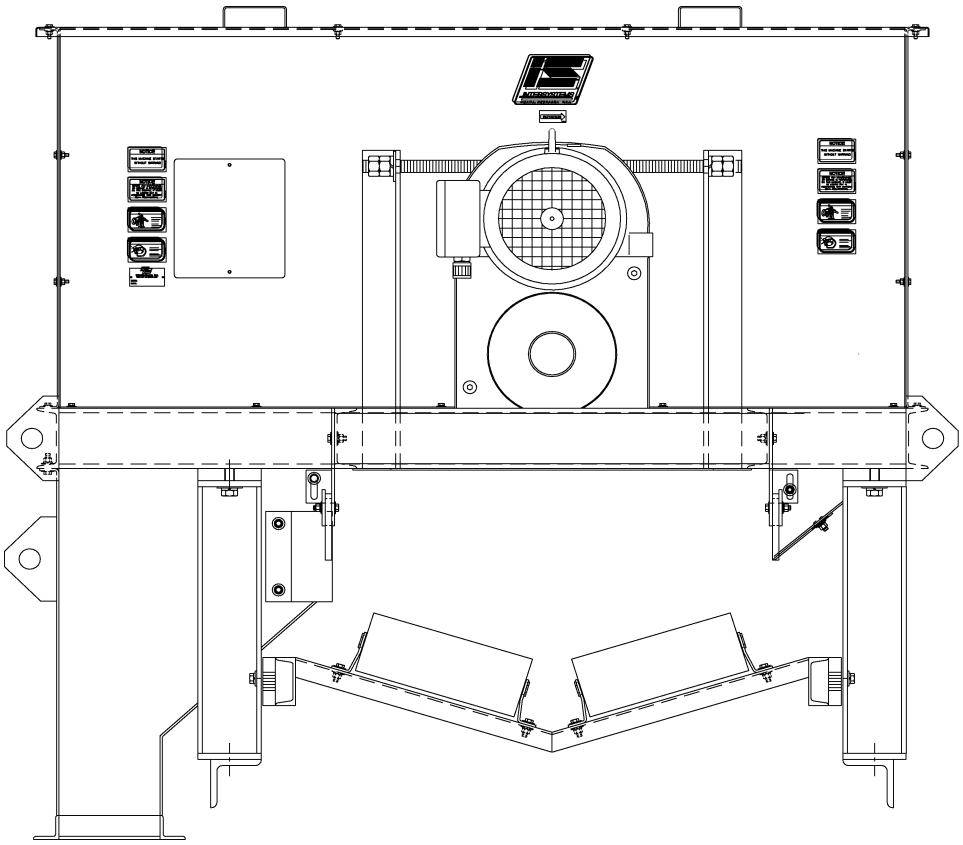


Sampler

Model: RS

Installation and Operation Manual

PNEG-2194

Version: 1.0

Date: 03-14-18

PNEG-2194

All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Contents

This manual covers the installation and operation for the Sampler Model RS. This manual provides guidelines for installing the product. You must retain a qualified contractor to provide on-site expertise. INTERSYSTEMS IS NOT RESPONSIBLE FOR THE INSTALLATION OF THIS PRODUCT.

InterSystems reserves the right to improve its product whenever possible and practical to do so. We reserve the right to change, improve and modify products at any time without obligation to make changes, improvements and modifications on equipment sold previously.

General Safety Statements

1. The Sampler system is designed and manufactured with operator safety in mind. However, residual hazards remain due to the nature of material handling, and specific material hazards. Use extreme caution at all times.
2. Modifications to equipment may cause extremely dangerous situations that could result in damage to the equipment as well as serious injury or death. Never modify the equipment.
3. Intersystems recommends that you contact the local power company to have a representative survey the installation to ensure wiring is compatible with their system and adequate power is supplied to the unit.
4. Consult InterSystems before making any changes to the sampler or its operating environment. Careless changes could result in death or serious injury to people and reduce the performance and service life of the equipment.
5. Never perform any service on this equipment 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 or pneumatic energy.
6. Never perform any service on this equipment without utilizing the required PPE (Personal Protective Equipment). Refer to the MSDS (s) (Material Safety Data Sheet (s)), on all products to which this equipment is in contact to determine what PPE is required.

This equipment is to be operated only on the voltage designated on the certified electrical drawings. Fire or explosion may result, which can cause death, serious injury and extensive damage to equipment. Do not connect to voltages other than designated.

Scope

The certified drawings list the non-standard components that have been incorporated into the equipment. InterSystems, Inc. normally stocks non-fabricated parts and non-custom OEM parts. Replacement parts for any other components, including fabricated parts and custom OEM components can be supplied upon request.

Ordering Parts

Direct parts orders or requests for technical assistance to your sales representative or to:

InterSystems, Inc.
9575 N. 109th Ave
Omaha, NE. 68137
Phone: (402) 330-1500
FAX: (402) 330-3350

Please have available the MODEL NUMBER, SERIAL NUMBER and CUSTOMER ORDER NUMBER of the equipment in question as well as the location where the sampler is INSTALLED.

Replacement Parts

The InterSystems, Inc. sampler is a quality built piece of machinery. As with any machine, parts do wear out and fail. It is InterSystem's recommendation that a small supply of spare parts be kept on hand to cover any minor breakdowns. A separate priced Spare Parts List will be sent identifying the suggested spare parts. It is also necessary to check the certified drawings, which will list any special or custom components utilized on this equipment.

Repair Kits

The following chart lists repair kits and parts that are available from InterSystems. These kits are offered as a more economical solution by rebuilding the defective part rather than replacing it. However in some cases the part may be beyond repair and replacement will be necessary.

Product Code	Description
546497	Oil Synthetic Gear Lube SAE 90 Quart
35527	Limit Switch Contact Block 1 N.O. 1 N.C.

Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in SERIOUS INJURY or DEATH.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which must be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

ST-0001-3

Cautionary Symbol Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.

