
Press F1. The following screen will appear: There are two options. In normal operation, press F6 and then enter the spout location. The other option is to press F1 to go to the distributor setup screen.



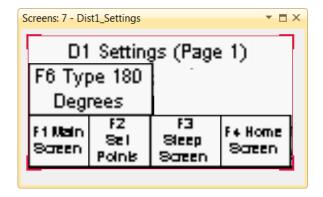
C. Press F1. The following screen will appear: By pressing the F3 key, the user will be taken to the jog screen. Use this option to jog the spout manually, home the distributor and troubleshoot the system. This option will be discussed later. By pressing the F4 key, the user will be taken to the setup screen. Use this option to setup the distributor control for the angle of sweep and the number of spouts in preparation of performing the distributor homing operation.



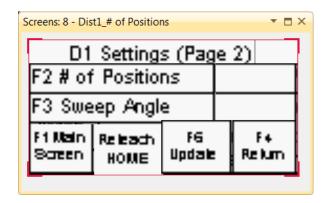
D. Press the **F4** key. A **user** window will appear. Enter "**2**" and press "Enter" — . The **password** window will appear: Enter "**1500**" for the password and press "Enter" — . Upon pressing enter, the next screen will be the disclaimer screen. Press **F3** (OK).



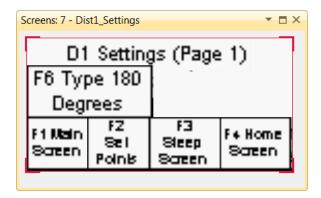
E. After pressing **F3**, the following screen will appear: If the distributor is a flat back, press **F6** to show **180** degrees. If the distributor is full round, press **F6** to show **360** degrees. Next press **F2** to enter the number of spout positions.



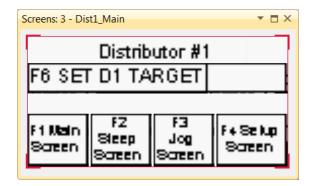
F. After pressing **F2**, the following screen will appear: Press **F2** and enter in the number of spout holes in the distributor. Ignore he sweep angle setting. After entering in the number of positions, press the **F6 Update key**. This updates the settings that have been entered. The Reteach Home will be flashing. This is a reminder that the distributor must be homed. Press the **F4** Return key. This will take the user back to the previous screen.



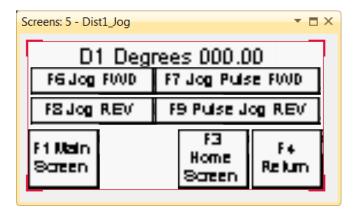
G. After pressing the F4 Return key, the following screen will appear again: Press the **F1** Main Screen key.



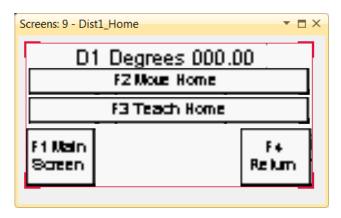
H. Press the **F1** Main Screen key. The following screen will appear:



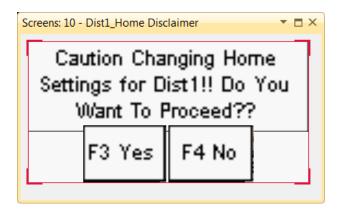
I. Press the F3 Jog Screen key. The following screen will appear: Use the F6 and F8 keys to move the spout forward and reverse. Note: When jogging the spout forward, the spout must travel counter clock wise as looking down on the distributor. At the same time, the D1 Degrees display must count up. If not, have a certified electrician change the motor rotation or check the encoder wiring. Jog the spout to the center of the access panel opening. This is the Home position. Once in the Home position, press the F3 Home Screen key.



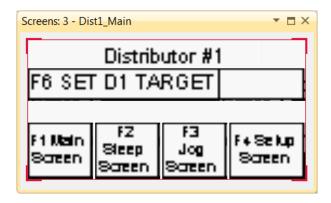
J. After pressing the **F3** Home Screen key. The following screen will appear: Press the **F3** Teach Home key.



