

# OPERATING INSTRUCTIONS

## MODEL RVA-05 THD

### PRESSURE RELIEF VALVE



#### APPLICATIONS:

Valve should only be used for non-corrosive fluids, or where the materials selected are compatible with the fluid and will not cause corrosive buildup, which could keep the poppet from opening. (Consult Factory). When liquids contain debris or other solid matter, which might cause internal clogging or improper operation of the valve, a strainer with a fine wire mesh should be installed before the inlet of the valve. In-line strainer fittings or basket strainers can be purchased from STRAVAL to solve this problem.

#### PRINCIPLE OF OPERATION

This is a poppet and spring type pressure relief valve where the spring constantly opposes the pressure acting against the poppet, which seals off the inlet port from the outlet port at the valve seat. The desired set pressure is achieved by compressing the spring until the spring force is adequate to balance the pressure force acting against the poppet. When the inlet pressure exceeds the set pressure, the poppet will open to relieve the excess pressure, and will reseal when the overpressure condition is dissipated.

#### MAINTENANCE & REPAIR

This valve requires little or no maintenance.

It is designed so that the pressure setting cannot be disturbed while in use. To change the pressure setting requires complete removal of the valve from its pressure port. Caution; **Make sure the pressure source is shut off to avoid any injury**, while removing the valve. The only item that would require replacement is the electrometric seal, if it no longer seals effectively, which would be from, wear or deterioration or buildup.

Usually, the body or spring rarely requires replacement, unless there is severe corrosion. If this exists, usually, the entire valve needs to be replaced and upgraded to minimize the corrosion effects. Ordinarily, the spring is manufactured from stainless steel. However, for special orders, Hastelloy and titanium springs can also be supplied.

The only other reason for removing the valve is to re-adjust the relief pressure. **Under no circumstance, over-tighten the spring so that it bottoms out, as there must be room for the poppet to travel to relieve the pressure.**

This can be easily checked by depressing the poppet by hand to see if it actually opens after the valve is set. If not install a heavier spring or replace the valve with the proper spring.

Make sure the discharge is safely piped away. If there is back pressure in the line, the pressure setting needs to be re-adjusted to compensate for the force unbalance that is created. \* Maximum installation torque for 1/4" NPT models is 10 ft/lbs.

SPECIFICATION	
MAT'L'S *	
1	POPPET
2	SEAL**
3	BODY
4	SPRING
5	GUIDE
6	NUT

\*ALTERNATE MATERIALS : PVC  
MONEL, TITANIUM, HASTELLOY

\*\*ALTERNATE ELASTOMERS: EPDM,  
TFE, KALREZ, PARFLUOR

\*A" NPT INLET

Dimensions inches

SIZE "A"	"B"	"C"	SIZE "A"	"B" dia	"C"
1/8	0.58	1.06	1 1/4	2.00	4.00
1/4	0.66	1.06	1 1/2	2.25	<b>4.25</b>
3/8	0.88	1.31	2	3.00	<b>4.25</b>
1/2	1.00	1.75	2 1/2	3.25	4.25
3/4	1.25	2.13	3	4.00	6.13
1	1.50	2.25	—	—	—

FOR AIR OR LIQUID SERVICE  
PRESSURES QUOTED ON APPLICATION

PH 973-340-9933  
FX 973-340-9933  
21 COLUMBUS AVE  
GARFIELD, N.J. 07034

SCALE	TITLE	REV	
NDNE	RELIEF VALVE 1/8" - 3" NPT		
DATE	DWG NO		
11-19-14	RVA-05THD		D
BY	LP		



## OPERATING INSTRUCTIONS

### MODEL RVA-05 THD

### PRESSURE RELIEF VALVE

#### PROCEDURE FOR DISASSEMBLY

Make sure the valve is isolated, vented or drained, and is not under pressure. Next, remove the valve from the system.

Unlock the lock nut and remove by using a small hex nut driver. Next, remove the spring guide. If the valve is a low-pressure valve and the spring wire is not very thick, a small tool such as a screwdriver can be inserted into the spring bore and the spring guide can be rotated between the lobes. For very small valves such as 1/8" & 1/4", a paper clip can be shaped to accomplish this. The same tool can be used later to make the pressure adjustment by rotating the spring guide to compress or decompress the spring. This will work well if it needs to be done only a few times. If adjustments need to be done frequently, then a special multi-prong tool can be purchased from Stra-Val to make the assembly, disassembly, and adjustment job easier.

Caution, when removing the spring guide, there're may still be spring compression left, which would result in the spring popping out. This could cause eye injury if safety glasses are not worn.

**Always wear safety glasses during the assembly and disassembly procedure.**

When the spring guide is removed, by unthreading it from the poppet threaded section, the spring and poppet can be removed.

Now the seal can be examined for wear or other deterioration. Replace if necessary.

Clean the body bore of debris or other accumulation, where the spring is housed so that the valve can work unobstructed.

Check the body seat on the body where the seal contacts the body and clean it and polish to a fine finish using fine abrasive paper or Scotch-Brite® so that it can seal properly.

#### REASSEMBLY & TEST

When all the valve parts are cleaned and inspected, the valve can be reassembled in reverse order.

Make sure no dirt or foreign particles are embedded in the valve seat, which might cause the valve seat to stay partially open and cause unwanted leakage.

When the spring and spring guide is inserted to its original position, the valve is ready for a preliminary installation and test. At this point, the lock nut need not be installed, as several adjustments to the spring may be required. This is usually a trial and error process. Once the final spring setting is achieved, the valve can be removed and the lock nut assembled and tightened. Some Loctite® or other removable thread-locking compound may be added if there is vibration in the system that could cause the lock nut to loosen.