DANGER — This symbol indicates an imminently hazardous situation which, if not avoided, **will result in serious injury or death.**

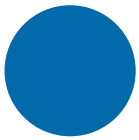
WARNING — This symbol indicates a potentially hazardous situation which, if not avoided, **can result in serious injury or death.**

CAUTION — This symbol indicates a potentially hazardous situation which, if not avoided, **can result in minor or moderate injury.**

NOTICE — This symbol is used to address practices not related to personal injury.

This symbol indicates a general hazard.

This symbol indicates a prohibited activity.



This symbol indicates a mandatory action.

ST-0005-2

Safety Cautions

Use Personal Protective Equipment

- Use appropriate personal protective equipment:

Eye Protection

Respiratory Protection

Foot Protection

Hearing Protection

Head Protection

Fall Protection

Hand Protection

- Wear clothing appropriate to the job.
- Remove all jewelry.
- Tie long hair up and back.

ST-0004-1

Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- If you do not understand any part of this manual or need assistance, contact your dealer.

ST-0002-1

Maintain Equipment and Work Area

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.

ST-0003-1

Stay Clear of Hoisted Equipment

- Always use proper lifting or hoisting equipment when assembling or disassembling equipment.
- Do not walk or stand under hoisted equipment.
- Always use sturdy and stable supports when needed for installation. Not following these safety precautions creates the risk of falling equipment, which could crush personnel and cause serious injury or death.

ST-0047-1

Sharp Edge Hazard

- This product has sharp edges, which can cause serious injury.
- To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.

ST-0036-2

Install and Operate Electrical Equipment Properly

- Electrical controls must be installed by a qualified electrician and must meet the standards set by applicable local codes (National Electrical Code for the US, Canadian Electric Code, or EN60204 along with applicable European Directives for Europe).
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.
- Make sure all equipment and bins are properly grounded.

ST-0075-1

Stay Clear of Moving Parts

- Stay clear - machine can start without warning.
- Entanglement in gate will cause serious injury.
- Keep all shields and covers in place at all times.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.

ST-0070-1

Flying Material Hazard

- Flying material can cause severe eye injury or blindness.
- Wear safety glasses around operating equipment.

ST-0074-1

Stay Clear of Rotating Parts

- Do not service equipment while it is in operation.
- Entanglement in rotating parts or exposed belts will cause serious injury or death.
- Keep all shields and covers in place at all times.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.

ST-0072-1

Toxic Fume and Dust Hazard

- Do all work outside or in a well-ventilated area. Dispose of paint and solvent properly.
- Remove paint before welding or heating:
  - — Avoid potentially toxic fumes and dust. Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.
  - — If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
  - — If you use solvent or paint-stripper, remove stripper with soap and water before welding.
  - — Remove solvent or stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

ST-0043-2

Safety Sign-Off Sheet

Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.

Date	*Employee Name*	*Supervisor Name*

ST-0007

3. Decals

The safety decals on your equipment are safety indicators which must be carefully read and understood by all personnel involved in the installation, operation, service and maintenance of the equipment.
To replace a damaged of missing decal, contact us to receive a free replacement.

InterSystems
9575 N. 109th Ave.
Omaha, Nebraska 68137
Phone: (402) 330-1500
FAX: (402) 330-3350

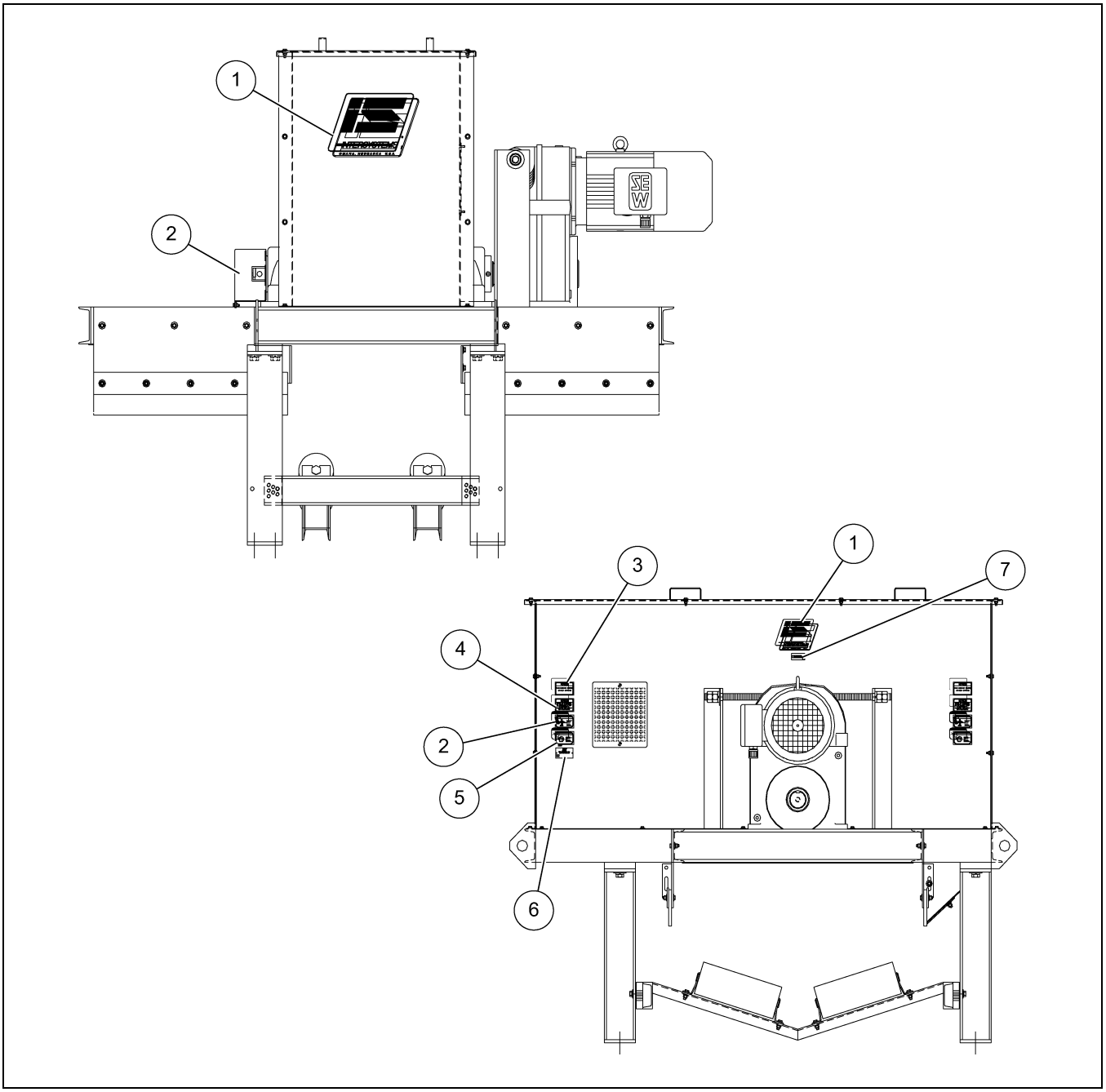
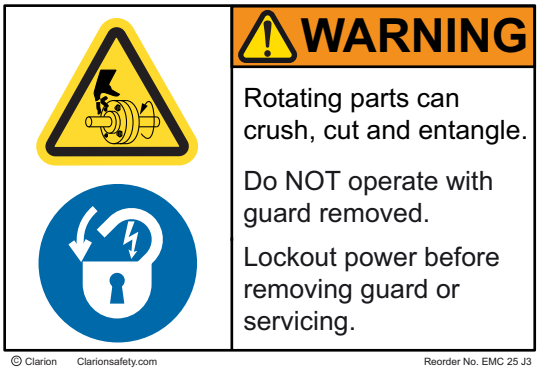
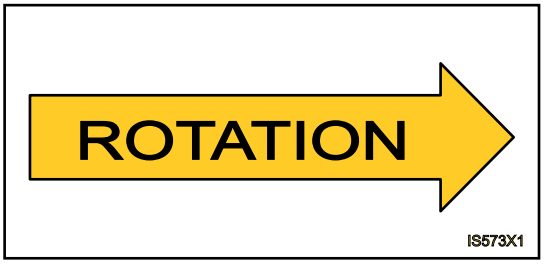


