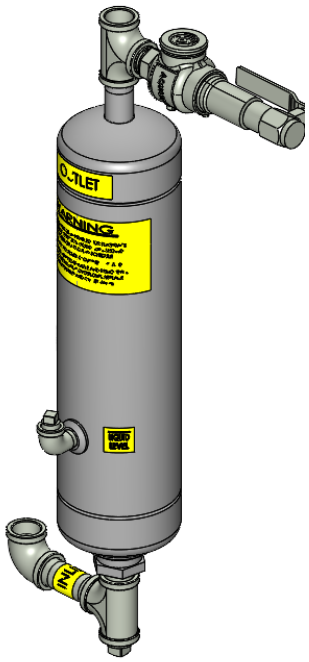
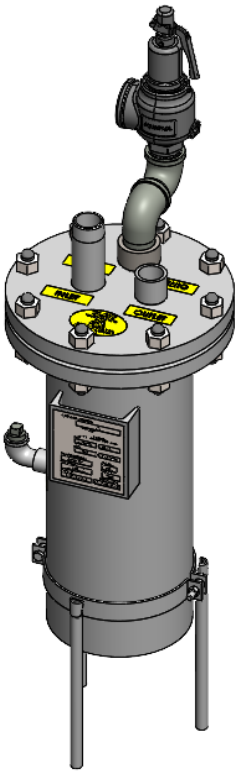
Liquid Flashback Arresters

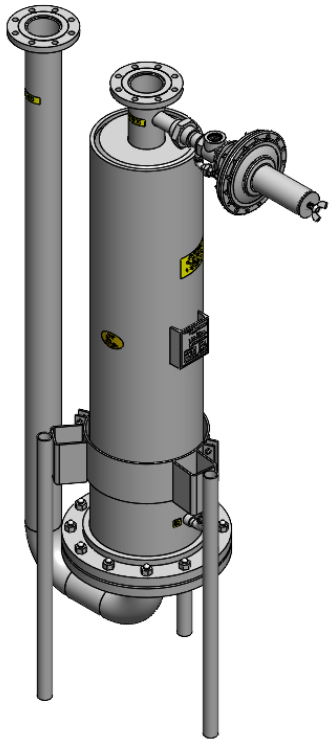
Installation • Operation • Maintenance Guide



MODEL 100



MODEL 3, 10, 10HP, 25, 50



MODEL 150

APPLICATION

Safety Device for Fuel Gas Systems

Designed in accordance with NFPA 51 and ASME requirements

⚠ DANGER! ⚠

Failure to install, maintain, or operate this equipment properly may result in FIRE, EXPLOSION, SERIOUS INJURY, OR DEATH

⚠ WARNING! ⚠

Install only by qualified personnel

Depressurize the system utilizing the vent and purge prior to servicing

Pipe relief valve outlet to a safe location

Use only Rexarc approved Flashback Arrester Fluid (FBA Fluid)

⚠ CAUTION ⚠

Maintain proper FBA Fluid level

Protect from freezing conditions

Do not obstruct relief vent piping

HANDLING:

HANDLING INSTRUCTIONS

Inspect the arrester upon receipt for any damage that may have occurred during shipment. Inspect all components, fittings, piping connections, and fasteners for damage or loose connections.

If the arrester was damaged during shipment:

- Notify carrier immediately and file a claim.
- Consult Rexarc before installing the arrester

Use safe lifting practices when handling the arrester. Select personnel, lifting methods, and lifting equipment appropriate for the weight of the unit and the work environment in accordance with applicable regulations and your company's safety procedures.

Do not lift the arrester by piping, valves, relief valve, or other attached components. These components are not designed to support the weight of the unit and may be damaged.

When mechanical lifting is used, lift the arrester using suitable lifting straps or other approved lifting devices positioned around the vessel body. Ensure lifting equipment is properly rated for the load and that slings, chains, or cables are clear of all piping and components before lifting.

Refer to the "Approximate Weight (Dry)" values in the **Specifications** table below when planning safe lifting operations and selecting appropriate personnel and lifting equipment.

