INSTRUCTIONS

BASIKS PTFE DIAPHRAGM RELIEF VALVES "S-RV"/ "S-TRV" ASSEMBLY, INSTALLATION & OPERATING INSTRUCTIONS

A. BEFORE INSTALLING

1. Series S-RV / S-TRV valves (2-way & 3-way) will open when the inlet pressure exceeds the set pressure when properly installed and used within the recommended ranges of pressure, temperature, and chemical compatibility. The ultimate determination of material compatibility is previous successful use in the same application.

TEMPERATURE DERATING

BODY MAT'	75°F (24°C)	105°F (40°C)	At MAX. TEMP.
PVC	150 PSI; 10 BAR	100 PSI; 7 BAR	35 PSI @ 140°F, 2.5 BAR @ 60°C
CPVC	150 PSI; 10 BAR	100 PSI; 7 BAR	35 PSI @ 140°F, 2.5 BAR @ 60°C
PP	150 PSI; 10 BAR	100 PSI; 7.5 BAR	35 PSI @ 180°F; 2.5 BAR @ 80°C
PVDF	150 PSI; 10 BAR	110 PSI; 7.5 BAR	35 PSI @ 180°F; 2.5 BAR @ 80°C

Ratings may be reduced for some applications. Typical leak pressure is 2.5 times rating or more.

2. Minimum temperature 40°F (5°C)

B. INSTALLATION

1. The valve must be installed in the proper flow direction as indicated by the flow arrows. All orientations, horizontal and vertical, are suitable. Relief valves should be installed as close as possible to the vessel or pipe which it is protecting.

2. ***Caution***: Series S-RV / S-TRV is not a "pop safety" relief valve. It is not intended for air or gas service. It does not regulate pressure downstream of the valve.
   Caution: Plastic materials can degrade in ultraviolet (UV) light or sunlight.

3. Visual Identification of Material

BODY MATERIAL	COLOR
"PV" (Geon) (PVC)	DARK GRAY
"CP" (Corzan) (CPVC)	LIGHT GRAY
"PP" (Polypropylene)	TRANSLUCENT WHITE
"PF" (Kynar) (PVDF)	TRANSLUCENT WHITE/YELLOW

Caution: Polypropylene and PVDF (Kynar) often look similar and may be difficult to distinguish by color. Do not install in your system if you are not sure.

4. Threaded Connections – A suitable thread sealant (ex. Teflon tape) should be applied to male tapered threads to assure a "leak-tight" seal. The assembly need only be made "hand-tight" followed by a quarter (1/4) turn with a strap wrench. Do not over tighten or use pipe wrenches on plastic pipe and components.
Caution: Teflon tape will "string" as pipe threads are joined. Loose "strings" could lay across the seating surface and prevent the valve from completely closing. To avoid this problem, clean out old tape, and do not apply tape to the first thread. Connections should be made only to plastic fittings; metal pipe should only be installed with an intervening plastic nipple. Metal pipe and straight threaded pipe tend to cut, stretch, and distort the plastic bodies, which could result in cracking or leaking over time.

C. OPERATION

This valve is factory pre-set to 30 PSI

1. Relief Valve Operations – The function of a relief valve is to protect a pressurized pipeline, vessel, or other similar system from excessive pressure. When the inlet pressure exceeds the set point, the valve opens to bleed off the excess pressure.

2. Back Pressure Operations – A back pressure valve maintains pressure in a line or system. Excess pressure opens the valve, keeping the inlet pressure near the set point.

3. By-pass Operations – A by-pass valve is installed on a tee in the outlet piping of a pump to prevent dead-heading and/or control the pump's outlet pressure. When pressure exceeds the set point, the valve opens to allow the liquid to recycle (by-pass) to the pump inlet.

4. 3 port S-TRV are flow through valves. As long as the line pressure is less than the set pressure, fluid will flow through the 3 port S-TRV unrestricted. The two ports that are opposite each other are the flow through ports. Fluid will only come through the third (bottom) port in an overpressure situation.

Pressure Setting for By-pass

1. Install the valve. Turn the adjusting screw all the way in.
2. With the pump running normally at a pressure above the desired point, turn the adjusting screw out to reach the desired pressure.

D. SETTING TWO PORT RELIEF VALVES

Drain and depressurize the system. Install the valve inlet to the upstream piping. Screw the adjustment screw all the way in. Leave the downstream side unconnected. Start the system at a low pressure and raise the system pressure to the point that you need the relief valve to open. Slowly turn the adjusting screw out until it starts to drip from the outlet port. This is your set pressure. As the pressure increases, the flow through the relief valve will increase. The remainder of the plumbing can be completed.

E. SETTING THREE PORT RELIEF VALVES

Drain and depressurize the system. Install the valve to the upstream and downstream inline piping. Screw the adjustment screw all the way in. Leave the third port (90° overpressure port) unconnected. Start the system at a low pressure and raise the system pressure to the point that you need the relief valve to open. Slowly turn the adjusting screw out until it starts to drip from the overpressure port. This is your set pressure. As the pressure increases, the flow through the overpressure port will increase. The remainder of the plumbing can be completed.