Figure 3A *Model RS Sampler Safety Label Locations*

NOTE: *These signs must never be removed, tampered with, painted over or obscured in anyway. If labels are damaged or become unreadable, replacement labels are available from InterSystems.*

Ref #	Decal #	Decals	Description
1	IS 5214X11		IS Logo (2 Places on Both Sides)
2	EMC 25 32		Rotating Parts (2 Places on Both Sides)
3	EMC 40 332		Starts Without Warning (2 Places on Both Sides)
4	EMC 40 232		Lock Out Machine (2 Places on Both Sides)

3. Decals

Ref #	Decal #	Decals	Description
5	EMC 28 34		Eye Protection (2 Places on Both Sides)
6	IS Tag		IS Serial No Tag (Motor Side Only)
7	IS573X1		Rotation (2 Places on Both Sides)

System Description

The RS Sampler is designed to collect a representative sample of granular, flake, pellet, or other materials from a belt conveyor. *Figure 4A* illustrates a typical RS Sampler application.

Sample collection is initiated in response to either an operator's manual command or a signal automatically generated by controller logic, usually time-based but which could also be volume or quantity based. A sample cycle begins when an electric motor rotates the sample cutter through the product flow to collect a sample of the material. The sample flows into the sample cutter and is discharged as it swings off the edge of the conveying belt. The sample cutter, when at rest, is situated in the 11 o'clock position away from the material flow. The sample from the sample cutter falls down and out the discharge chute to the desired sample collection point, at which point an InterSystems SCS Sample Collection System (optional) may be installed.