STORAGE INSTRUCTIONS

If this unit is to be placed in storage before it is installed, it should be stored indoors and covered with a tarpaulin to keep it clean. The location should be free from corrosive gases and extreme humidity, which can cause damage to the unit.

Do not place any objects on the vessel that could damage the vessel or its components.

If outside storage is required, the unit must be adequately covered to prevent rain or snow from accumulating on the arrester and accompanying items. The unit must be placed on a paved surface to keep it out of standing water and mud.

SAFETY:

Personal Safety Equipment (PPE)

Personnel working with or around arresters shall comply with all applicable company policies and federal, state, and local regulations governing the use of personal protective equipment (PPE). Proper PPE must be worn at all times as required by the task, work environment, and applicable safety procedures.

Depending on the application and work environment, appropriate PPE may include items such as eye protection, hand protection, protective footwear, head protection, hearing protection, or other equipment as determined by the employer's hazard assessment and applicable regulations.

INSTALLATION

Purge all oxygen from the arrester and associated piping with an inert gas (nitrogen recommended) before placing the arrester into service.

When installing and operating this equipment, comply with all applicable federal, state, and local codes.

Follow all manufacturer instructions when installing components of the arrester.

OPERATION

Do not operate the arrester if the relief valve is not properly installed and vented to a safe location per code requirements.

Do not operate the arrester if any damage is present. Damage to the unit can make it unsafe to use. Inspect the unit regularly for corrosion and any damage (i.e., dents, gouges or bulges). If damaged, take out of service immediately.

Do not operate this arrester outside of specified operating conditions.

Follow all manufacturer instructions when operating components of the arrester system.

Operating Principle:

Rexarc Liquid Flashback Arresters are designed to operate within fuel gas piping systems. Arresters protect the main gas supply from dangers of reverse flow and flashbacks.

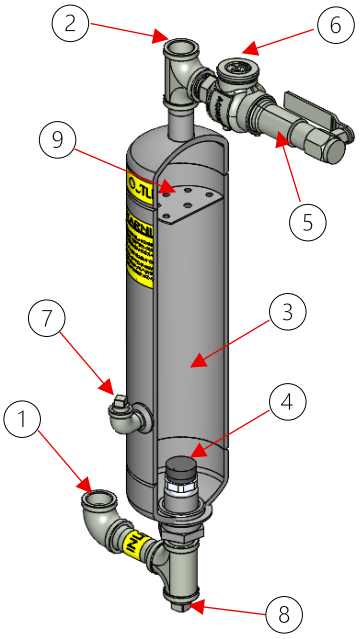
Fuel gas enters the arrester through the inlet connection and passes through the first of three safety devices: a reverse-flow check valve. In the event of over pressurization, resulting in reverse flow, the internal check valve closes to prevent reverse flow and inhibits flashback propagation toward the upstream gas supply system.

The second safety device is the Rexarc Flashback Arrester Fluid contained within the arrester body. This liquid acts as a flame-arresting medium and extinguishes the flame front during a flashback condition.

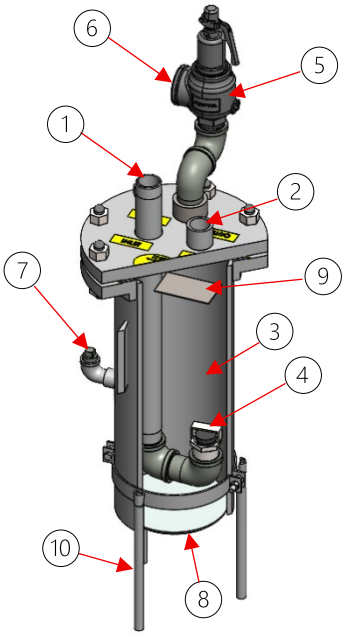
The third safety device is the integral safety relief valve. The safety relief valve is set at a pressure intended to protect the structural integrity of the arrester and associated piping. In the event of flashback and/or over pressurization, the safety relief valve will vent flammable gases to a safe discharge location through the end user installed vent piping.

