



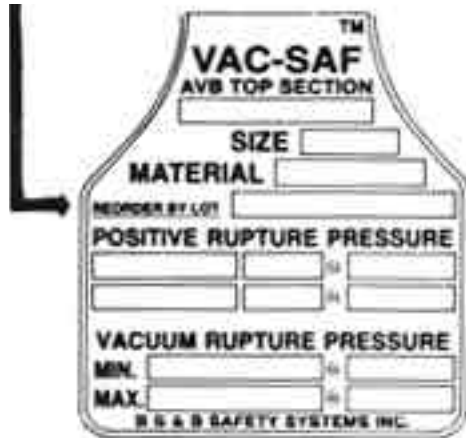
BS&B SAFETY SYSTEMS, INC.
BS&B SAFETY SYSTEMS LTD.

VAC-SAF™

AVB RUPTURE DISK INSTALLATION INSTRUCTIONS

**BULLETIN
77-8004 I**

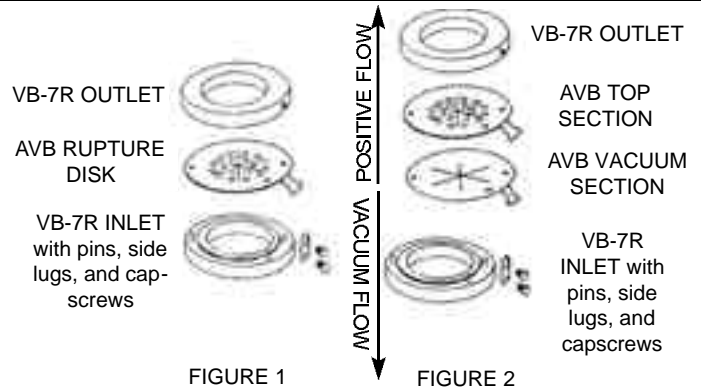
- **NEW INSTALLATIONS**
- **REPLACEMENT OF DISKS IN EXISTING INSTALLATIONS**
- **ORDER REPLACEMENT DISKS BY LOT NUMBER**



1. **Select proper location for AVB Disk**
CAUTION - VENT TO SAFE AREA
Do not locate where personnel or property could be exposed to the product being discharged through the disk. Any equipment or property in the vicinity of discharge could be damaged.
2. Consider recoil or "kickback". Recoil is the force the system will experience upon rupture. Recoil is approximately twice the disk rating (psig) times the relief area (in²). Provide adequate support for piping and connections. If the discharge is free-vented, a baffle plate mounted with extra length studs will minimize recoil.
3. The AVB disk should not be subject to excessive structural bending stresses.

BEFORE YOU INSTALL THE RUPTURE DISK:

1. **Inspect Safety Heads**
Clean seating surfaces of both Safety Head flanges before installing rupture disk. Pits, dirt, or grit can damage rupture disks or cause leakage. If surfaces are rough, polish with a fine emery cloth. **DO NOT MACHINE!** Dimensions of the Safety Head are critical. **DO NOT ALTER THEM.**
2. **Inspect companion flanges**
Clean seating surfaces of both flanges before installing the disk.
3. **Inspect the rupture disk**
Handle disk carefully - it is a precision instrument. Examine both sides of the disk for any damage.
4. **Examination of disk**
Examine for any indentations or severe scratches. A damaged disk must not be installed as it may result in premature failure.



PREASSEMBLE YOUR VB-7R ASSEMBLY

I. NEW INSTALLATION PREASSEMBLY

(See Figure 1)

1. Place Safety Head inlet in position as shown with pins up.
2. Place new undamaged AVB rupture disk on inlet. The holes in the disk will mate with the pins on the Safety Head.
3. Carefully place Safety Head outlet in position as shown.
4. Assemble unit with alignment lugs and capscrews. Tighten capscrews sufficiently to hold disk snugly in place between the inlet and outlet.

II. VACUUM REPLACEMENT PREASSEMBLY

(see Figure 2 above)

1. Remove all plastic from the ruptured AVB until only the bare metal AVB top section remains.
2. Make sure the "use with AVB top section lot number" printed on the vacuum replacement disk **MATCHES** the "Reorder by Lot No." stamped on the AVB top section disk tag. If they do not match - do not install. Consult the factory.