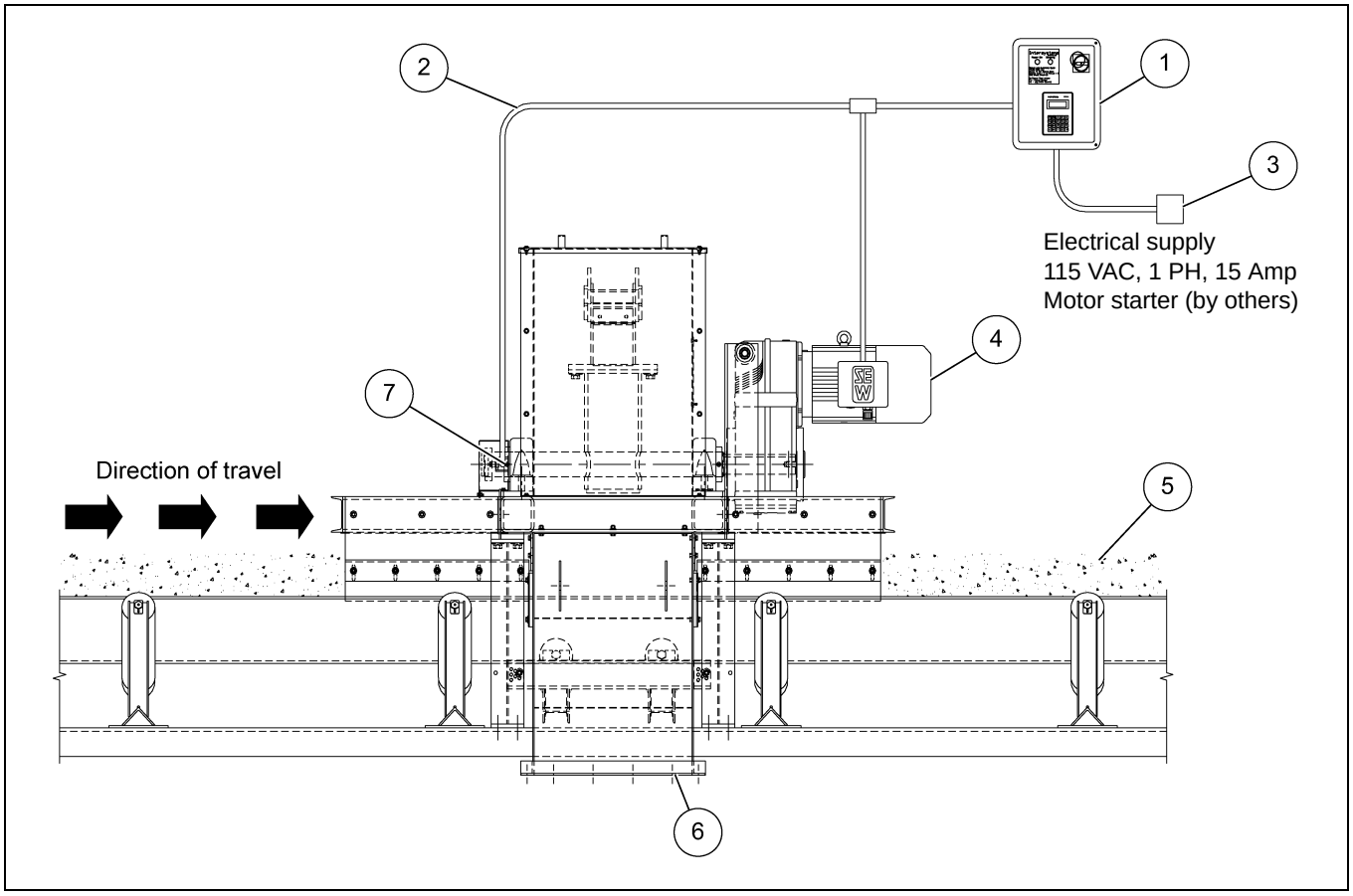


Figure 4A *Typical Installation, Model RS Sampling System*

Ref #	Description
1	Sampler Control Panel
2	Electrical Conduit
3	Circuit Breaker
4	Drive Motor

Ref #	Description
5	Material to be Sampled
6	Sample Discharge Extend to Desired Collection Point
7	Limit Switch

Optional Features

The certified drawings indicate which, if any, optional features are included with a sampling system. Some of the more frequently specified optional features are briefly described in the following list.

1. Controller arranged to initiate a sampling cycle based on quantity or volume of material passing through conveying line rather than upon elapsed time periods.
2. Explosion-Proof Sampling System. There are several major differences in an explosion-proof sampler as compared to a standard sampling system. An explosion-proof sampler will typically have the following features.

    a. An explosion-proof limit switch with the rating of:

        Class 1, Groups C and D, Division 1 and 2

        Class 2, Groups E, F and G, Division 1 and 2

    b. An explosion-proof motor with the rating of:

        Class 1, Groups D, Division 1 and 2

        Class 2, Groups E, F and G, Division 1 and 2

    The explosion-proof sampler control is available in two enclosure classifications:

    a. The NEMA 9 control with the rating of:

        Class 2, Groups E, F and G, Division 1 and 2

    b. The NEMA 7 control with the rating of:

        Class 1, Groups C and D, Division 1 and 2

        Class 2, Groups E, F and G, Division 1 and 2

3. Components of special materials, such as 316 stainless steel, monel, inconel or nedox coatings.
4. Abrasion resistant linings of urethane, AR carbon steel plate, 304 stainless steel or ceramic tile.

Material Sampled

Most materials from light to heavy density granules, flakes and pellets.

Sampler Construction

Standard sampler construction is of painted carbon steel. Type 304 Stainless Steel other materials and/or finishes appropriate to the operating environment and the material or product being sampled may be used. Refer to the certified drawing(s) for any optional or special components installed on the sampler.

Receiving Inspection

Carefully inspect the sampling system for damage as soon as it is received. Also, 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 the equipment ended with acceptance by the delivering carrier. Refer to the bill of lading.

Pre-Installation Preparation

NOTE: *Before starting sampling system installation, study this manual, the certified drawing(s) furnished with the system, and other applicable documents (including, but not limited to OSHA regulations; the National Electrical Code; and all other applicable federal, state, and local codes and regulations).*

Location

The RS sampler is mounted above belt conveyor carrying the product to be sampled as shown in *Figure 4A on Page 15*. The sampler axis is installed parallel to the centerline of the belt conveyor. The sampler and associated equipment should be located for ease of access and maintenance.

The sampler is to be installed only as shown on the certified drawing(s). If an alternate mounting arrangement is desired, contact InterSystems prior to installation for proper guidance. The sampler is of a general design with modifications specifically for your application. It may be necessary to rework the sampler in order for it to function properly if you alter the application.

General Mounting Guidelines

Sampler cannot support any other equipment or conveying line. Collapse of the whole system can cause death, serious injury, and extensive damage to equipment. Properly support all spouts, containers, and conveying lines.

1. Locate and mark the desired mounting location of the sampler on the conveyor frame where the support legs are to be bolted. Customer to ensure suitability of conveyor to support sampler. If conveyor can not support sampler additional bracing is required.
2. Position sampler and fasten in place.
3. Install idler rollers under the sampler so as to have rollers touch belt when no material is present.
4. Adjust the rubber skirtboards to touch edge of belt.
5. Jog sample cutter so cutter is bottom dead center on belt. Measure distance from cutter blade wipers to top of belt. **NOTE**: *Pay attention to belt as cutter crosses. The idler rollers may need to be re-adjusted if cutter contacts belt only on the sides and not the bottom*.
6. Jog sampler back to top and adjust wipers accordingly. Repeat this procedure until cutter blade wipers firmly contact belt.
7. Once sample cutter is adjusted attach discharge hopper. Note rubber belt seals on the hopper will need to be field cut to fit belt profile.

Material Sample Transport Lines

The discharge chute used to transport material samples must be compatible with the operating environment and the material sampled. The discharge chute should be routed to allow material to flow via gravity to a convenient collection point. At that point the dicharge chute may be connected to a collection jar bracket or a Sample Collection System cabinet.

Make all connections airtight and make sure all interior surfaces of joints are smooth and flush. Any ragged or raised ends will collect dust and debris as well as retard material flow. Escaping sample material can contaminate surrounding atmosphere and equipment.