Following any flashback event, the arrester shall be removed from service and replaced.

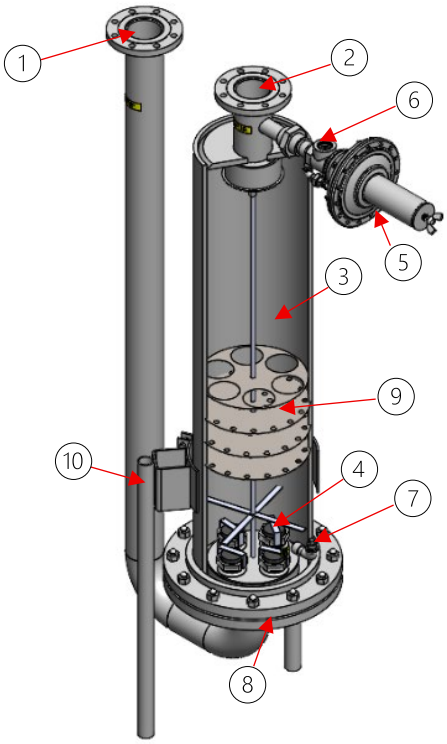
Product Specifications:



MODEL 100



MODEL 3, 10, 10HP, 25, 50



MODEL 150

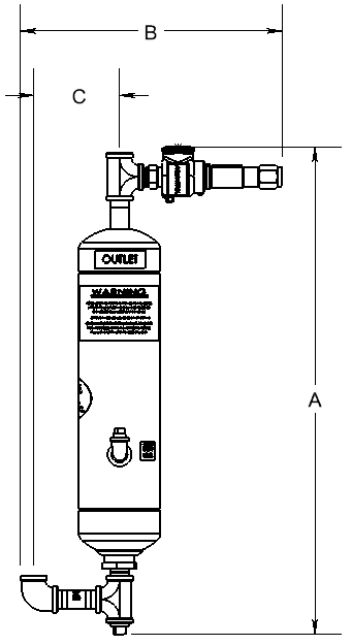
1. Inlet Piping
2. Outlet Piping
3. Flashback suppression chamber – Flashback Arrester Fluid (FBA) extinguishes the flame, should there be a flashback event
4. Reverse-flow check valve – prevents fire and high-pressure spike from moving upstream to the gas source
5. Relief Valve – protects the system against overpressure
6. Vent piping
7. Fill port – allows for easy filling and refilling of FBA Fluid and verifying proper liquid level
8. Drain port – allows for draining of the FBA Fluid during maintenance
9. Baffle plate – deflects the force of a flashback to reduce the impact on the check valve
10. Stand

Specifications:

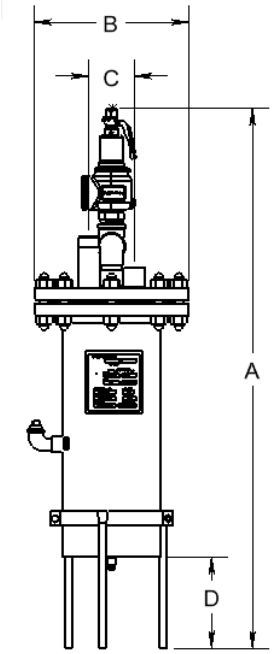
Model	Flow Rating (SCFH)	Connection Size – Inlet/Outlet	Connection Size – Vent Outlet	Approximate Weight (Dry – Lbs.)	FBA Fluid Capacity (Gal.)	Operating Pressure Range (PSI)
#100	100	*3/4" NPT	3/4" NPT	39	0.37	2, 10, 15, 40
#3	300	1” NPT	3/4" NPT	55	0.73	2, 10, 15, 40
#10	1,000	1-1/2” NPT	2” NPT	145	2.30	2, 10, 15, 40
#10HP	1,000	1-1/2” NPT	2” NPT	145	2.30	200
#25	2,500	2” NPT	2” NPT	460	7.20	2, 10, 15, 40
#50	5,000	4” NPT	2” NPT	600	6	2, 10, 15, 40
#150	15,000	4” Class 150 Flange	1-1/2”	1750	6	15