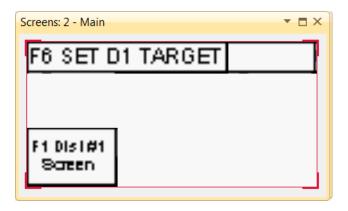
K. After pressing the **F3** Teach Home key, the following disclaimer screen will appear: Press the **F3 Yes** key if you wish to perform the home operation.



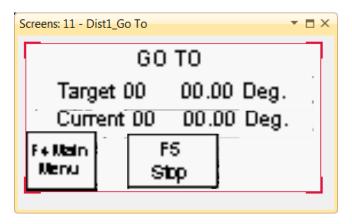
L. Press the **F3** Yes key, the homing operation will be performed and the following screen will appear again:



M.: Press the **F1 Main Screen** to return to the Main Screen: The following screen will appear



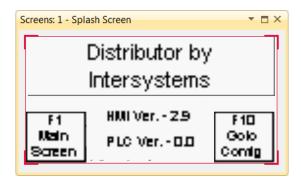
N. Press the **F6** key and enter the number of the spout position you wish to make the spout travel to. Press the **enter** — **key**, the following screen will appear while the spout is moving into position:



O. The target degrees will be displayed and the current degrees will count up or down until the spout reaches the target degrees. After the spout is in position, the **In Position** light will light and the main screen will appear again. The distributor is now homed and ready to use

2.3.2.2 Distributor Control Setup, Homing and Operation, Swing type Distributor

A. Upon powering up, the following screen will appear: Press **F1** for Main Screen.



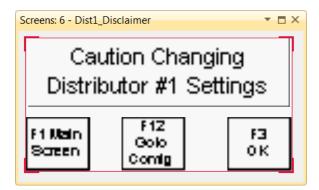
B. After pressing F1, the following screen will appear. There are two options. In normal operation, press F6 or F7 and then enter the spout location. The other option is to go to each spout's setup screen. NOTE: If the distributor is a single spout type, only the F1 option will appear. If the distributor is a double swing, the F1 and F2 options will appear. If the distributor is a triple swing, F1, F2 and F3 will appear.



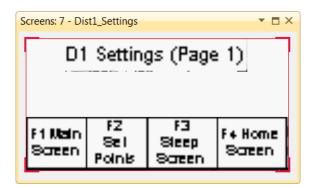
C. After pressing F1, the following screen will appear: By pressing the F3 key, the user will be taken to the jog screen. Use this option to jog the spout manually, home the distributor and troubleshoot the system. This option will be discussed later. By pressing the F4 key, the user will be taken to the setup screen. Use this option to setup the distributor control for the angle of sweep and the number of spouts in preparation of performing the distributor homing operation.



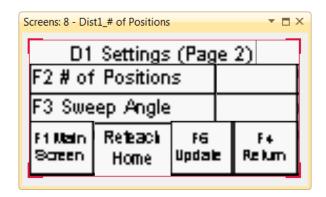
D. After pressing the **F4** key, the user will be taken to the **user screen**. Enter "2" and then press "Enter"—. The next screen will be the **password screen**: Enter "1500" for the password and press "Enter"—. Upon pressing enter the next screen will be the disclaimer screen. Press **F3** (OK).



E. After pressing F3, the following screen will appear: Press F2 Select Points.

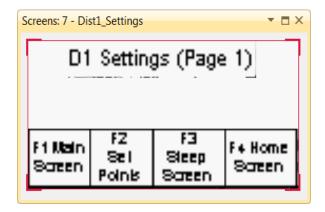


F. After Pressing **F2**, the following screen will appear:

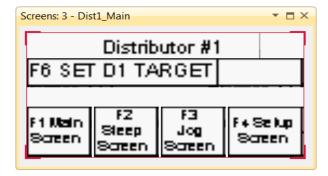


G. Refer to the certified drawing that was included with the distributor for the following information to be entered: Press F2, enter in the number of spout locations for that spout, and then press "Enter" —.