AVB VACUUM SECTION REPLACEMENT	
SIZE _____	USE WITH AVB
LOT NO. _____	TOP LOT NO. _____
VACUUM RUPTURE PRESSURE	
MIN. _____	MAX. _____
MIN. _____	MAX. _____
BS&B SAFETY SYSTEMS, INC.	

3. Place Safety Head inlet in position as shown with pins up.
4. Place the AVB vacuum section replacement on the Safety Head inlet first.
5. Next place the metal top section from Step 1 on top of the AVB Vacuum section.

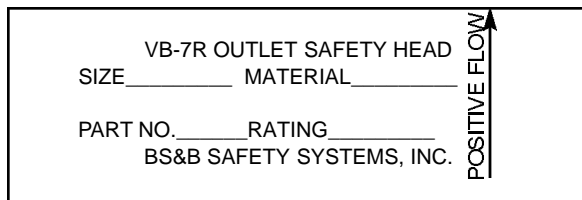
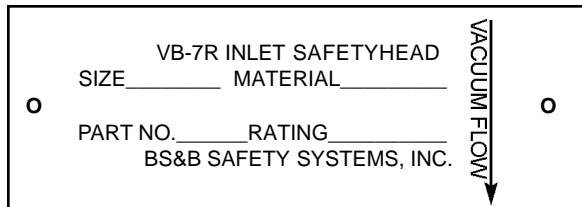
- Carefully place the Safety Head outlet in position - as shown.
- Assemble unit with alignment lugs and capscrews. Tighten capscrews sufficiently to hold disk snugly in place between the inlet and outlet.

**TABLE I COMPANION FLANGE TORQUE
ANSI 150 and DIN 10,16 RATINGS**

DISK SIZE		COMPANION FLANGE RATING		TORQUE	
IN	MM	ANSI	DIN	NM	FT-LB
3	80	150	~	57	42
		~	10/16	62	46
4	100	150	~	57	42
		~	10/16	62	46
6	150	150	~	102	75
		~	10/16	122	90
8	200	150	~	102	75
		~	10/16	122	90

INSTALL YOUR VB-7R ASSEMBLY

- Install gaskets between VB-7R Safety Head and mating pipe flanges. BS&B recommends a hard compressed fiber gasket 1/8 of an inch. However, the user is cautioned to select gasket materials adequate for the service conditions and the ability of the gasket to resist "cold flows." Gaskets that "cold flow" will allow torque relaxation which will cause premature bursts.
- Note the flow directions marked on each Safety Head of the assembly. The inlet Safety Head is marked "VACUUM FLOW" with an arrow. The outlet Safety Head is marked "POSITIVE FLOW" with an arrow.



- Place the assembly on your flanges BEING SURE TO MATCH the flow directions of your system to those marked on the AVB assembly.
- Install studs with nuts. Tighten all nuts finger tight before torquing. Evenly torque the studs to the values in Table I. Even torque can be achieved by applying 1/4 of desired final torque to each stud. Repeat pattern by torquing 3/4 of the desired final torque. Then, using same pattern, torque to full specified torque.

LIMITATIONS OF WARRANTIES

BS&B Safety Systems, Inc. warrants its products against defective workmanship and material under normal and proper use in service for a period of twelve (12) months from the date of shipment, when owned by the original buyer and only when subject to normal operating conditions outlined by Buyer when the order is placed; except that, rupture disks are not guaranteed except to burst within specified pressure ranges at temperatures specified at the time of sale.

Where the products involved include a rupture disk inside a rupture disk holder, each must be of the proper type to be utilized with its mating part as otherwise recommended by and manufactured by BS&B. BS&B specifically disclaims any warranty and any and all liability for damages, either direct or indirect, incidental or consequential, arising from the use of rupture disk assemblies not wholly comprised of BS&B manufactured products.

Any article not manufactured by BS&B and which is sold hereunder is sold only under such warranties as the manufacturer thereof extends to BS&B and which BS&B can pass through to the Buyer and enforce with reasonable effort.

Because of the effects of corrosion or erosion caused by acids, chemicals, fumes, rust, dirt, debris and other factors of storage, use, and installation, over which BS&B has no control, BS&B makes no other warranties beyond those expressly stated in this limited warranty.

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