**INLET PIPE CONNECTION MUST EXTEND ABOVE THE TOP OF THE FLASHBACK ARRESTER*

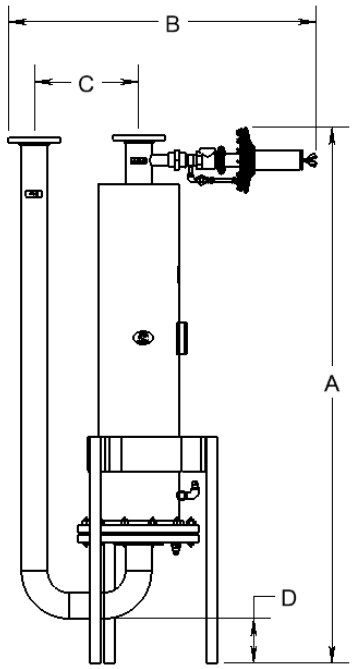
NOTE: Approximate weights shown are dry weights and are provided for planning purposes only. Actual lifting weight will be greater due to FBA Fluid and installed accessories. Verify the load before lifting and ensure personnel and lifting equipment are suitable for the actual weight and site conditions.



MODEL 100



MODEL 3, 10, 10HP, 25, 50

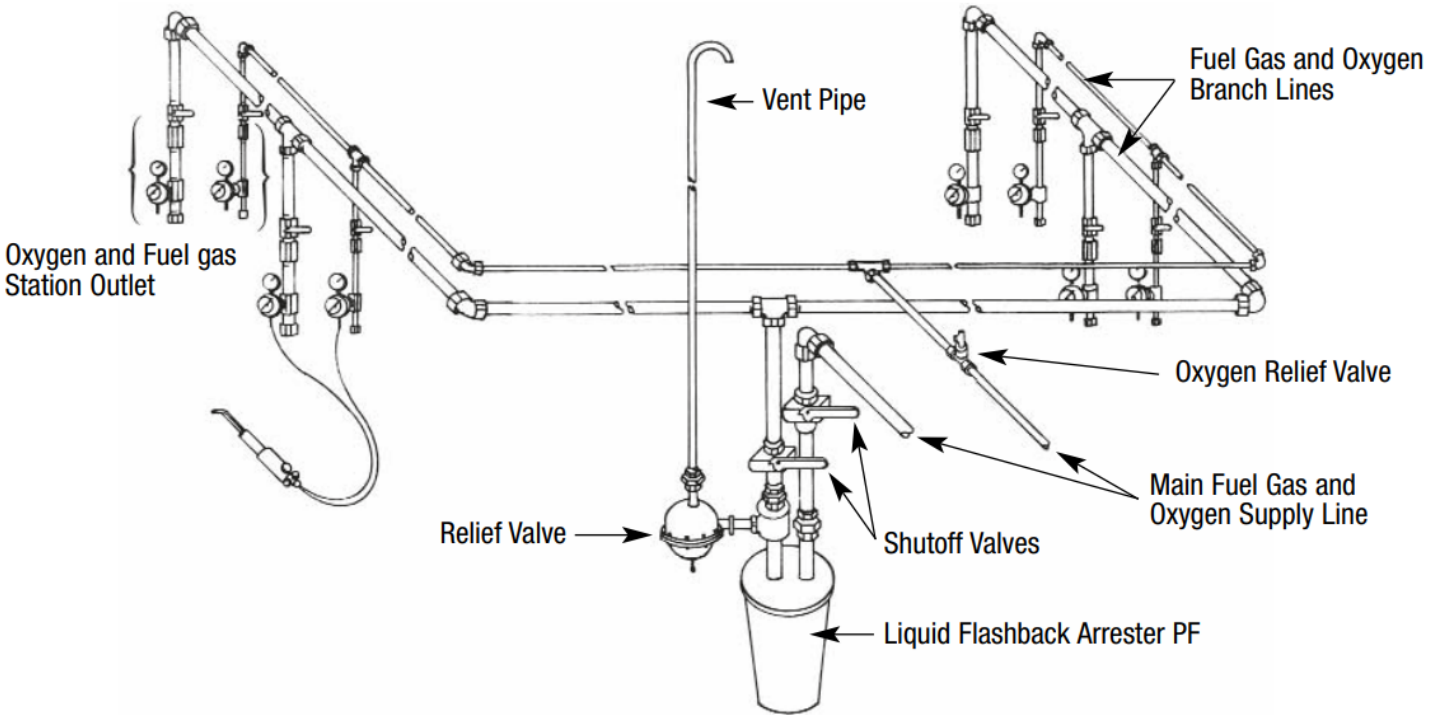


MODEL 150

Model	“A” OAH	“B” OAW	“C” PIPE SPACING	“D” STAND HEIGHT
#100	27”	15”	5”	N/A
#3	38”	10”	2-1/2”	8”
#10	48”	14”	4”	8”
#10HP	48”	14”	4”	8”
#25	52”	21”	8”	8”
#50	60”	26”	8”	8”
#150	93”	53”	18”	11”

NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY

Typical System Layout:



Installation:

Install the Rexarc Liquid Flashback Arrester in a vertical position at a location that provides convenient access for inspection and maintenance.

All fittings and piping used in the installation shall be the same size as the main service line, or the branch line when the arrester is installed at the head of a branch line.

Install inlet and outlet shutoff valves to allow for maintenance procedures.

Mount the arrester using the supplied stand or secure it to a rigid structure using suitable hardware capable of supporting the weight of the unit.

Service Piping

To ensure adequate flow rates, the main supply and branch piping in the gas distribution system must be properly sized. NFPA 51, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes*, provides guidance and requirements for the installation and operation of oxygen/fuel gas systems used for welding and cutting applications. Refer to NFPA 51 and applicable local codes for additional information regarding piping design and installation requirements. Visit www.nfpa.org for further information.

Relief Valve Vent Piping

- Install the safety relief valve in the open port located on top of the arrester using an approved thread sealant suitable for the service gas.
- Use vent piping that is the same size as, or larger than, the relief valve outlet connection.
- Do **not** install shutoff valves, flow-restricting devices, or other obstructions in the vent piping.