Press F3, enter the sweep angle, and then press "Enter" —. After entering in the sweep angle, press the F6 Update key. This updates the settings that have been entered. The Reteach Home will be flashing. This is a reminder that the distributor must be homed. Press the F4 Return key. This will display the following screen:

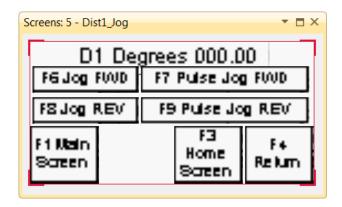


H. Press the F4 Home Screen key to display the following screen

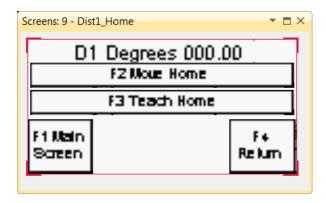


- I. Press F3 Jog Screen.
- J. After pressing the F3 Jog Screen key, the following screen will appear: Use the F6 and F8 keys to move the spout forward and reverse. Note: When jogging the spout forward the D1 Degrees display must count up. If not, have a certified electrician check the motor rotation and the encoder

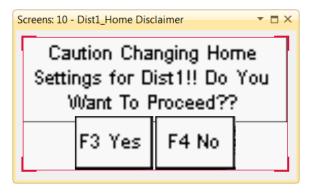
wiring. Jog the spout to the center of the access door opening. This is the **Home** position. Once in the home position, press the **F3** Home Screen key.



K. After pressing the **F3 Home Screen** key, the following screen will appear.



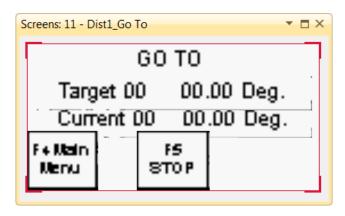
L. Press F3 Teach Home.



M. Press **F3 Yes** to finish homing the spout.
After pressing F3, the following screen will appear:



O. This is the main screen. The distributor number 1 is now homed and ready to use. Press **F6** or **F7** and enter the number of the spout position you wish to make the spout travel to. Upon pressing the **Enter** key, following screen will appear while the spout is moving into position:



P. The target degrees will be displayed and the current degrees will count up or down. After the current degrees reaches the target degrees, the **IN Position** light will illuminate, and the main screen will appear again. If distributor number 2 needs to be homed, press **F2** and perform all of the same steps as shown above for distributor number 1.



2.3.3 Connecting the Intersystems Control Panel to an Independent PLC;

The PLC built into the optional control panel has an ethernet cable connection that allows it to connect to an independently obtained PLC system. Communication must first be established between the two PLC units. Then

certain registry bits need to be programmed into the independently obtained PLC. Refer to Engineering for the specific registry bits for your unit. They contain the following information:

A. Set Target Position
B. PV Notify Change Target
C. Selected Target Position
D. Target Degrees
E. Current Position
F. Current Degrees
Write to this tag to move Distributor
Shows which position is selected
Shows what the target degree position is Shows the Current Position
Shows the Current Degree

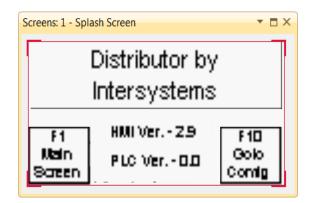
2.3.4 Distributor Installation without Intersystems Control Panel;

Care should be taken when selecting a control panel and PLC system to insure that the independently obtained PLC has capabilities to handle the different inputs and control the different outputs for the distributor being ordered. Information on the inverter duty motor and encoder can be found in their respective sections listed previously.

