



VAC-SAF™ SYSTEM

DKB RUPTURE DISK KB-7R SAFETY HEAD INSTALLATION INSTRUCTIONS

**Bulletin
77-80061**

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

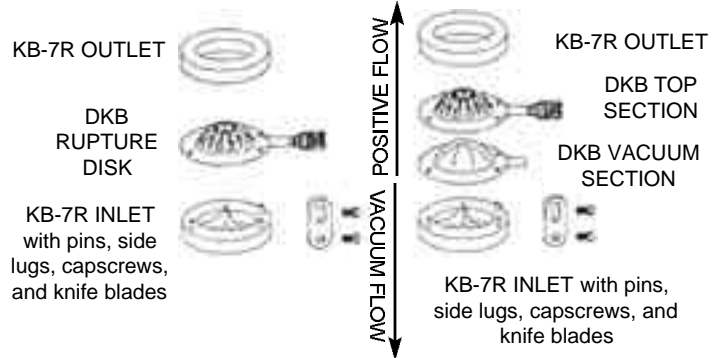
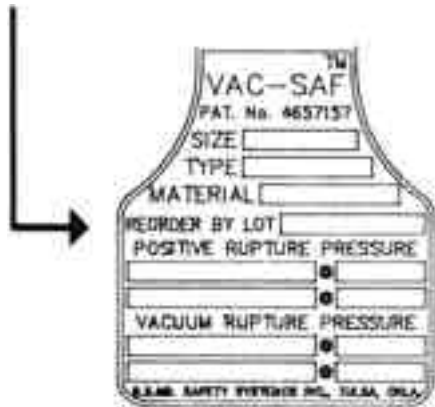


FIGURE 1
NEW INSTALLATION

FIGURE 2
VACUUM REPLACEMENT

Select proper location for DKB Disk

- CAUTION - VENT TO SAFE AREA**
Do not locate where personnel or property could be exposed to the product being discharged through the disk, also, any equipment or property in the vicinity of discharge could be damaged.
- Consider recoil or "kickback". Recoil is the force the system will experience upon disk rupture. Recoil is approximately twice the disk rating (PSI) 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.
- The DKB disk should not be subject to excessive structural bending or stresses.

BEFORE YOU INSTALL THE RUPTURE DISK:

- 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.**
- Inspect companion flanges**
Clean seating surfaces of both flanges before installing the disk assembly.
- Inspect the rupture disk**
Handle the disk carefully, it is a precision instrument. Examine both sides of the disk for any damage.
- 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 KB-7R ASSEMBLY WITH DKB RUPTURE DISK

I. NEW INSTALLATION PREASSEMBLY

(See Figure 1)

- Place safety head inlet in position as shown with pins up.
- Place undamaged DKB rupture disk on inlet. The Safety Heads' locating pins should fit into the three pin holes in the rupture disk.
- Carefully place safety head outlet in position as shown in Figure 1.
- Assemble unit with alignment lugs and capscrews. Tighten capscrews sufficiently to hold disk snugly in place between the nut and outlet.

II. VACUUM REPLACEMENT PREASSEMBLY ONLY

(See Figure 2)

- Remove all damaged plastic from the ruptured DKB until only the bare metal DKB top section remains.
- Make sure the "use with DKB top section lot number" printed on the vacuum replacement disk matches the DKB top section Lot number. (See Figure 3) If they do not match - **do not install**. Consult the factory.

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

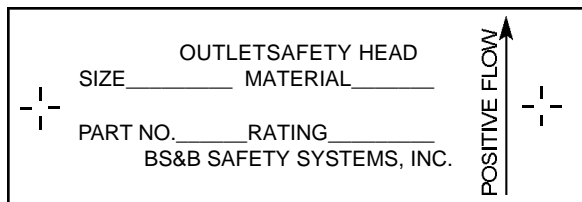
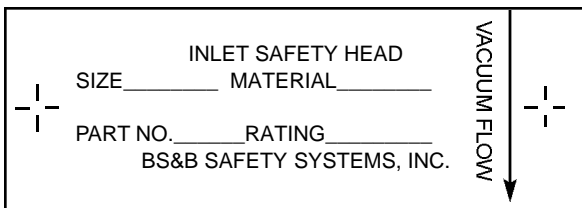
Figure 3

- Preassemble plastic replacement to metal top section:
 - Gently snap button of replacement unit into the holder on top section.
 - Rotate parts until pin holes line up.
 - Tape parts together at O.D.

- Place Safety Head inlet in position with locating pins up (See Figure 2).
- Place disk on the Safety Head inlet. The holes in the disk must line up with pins on the Safety Head.
- Carefully place the Safety Head outlet in position - align holes in outlet with pins on inlet.
- Assemble unit with alignment lugs and capscrews. Tighten capscrews sufficiently to hold disk snugly in place between the inlet and the outlet.

INSTALL YOUR KB-7R ASSEMBLY

- Install gaskets between KB-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 KB-7R 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.

**TABLE I COMPANION FLANGE TORQUE
ANSI 150, DIN 10, 16, JIS 10, 16, B.S. 10, D-E**

SIZE		COMPANION FLANGE RATING				TORQUE	
IN	MM	ANSI	DIN	JIS	B. S. 10	NM	FT-LB
2	50	150	10/16	10/16	D-E	57	42
	80	150	-	-	D-E	57	42
3	80	-	10/16	10	-	28	21
	80	-	-	16	-	35	26
	100	150	16	10	E	57	42
4	100	-	10	-	D	114	84
	100	-	-	16	-	72	53
	150	150	16	10	E	102	75
6	150	-	10	-	D	85	63
	150	-	-	16	-	79	58
	200	150	16	-	E	102	75
8	200	-	10	-	D	85	63
	200	-	-	16	-	77	57
	200	-	-	10	-	70	52
	200	-	-	10	-	70	52

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.

THE EXPRESSED WARRANTIES HEREINBEFORE GIVEN BY BS&B SAFETY SYSTEMS, INC. ARE EXCLUSIVE AND IN LIEU OF ALL WARRANTIES EXPRESSED OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



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

BS&B Safety Systems, Inc. and BS&B Safety Systems Ltd. are here to assist you in providing a safe and efficient work place. For assistance on installation, audits, training or technical advice, please contact our Customer Service Department.

BS&B Safety Systems, Inc.
7455 East 46th Street
Tulsa, OK 74145
Telephone: 918-622-5950
Facsimile: 918-665-3904
www.bsbsystems.com

or

BS&B Safety Systems Ltd.
Raheen Business Park
Raheen, Limerick, Ireland
Telephone: +353 61 227022
Facsimile: +353 61 227987
www.bsb.ie