- Support vent piping independently of the safety relief valve. The relief valve shall not support the weight of the vent piping, as excessive loading may affect proper valve operation.
- Route vent piping separately from all other vent lines.
- Terminate vent piping with a downward-facing elbow to minimize the accumulation of rainwater, condensation, or debris.
- Relief valve discharge contains flammable gases. Vent to a safe outdoor location away from ignition sources in accordance with NFPA 51.
- After installation is complete, verify that the manual vent lever is in the closed position and parallel to the relief valve body. If the vent lever is left in the open position, fuel gas may discharge through the vent piping during operation.

Leak Testing and Filling

After installation is complete, leak-test all connections using inert gas at the intended operating pressure. Repair any leaks before placing the arrester into service.

Perform a soap-bubble leak test at the vent piping outlet to verify the relief valve is not leaking at pressures below its set pressure. If leakage is detected, inspect and replace the relief valve as necessary.

Once leak testing is complete, vent the system pressure. Next, remove the liquid level fill plug and fill the arrester with Rexarc FBA Fluid until the liquid level is at the bottom of the fill port threads. Maintain the FBA Fluid above -30°F (-34°C) to prevent freezing and ensure proper operation.

Startup Checklist

Step	Verification
☐	Verify arrester is mounted vertically and properly supported.
☐	Verify inlet and outlet piping are installed correctly.
☐	Verify inlet and outlet isolation valves are installed and functional.
☐	Verify relief valve is installed and manual vent lever in closed position
☐	Verify vent piping is independently supported and routed to a safe outdoor location.
☐	Leak test all connections and relief valve outlet using inert gas at the intended operating pressure.
☐	Repair any leaks and retest as required.
☐	Purge arrester and associated piping with inert gas.
☐	Fill arrester with Rexarc FBA Fluid through the fill port.
☐	Verify FBA Fluid level is at the bottom of the fill-port threads.
☐	Slowly introduce fuel gas into the system.
☐	Verify normal operation and place the arrester into service.