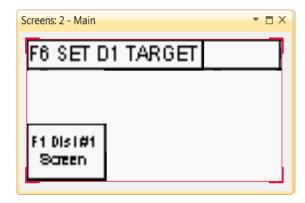
2.3.5 Distributor Sleep Mode;

If the distributor is freezing up at night when the distributor is not in use, use this procedure to enter the sleep mode. When the distributor is in the sleep mode, a timer will count down and the spout will move from its current position to the home position and then back to the current position. This mode will operate continuously until the sleep mode is suspended.

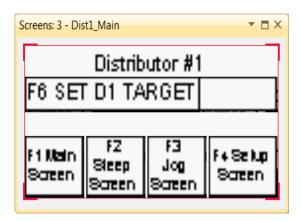
A. Upon powering up, the following screen will appear.



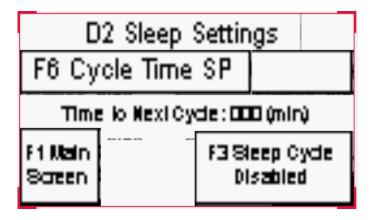
B. Press **F1** and the following screen will appear:



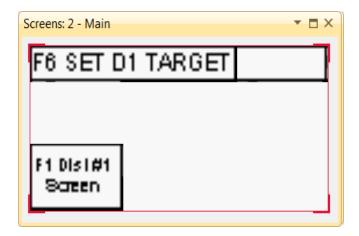
C. Press **F1** and the following screen will appear.



D: Press the F2 key to enter the sleep mode menu. To set the time between cycles, press F6. Enter the time value desired in minutes and press **Enter**. Enter a value between 10 and 999 minutes. Verify the Sleep Cycle is Enabled (see the bottom right box) by pressing the **F3** key. While in this screen, the **Time to Next Cycle** will count down to zero and then the spout will automatically move to the home position and back to the current position. The time to next cycle will begin to count down again. Note: By pressing the F1 Main Screen key, the distributor will go back to the main screen and the sleep cycle will be suspended.



E: After pressing the **F1** key, the following main screen will appear and the sleep mode will be suspended.



F: Repeat the procedure to go back into the sleep mode again.

III. Maintenance & Troubleshooting

NOTICE

Thoroughly read Section I, regarding safety information before beginning installation and startup.

3.1 General Maintenance

A good maintenance program involves thorough general housekeeping, periodic inspection, adequate lubrication, and timely adjustment.

3.2 General Housekeeping and Periodic Inspection

At frequent and regular intervals, perform these housekeeping chores and inspections:

- A. Remove accumulated dirt from the motor, reducer housings and bearings.
 - 1. Motors depend upon unobstructed airflow over their housings for effective cooling.
 - Reducer gear cases must also be free of dirt for effective heat radiation. Most reducers have a
 pressure vent to relieve internal pressure. If dirt blocks a vent, internal pressure can rupture seals.
 Leaking lubricant can contaminate the product being handled by the distributor and reducer failure
 and subsequent equipment downtime may result.
 - Check the reducer's lubricant level and condition on a regular basis. If the level is low, find and correct the leak. If the lubricant is dirty or shows signs of overheating, schedule a change of lubricant as soon as possible.
 - 4. Listen carefully for a noisy motor, reducer, or bearings. Any of these sounds can be a forewarning of overheating and fire or explosion. Correct any problem discovered immediately!

- B. Periodically remove the inspection door from the distributor and clean the interior of all accumulated dirt and material.
- C. Examine the distributor lining. Extreme wear patterns can sometimes distort the discharge and if not corrected, wear completely through the distributor. Spouting may also wear through.
- D. Inspect all flanges and spouting. Tighten any loose fasteners. Note any damage to the distributor and support structure and schedule immediate repair. Also, schedule replacement for any damaged spouting, platform structural members, or floor grates. While inspecting platforms and ladders, be sure to examine mounting brackets and /or bracing. Note any defects and schedule immediate repair.
- E. It is also advisable to check the condition of all inlet and discharge spouting associated with the distributor for damage and wear.