Controller Location

1. Use vibration isolation pads when mounting the control enclosure or mount the controller in a vibration free location.
2. Unless ordered for severe duty, locate controller so it is protected from water and dust.
3. Unless an explosion-proof rated controller was specifically ordered, DO NOT locate the controller in a hazardous area.
4. Most applications require that the sampler be in easy view of the controller.

System Wiring

Refer to the certified electrical drawing(s) for specific wiring requirements. As explained in Terminal Strip *on Page 20*, the 19-position barrier terminal strip on the circuit board mounted INSIDE the controller enclosure is the connection point for ALL external circuitry.

The controller was completely assembled and tested with the sampler before it left the factory. The electrical installation must comply with OSHA Regulations; the National Electrical Code; and all other applicable federal, state, and local codes and regulations.

If wiring between the controller and the sampler unit is run through rigid conduit, use a short length of flexible conduit to connect wiring to the sampler. This will isolate the rigid conduit from any vibration originating in the product conveying line and sampler.

Electrical Power Requirements, System

110/120 VAC 50/60 Hz, Single Phase, 20 Amp Service

Optional - 220/240 VAC 50/60 Hz, Single Phase, 10 Amp Service

Refer to the certified electrical drawing(s) for specific wiring requirements. InterSystems strongly recommends that electrical service to the sampling system be an isolated line. Voltage fluctuations and line noise can affect the controller's circuit board, thus causing the sampler to malfunction.

Controller

110/120 VAC, 50/60 Hz, Single Phase, 2 Amp Max (does not include motor power requirements).

Optional - 220/240 VAC, 50/60 Hz, Single Phase, 1 Amp Max (does not include motor power requirements).

Drive Motor

Refer to the certified drawing(s) of the RS sampler for motor size, horsepower, voltage, and current rating.

Failure to observe all safety rules, written and implied and those suggested by common sense, can result in death, serious injury and/or equipment damage. Lock out power before performing any maintenance.

Control Components and their Functions

Interystems supplies two version of controllers for the RS Sampler.

1. A PLC based controller with keypad input. This controller can be used in both manual and automatic sampling modes. Refer it Controller Manual PNEG-2170 for details.
2. A manual push button controller. With this controller, the unit will take one sample each time the manual sample push button is pressed. Refer to Certified drawings for details.

Power OFF/ON Switch (S1) (Both Controllers)

The power OFF/ON Switch controls the electrical power to the controller and the sampler.

This machine starts without warning. Moving parts can cause severe injury. Clear area prior to controller start-up.

Power Pilot Light (Both Controllers)

This light is illuminated as long as power is available to the controller and the POWER switch (S1) is set to ON.

Manual Sample Push-Button (Manual Push-Button Controller Only)

This push-button initiates the sample cycle. The RS sampler will take one sample each time the push-button is pressed.

Sampling Pilot Light (PLC Based Controller Only)

This light is illuminated when a sampling cycle has been initiated and will stay lit until the sampling cycle has completed.

Control Keypad (PLC Based Controller Only)

The operator keypad is the source of all inputs necessary to operate the control.

The operator keypad is set up using linked menus to step through the operation of the control.

See the control manual PNEG-2170 for further information on the sampler control.

Main Fuse (FU1) (Both Controllers)

The fuse, located along the top center of the control, protects the controller and sampler components against overloads and short circuits.

For 110/120 VAC, 1 PH operation, use ONLY a BUSS Type FNM 2 Amp, 250 VAC Slo-Blo fuse or equivalent.

For 220//240 VAC, 1 PH operation, use ONLY a Buss Type FNM, 1 Amp, 250 VAC Slo-Blo fuse of equivalent.

Terminal Strip (Both Controllers)

This terminal strip is located inside the controller. It serves as the controller's interface and connection point for all external circuits and for the components mounted inside the enclosure. Refer to the certified electrical drawing(s).

Power Supply (PLC Based Controller Only)

The controller is equipped with a power supply which converts 120/240 VAC to 24 VDC for the operation of the PLC, Micro-View, display lights, input signals and the operation of the control relays. Refer to the certified drawing(s).

This control is to be operated only on the voltage designated on the certified electrical drawing. Fire or explosion may result, which can cause death, serious injury, and extensive damage to equipment. Do not change the 115/230 VAC transformer without consulting InterSystems.

Control Relays (PLC Based Controller Only)

The controller is equipped with four control relays which are driven by the PLC 24 VDC outputs.

Each relay has a mechanical flag indicator showing the relay is energized.

The relay contacts are wired for 120/240 VAC. Refer to the certified drawing(s).

Micrologix PLC (PLC Based Controller Only)

The PLC for the control is an Allen Bradley Micrologix controller. The PLC operates using 24 VDC and is prewired to the proper terminal strip inputs and outputs. The processor program is protected to prevent any alterations to the existing program. This control is designed to run InterSystem equipment.

Manual Sampling

The operator may choose to run the sampler in Manual Mode by selecting manual mode in the PanelView menu. (Refer to manual PNEG-2170.) After selecting manual mode, each time F1 is pressed on the PanelView, a manual sample is initiated.

Automatic Sampling (PLC Based Controller Only)

The operator may choose to run the sampler in the Automatic Mode by selecting automatic mode in the PanelView menu. (Refer to manual PNEG-2170.) **NOTE**: *A jumper or switch must be installed between the controller's terminals 1 and 2 to initiate automatic sampling. When automatic mode is selected, an automatic sample will not be initiated until the jumper circuit between terminals 1 and 2.* By installing a remote switch across terminals 1 and 2, the user can initiate the sampling cycle remotely. See manual PNEG-2170 for sampling automatic sampling options.