Maintenance:

Item	Frequency
FBA Fluid level check	Weekly (first month) Then monthly if no deviations during weekly check
Leak inspection	Monthly
Relief valve inspection & test	Annually
Replace FBA Fluid	Annually If contaminated during level check Darkening, charring, particulate contamination, or odor changes* If fluid becomes frozen

* May indicate a flashback event.

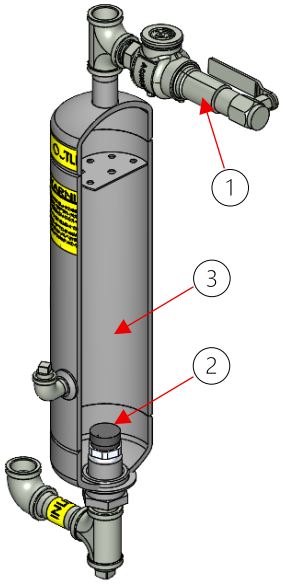
- Do not remove, repair, or replace any item on the arrester while it is pressurized or in service. Depressurize and purge the system completely before starting maintenance procedures.
- Do not weld, grind, or modify any components of the system. It will not be safe to operate. Any uncertified alteration to the system voids any warranty and the ASME certification if applicable.
- Follow all manufacturer instructions and warnings when performing maintenance on the arrester and any components.

FBA Fluid Level Inspection and Service Procedure

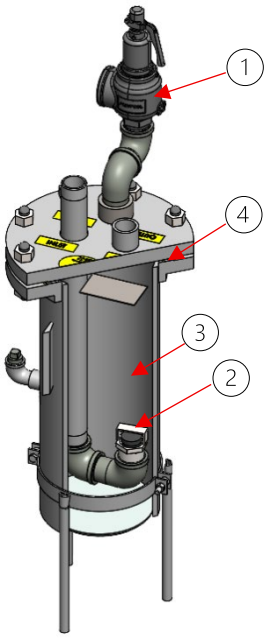
Use the following procedure when inspecting the FBA Fluid, performing routine maintenance, or replacing fluid.

- Close the inlet and outlet shutoff valves and lock out all gas sources in accordance with facility safety procedures.
- Operate the manual vent lever on the safety relief valve to safely vent pressure from the arrester and associated piping. Leave the manual vent lever in the open position until maintenance is complete.
- Confirm the vessel and connected piping are completely depressurized before opening any ports or removing plugs.
- Examine the vessel, piping connections, relief valve, vent piping, and fittings for signs of leakage, corrosion, damage, or unauthorized modifications.
- Remove the fill port plug and verify that fluid is visible at the fill opening. The correct fluid level is at the bottom of the fill-port threads.
    - If the fluid level is low, add approved Rexarc FBA Fluid until the proper level is reached.
    - If the fluid level is above the fill port opening, drain excess fluid until the correct level is obtained.
- Examine the fluid for contamination, discoloration, charring, suspended particles, unusual odor, or evidence of freezing. Replace the fluid if any of these conditions are present.
- Reinstall the fill port plug, verify all connections are secure, slowly return the system to operating pressure, and check for leaks before placing the arrester back into service.