3.3 Lubrication

In all cases, the manufacturers of the individual components have precise recommendations for periodic lubrication of their products. Strict adherence to these procedures will result in a minimum of down time and maximum component life.

3.3.1 Reducer

Refer to the documentation furnished with the reducer. The user must interpret this information in light of the severity of duty in each application. If there is any doubt, contact the manufacturer or a local supplier of the reducer for specific recommendations.

3.3.2 Motor

Many motors have sealed and permanently lubricated bearings; with these, no lubrication is possible or desirable. If bearings of this type become noisy or overheat, they must be replaced.

Motors having bearings that can be re-lubricated are usually larger integral horsepower sizes. Special pressure lubricating equipment may be required. Refer to the documentation furnished with the motor. All replacement motors must have INVERTER DUTY CAPABILITIES and all replacement motors for SWING STYLE DISTRIBUTORS must be INVERTER DUTY BRAKE MOTORS.

3.3.3 Shaft Bearings

Mounted bearings DO require periodic lubrication. The amount and frequency depends in large extent upon the severity of the operating environment and the duty cycle. Refer to manufacturer's recommendations for frequency, type and amount of lubrication.

3.3.4 Roller Chain (Swing Style Distributors ONLY)

If the distributor includes a roller chain furnished by Intersystems, the chain will have to be lubricated periodically. Refer to proper chain lubrication guidelines for proper lubrication schedules.

Many roller chain catalogs include instructions for properly tensioning roller chains and give specific values. Excessive tension can cause accelerated chain and sprocket wear, destroy bearings, and bend shafts. In extreme cases, excessive tension can cause structural damage.

3.4 Troubleshooting

Problems	Solutions		
Inner spout won't turn	Check for and relieve choked spouting		
	Check for and remove internal obstructions		
	Check for and relieve extra downward pressure from input flange		
	Check for and relieve tight clearance of white UHMW ring around flat plate		
Inner spout continues to turn	Check for changing degrees on the Control Panel and correct wiring		
indefinitely	Insure that the PLC input card is receiving a changing signal from the encoder		
	Check the encoder coupling and tighten or replace if necessary		

IV. Spare Parts

4.1 Scope

The certified drawings furnished with the distributor list the components, which are likely to require replacement. Replacements for any other components, including structural members can be supplied upon request.

4.2 Ordering Parts

Parts orders or requests for technical assistance should be directed to:

Intersystems 9575 No. 109th Ave. Omaha, NE 68142 Phone: (402) 330-1500 FAX: (402) 330-3350

Please have available the Model Number and Serial Number of the equipment in question, as well as the facility name, city, and state where the equipment is INSTALLED.

V. Warranty

Intersystems reserves the right to make changes in design or in construction of equipment and components without obligation to incorporate such changes in equipment and components previously ordered.

WARRANTY, LIMITATION OF LIABILITY, DISCLAIMER OF IMPLIED WARRANTIES: Intersystems manufactured equipment and components are guaranteed against defects in workmanship or materials for one year from date of shipment. The obligation of Intersystems with respect to any goods is limited to replacement or repair of defective parts and equipment, provided those parts are returned, shipping costs prepaid, to Intersystems' factory and provided the product has not been subject to misuse, negligence, or accident, or repaired or altered outside of our factory, or other than by an Authorized Service Representative. This warranty does not cover the replacement of parts inoperative because of wear occasioned by use, the cost of replacing parts by a person other than an Intersystems employee or an Authorized Service Representative, or the adjustment of a product where the product was improperly adjusted by the purchaser. In addition, this warranty does not cover components manufactured by others such as motors, drives, clutches, cylinders, valves, blowers, and the like. On those components the standard Manufacturers' warranty applies. In any event, liability is limited to the purchase price paid, and Intersystems will, under no circumstances, be responsible for special or consequential damages, or for incidental damages.

INTERSYSTEMS NEITHER MAKES NOR AUTHORIZES ANY WARRANTY OTHER THAN AS HEREIN CONTAINED. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.