Sampler Mounted Electrical Components

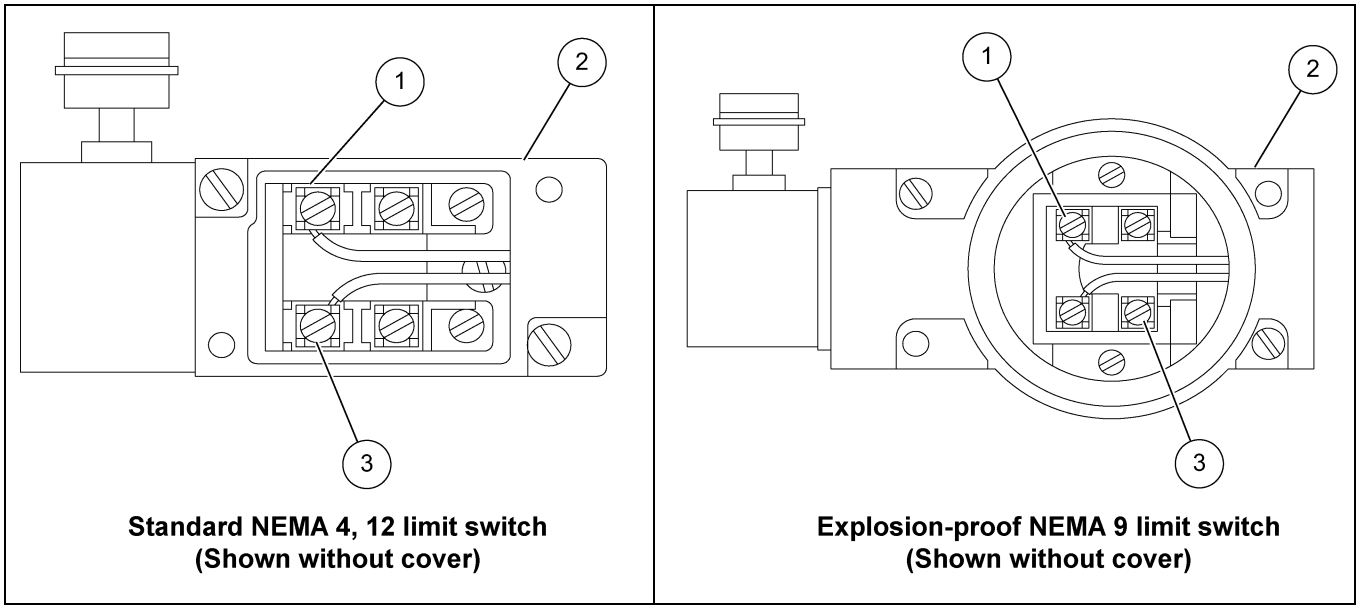


Figure 6A *Limit Switch Connections*

Ref #	Description
1	N.O. Contact Connection
2	1/2" NPT Conduit Connection
3	Common Connection

Limit Switch, LS-1

The limit switch is actuated when the sample cutter is in the home position. Upon initiation of a Sample Cycle, the limit switch is overridden by a timer circuit until the limit switch is clear of the limit switch flag. The sample cutter will continue to rotate until the limit switch is actuated again in the home position at which time the sampler cutter will stop in the home position.

NOTE: *When the PLC based controller is used, connect the limit switch to the normally open contacts. When the manual push button controller is used, connect the limit switch to the normally closed contacts.*

Drive Motor

This motor drives the sample cutter rotation through an in-line gear reducer. A label is located on the motor designating the correct direction of rotation. *(See Figure 3A on Page12.)* Verify that the motor is turning the proper direction of rotation when wiring the system. On initial setup, jog the motor to ensure proper rotation. Refer to *Figure 6B*.

NOTE: *Do not run the motor in wrong direction. Damage to the limit switch arm may result.*