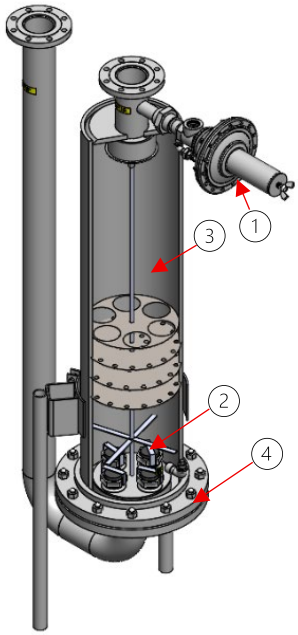
Replacement Parts:



MODEL 100



MODEL 3, 10, 10HP, 25, 50



MODEL 150

Model	1. RELIEF VALVE	2. CHECK VALVE	3. FBA FLUID	4. SEALING GASKET
#100				
3-01-0118	1-05-0160P	1-01-0168S	1-01-0408 (1GAL.)	N/A
3-01-0118S	1-05-0161P	1-01-0168S	1-01-0408 (1GAL.)	N/A
3-01-0118SF	3-05-0025SF	1-01-0168S	1-01-0408 (1GAL.)	N/A
3-01-0118SL	3-05-0025SL	1-01-0168SL	1-01-0408 (1GAL.)	N/A
#3				
3-01-0109	1-05-0160P-ASME	1-01-0112S	1-01-0408 (1GAL.)	GK-5.5-NA-CR-RB
3-01-0109S	1-05-0161P-ASME	1-01-0112S	1-01-0408 (1GAL.)	GK-5.5-NA-CR-RB
3-01-0071SF	3-05-0025SF-ASME	1-01-0112S	1-01-0408 (1GAL.)	GK-5.5-NA-CR-RB
3-01-0071SL	3-05-0025SL-ASME	1-01-0112SL	1-01-0408 (1GAL.)	GK-5.5-NA-CR-RB
#10				
3-01-0110	1-05-0160P-ASME	2-01-0055S	1-01-0408 (3GAL.)	GK-8-150CL-304-SW
3-01-0110S	1-05-0161P-ASME	2-01-0055S	1-01-0408 (3GAL.)	GK-8-150CL-304-SW
3-01-0070SF	3-05-0025SF-ASME	2-01-0055S	1-01-0408 (3GAL.)	GK-8-150CL-304-SW
3-01-0070SL	3-05-0025SL-ASME	2-01-0146	1-01-0408 (3GAL.)	GK-8-150CL-304-SW
#10HP				
3-01-0110-1	1-25-0813-2P-ASME	2-01-0055S	1-01-0408 (3GAL.)	GK-8-150CL-304-SW
#25				
3-01-0111	1-05-0160P-ASME	2-01-0048S	1-01-0408 (8GAL.)	GK-14-150CL-304-SW
3-01-0111S	1-05-0161P-ASME	2-01-0048S	1-01-0408 (8GAL.)	GK-14-150CL-304-SW
3-01-0069SF	3-05-0025SF-ASME	2-01-0048S	1-01-0408 (8GAL.)	GK-14-150CL-304-SW
3-01-0069SL	3-05-0025SL-ASME	2-01-0131	1-01-0408 (8GAL.)	GK-14-150CL-304-SW
#50				
3-01-0081	1-05-0160P-ASME	2-01-0048S	1-01-0408 (6GAL.)	GK-14-150CL-304-SW
3-01-0081S	1-05-0161P-ASME	2-01-0048S	1-01-0408 (6GAL.)	GK-14-150CL-304-SW
3-01-0081SF	3-05-0025SF-ASME	2-01-0048S	1-01-0408 (6GAL.)	GK-14-150CL-304-SW
3-01-0081SL	3-05-0025SL-ASME	2-01-0131	1-01-0408 (6GAL.)	GK-14-150CL-304-SW
#150				
3-01-0089SC-15	3-05-0027A	2-01-0048S (4)	1-01-0408 (6GAL.)	GK-14-150CL-304-SW

HOW TO ORDER PARTS

To order parts contact Rexarc International: 937-839-4604 or send emails to customerservice@rexarc.com.

When contacting Rexarc International representatives, the following information is necessary:

- Customer information
- Replacement part numbers required
- Quantity
- Request for quote or purchase order number

WARRANTY

Warranty per Rexarc International terms and conditions of sale.

Any modification and/or tampering with system may void manufacturer warranty.

If a problem occurs, contact Rexarc International immediately.