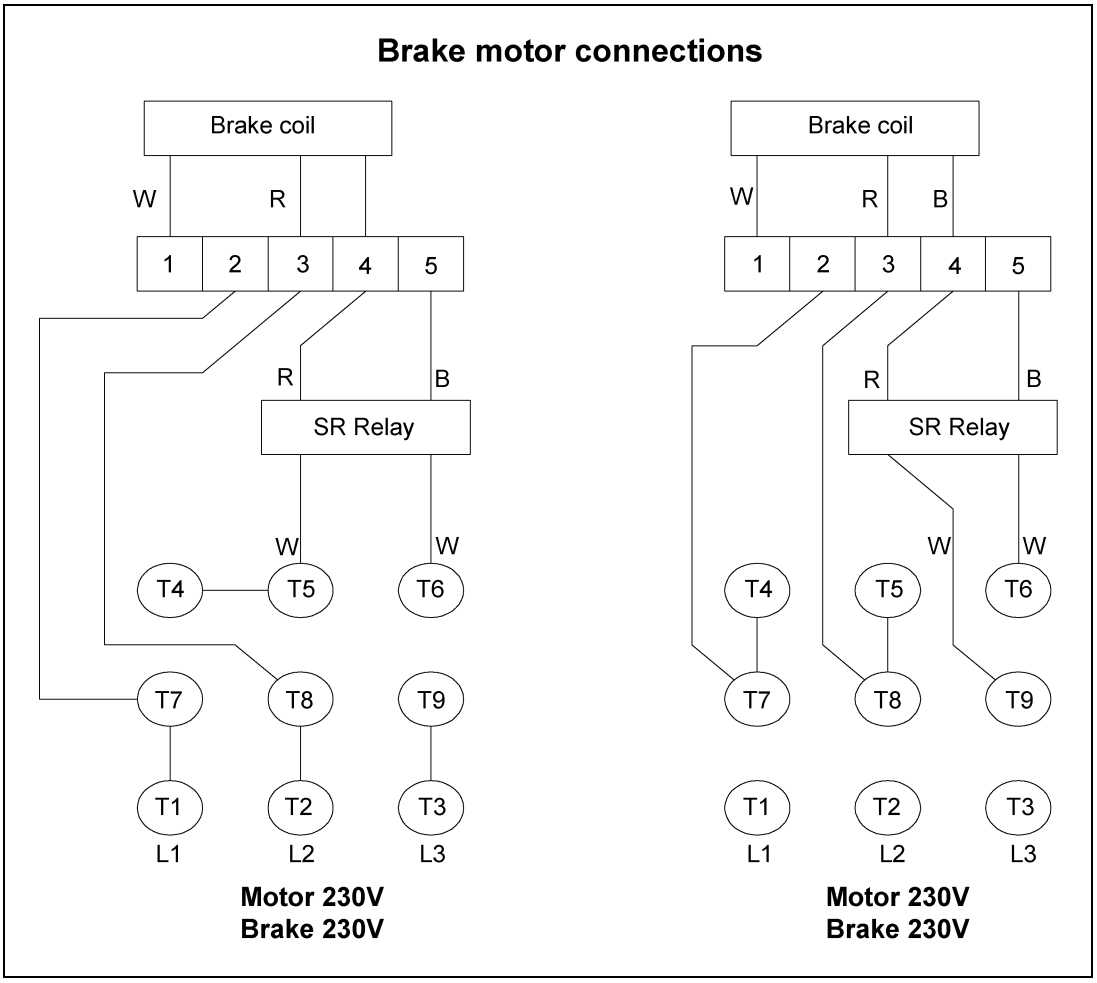


Figure 6B *Motor Brake Wiring Diagrams*

Failure to observe all safety rules, written and implied and those suggested by common sense, can result in death, serious injury and/or equipment damage. Lock out power before performing any maintenance.

General Maintenance

A good maintenance program involves thorough general housekeeping, adequate periodic re-lubrication, and replacement of worn or damaged components.

Periodic Inspection

At regularly scheduled intervals, while observing all safety precautions, observe the sampler as it operates. Inspect for:

1. Loose or missing hardware
2. Noisy motor or motor/reducer bearings
3. Overheated motor or reducer
4. Adequate lubricant in gear reducer
5. Structural damage
6. Damaged wiring or conduit, including exposed conductors and connections
7. Make sure that all guards are in place and that all warning labels are in place and legible. *See Page 7*, GENERAL SAFETY INFORMATION, explains the purpose and intended location of the warning signs.Warning signs are an important part of any safety program; replace any missing signs IMMEDIATELY.

Lubrication

Pillow Block Bearing

The pillow block bearings have been greased at the factory. Re-greased once a year using a multi-purpose grease.

Gear Reducer

The gear reducer is shipped filled with oil. Check the oil level every six months and add oil if required. Under normal sampler operating conditions the oil should be changed once every two years.

Use a gear lubricant with an AGMA #5 rating for normal operating conditions. Use a synthetic gear lubricant such as “Mobil SHC 630” for extreme operating conditions.

Oil Capacities

Sampler Size	Gear Reducer Output Ratio	Primary Reducer Oil Capacity OZS (QTS)	Gear Reducer Stages
RS-18	27.4:1	96 (3)	2 Stage
RS-24	27.4:1	96 (3)	2 Stage
RS-30	28.75:1	192 (6)	2 Stage
RS-36	28.75:1	192 (6)	2 Stage
RS-42	28.75:1	640 (20)	2 Stage
RS-48	30.39:1	640 (20)	2 Stage
RS-54	33.79:1	832 (26)	2 Stage
RS-60	33.79:1	832 (26)	2 Stage

Limit Switch Adjustment

Loosen and adjust the limit switch arm if required. The limit switch trips on a tripper attached to the shaft of the sample pelican and signals the control to remove power from the motor. It should trip to stop the sample pelican at the upright (11 o’clock) position as viewed from the motor side.

General RS Sampler Troubleshooting

Careless or accidental restoration of power can result in death or serious injury. Make certain area is clear before removing lock outs.

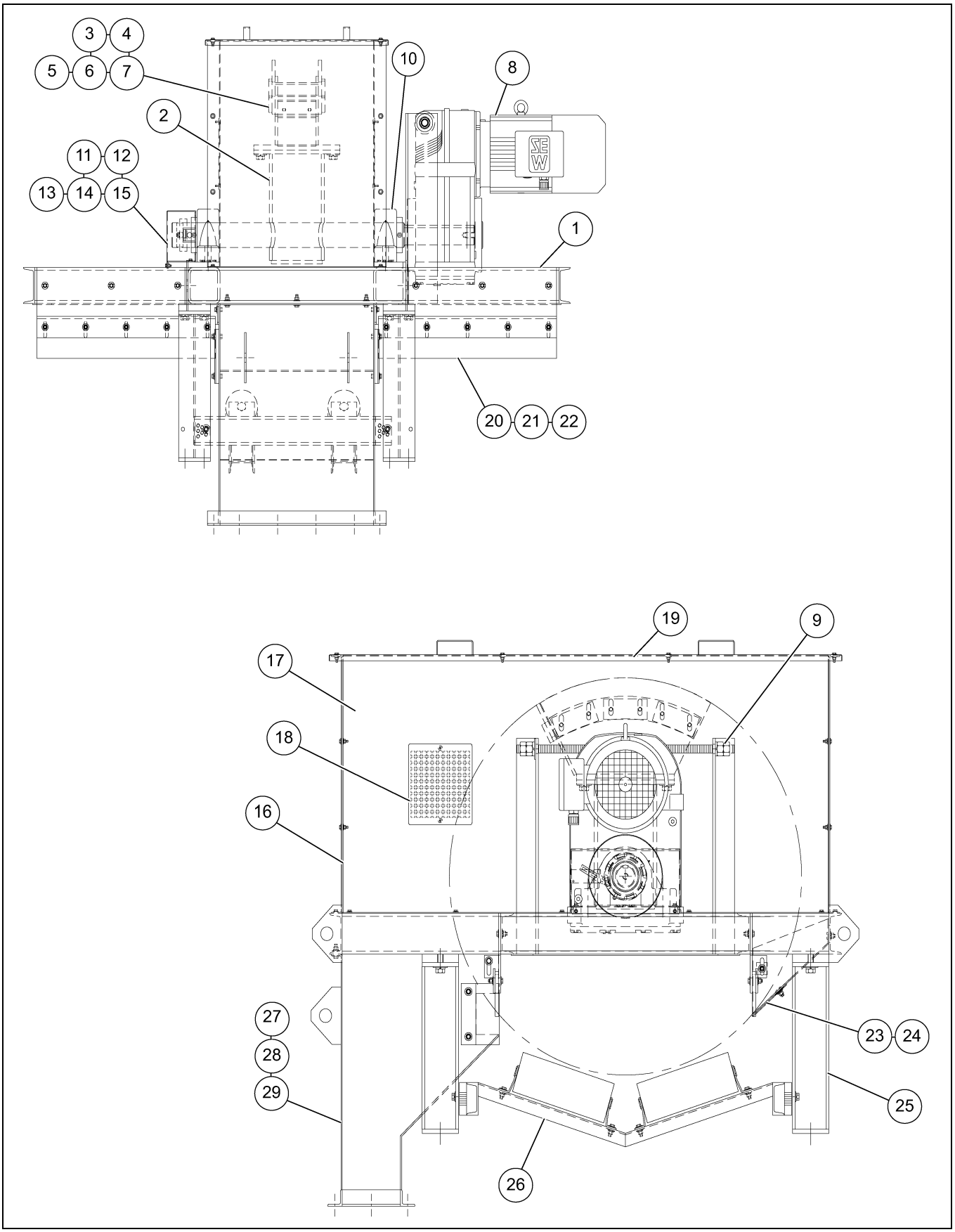
Problem	Possible Cause	Corrective Action
Sampler does not cycle in either Auto or Manual modes (Power light OFF).	Power switch OFF.	Turn power switch ON.
	Circuit breaker is open.	Reset breaker.
	Main fuse is blown.	Replace. Refer to Power Supply section *on Page 20*.
	Faulty supply wiring.	Correct. Refer to certified electrical schematic.
	Defective power switch.	Replace switch.
Sampler does not cycle in either Auto or Manual modes.	Faulty system wiring.	Correct. Refer to certified electrical schematic.
	Motor power OFF.	Turn ON.
	Motor starter heaters tripped.	Reset.
	Motor burnt out.	Replace.
Sampler cycles continuously.	Limit switch not activating or wired incorrectly.	Adjust limit switch. Refer to Limit Switch section *on Page 22* and Limit Switch Adjustment section *on Page 24*.

PLC Troubleshooting

Problem	Possible Cause	Corrective Action
Power light ON but no display on keypad.	Communication cable between PLC and keypad is loose.	Check both ends of cable are firmly seated in the PLC and keypad.
Sampler runs in Manual but does not run in Automatic.	Remote enable jumper missing.	Install remote enable jumper between contact 1 and 2 on terminal strip. Refer to certified electrical schematic.
	Control has been selected with index cabinet or purge options. Index cabinet is not being used.	Refer to controller manual PNEG-2190. Turn OFF index cabinet and purge options.
PLC displays output light for cycling Sampler, but sampler does not run.	Bad relay between sampler output and motor starter. Motor power OFF.	Replace relay. Refer to the certified electrical schematic. Turn ON.

NOTE: *RS samplers require the program mode be programmed for mode “3” (three). If the program mode is not correctly set system damage may occur.*

RS Sampler Elevation Views



RS Sampler Parts List

Ref #	Machine Size (Conveyor Belt Width)				Description	Qty
	18'	24'	30'	36'		
1				546536	Frame 35 Idler	1
2				546537	Pelican and Shaft 35 Idler	1
3				546516	Cutter Blade 35 Idler	1
4				545778	Pelican Wiper Rear RS 6"	1
5				545777	RS Pelican Wiper Retainer	1
6				546517	Pelican Wipers Side 35 Idler	1
7				546518	Pelican Wiper Retainer	6
8				545549	Gearmotor	1
9				545545	Torque Arm Kit	1
10				300915	Bearing PB Non-Exp	2
11				546535	Limit Switch Cam	1
12				26402	Limit Switch NEMA 4	1
13				35341	Limit Switch Roller Arm	1
14				546538	Limit Switch Bracket	1
15				546539	Limit Switch Guard	1
16				546580	End Panel 35 Idler	2
17				546581	Side Panels	1
18				545745	Inspection Cover	2
19				546582	Top Cover 35 Idler	1
20				546583	Skirt Board Bracket	2
21				546584	Skirt Board Rubber	4
22				546585	Skirt Board Retainer	4
23				546586	Bottom Cover 35 Idler	1
24				546526	Insert AR	1
25				546590	Leg Set 35 Idler	1
26				546588	Intermediate Roller Set	1
27				546591	Discharge Hopper	1
28				546512	Rubber Belt Seal	2
29				546513	Rubber Belt Seal Retainer	2

RS Sampler Parts List (Continued)

Ref #	Machine Size (Conveyor Belt Width)				Description	Qty
	42'	48'	54'	60'		
1	546504	545748			Frame 35 Idler	1
2	545771	545752			Pelican and Shaft 35 Idler	1
3	545769	545753			Cutter Blade 35 Idler	1
4	545778	545778			Pelican Wiper Rear RS 6"	1
5	545777	545777			RS Pelican Wiper Retainer	1
6	545770	545754			Pelican Wipers Side 35 Idler	1
7	545777	545777			Pelican Wiper Retainer	6
8	545548	545548			Gearmotor	1
9	545572	545572			Torque Arm Kit	1
10	300891	300891			Bearing PB Non-Exp	2
11	545761	545761			Limit Switch Cam	1
12	26402	26402			Limit Switch NEMA 4	1
13	35341	35341			Limit Switch Roller Arm	1
14	545759	545759			Limit Switch Bracket	1
15	545760	545760			Limit Switch Guard	1
16	546500	545749			End Panel 35 Idler	2
17	546501	545750			Side Panels	1
18	545745	545745			Inspection Cover	2
19	546502	545751			Top Cover 35 Idler	1
20	546503	545757			Skirt Board Bracket	2
21	545774	545774			Skirt Board Rubber	4
22	545773	545773			Skirt Board Retainer	4
23	546505	545758			Bottom Cover 35 Idler	1
24	546526	546526			Insert AR	1
25	546507	545763			Leg Set 35 Idler	1
26	546509	545764			Intermediate Roller Set	1
27	546506	546533			Discharge Hopper	1
28	546512	546512			Rubber Belt Seal	2
29	546513	546513			Rubber Belt Seal Retainer	2

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