



SINCE
1952

...rupture disks and related over-pressure protection products

Technical Bulletin #460 Rev.A

External Vacuum Support for Duplex/Inverted Style Disks

OVERVIEW

- Before the development of ZOOK's external vacuum support, few options existed for the user that required a rupture disk in a **highly corrosive, low-pressure, full vacuum application**. The best option was a TFE Mono style disk with a vacuum support. The external vacuum support is a device that offers low rated Duplex rupture disks the ability to withstand full vacuum. By offering a Duplex disk with an external vacuum support, the user can now meet all three requirements.
- The external vacuum support may only be used with a ZOOK Duplex style graphite rupture disk.
- Duplex style disks rated less than 25 psig will not withstand full vacuum without this support.
- Duplex style disks rated 25 psi or greater do not require this support as they will withstand a full vacuum.
- The external vacuum support installs on the process side (vacuum side) of a Duplex disk.
- The vacuum support consists of a solid plate of TFE with an O-ring groove machined into the support surface. A Viton O-ring creates the seal between the process side of the Duplex disk and the external vacuum support. The plate is precision drilled and has optimum free flow area. Consult ZOOK for availability of other O-ring materials. Other support materials are available upon request.
- The external vacuum support is reusable.
- The external vacuum support is provided with an adhesive label with the following information; material of construction, manufacturer, flow direction, size and part number.

CAUTION!

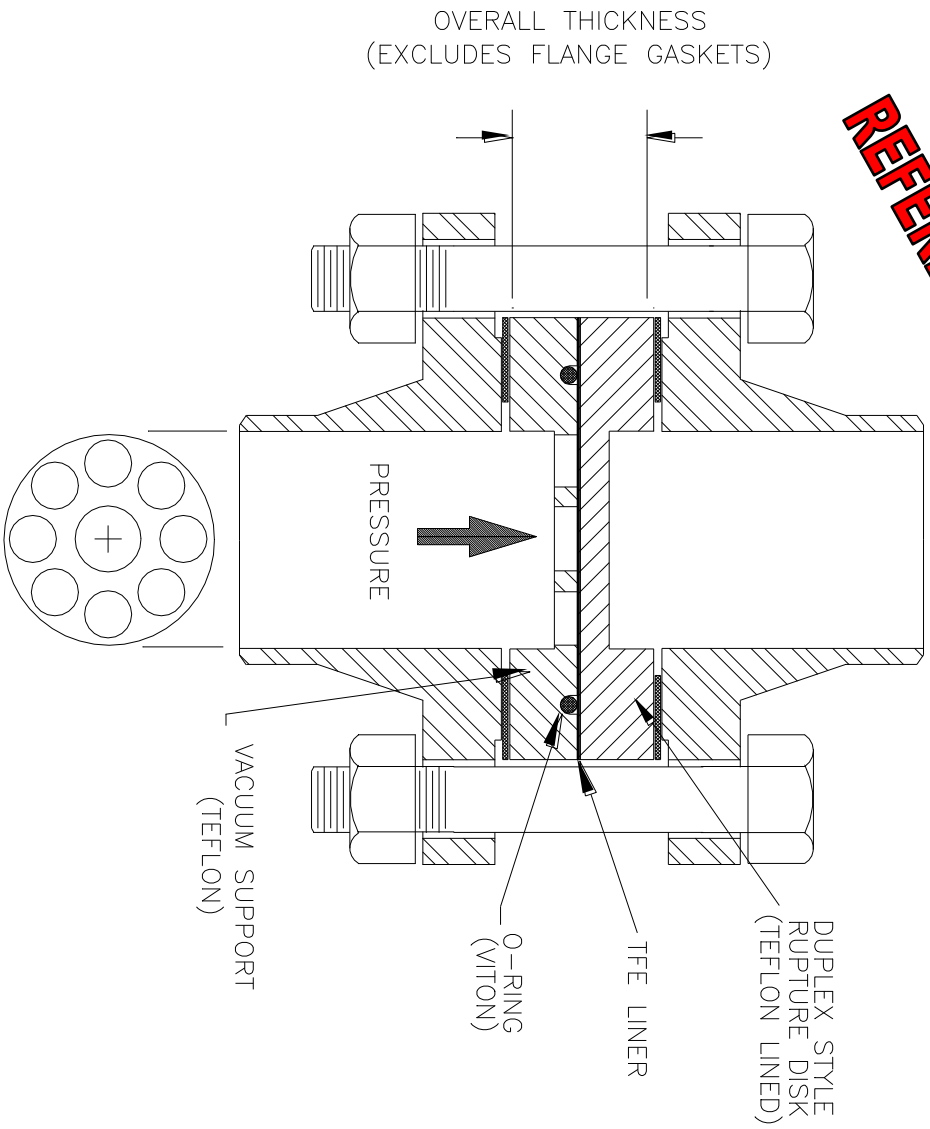
- Prior to reinstallation, a visual inspection must be performed to verify the condition of the support. No damage to the support sealing surfaces or O-ring groove should be evident.
- The O-ring should be replaced each time the external vacuum support is reused.
Replacement O-rings are available from ZOOK.
- All sealing faces must be clean, flat and parallel.
- Refer to drawing ZP 3842B for proper orientation.
- Flow direction on tags of disk and external vacuum support must both point in the proper vent direction.
- Users should consider the vacuum support free area while performing sizing calculations.
Refer to drawing ZP3842B for free area.
- Proper use of this device and/or determination of adequate flow are the responsibility of the user.



ZOOK® USA – PROQUIP – ZOOK® EUROPE
...rupture disks and related over-pressure protection products

Phone 440.543.1010
U.S.A. Toll Free 800.543.1043
Fax 440.543-4930
E-Mail zook@zook.cc
www.zook.cc

REFERENCE COPY



DISK SIZE (In.)	FREE AREA (Sq.In.)	OVERALL THICKNESS (In.)
* 1	0.34	1.75
1.5	0.76	1.75
2	1.36	1.75
3	3.87	1.75
4	5.77	1.75
6	14.78	1.75
8	25.81	2.00
* 10	32.70	3.25
* 12	47.24	3.50

*Not stock items

E	DLE	ADDED 1" AND 12" DISK TO TABLE	10/15/02
D	DLE	ADDED 10" DISK TO TABLE	09/01/99
		ADDED TFE LINER	07/09/99
		ADDED TABULATION	08/10/98
		ADDED VACUUM SUPPORT & O-RING MATL	06/26/98
		DESCRIPTION	DATE

DUPLEX STYLE VACUUM SUPPORT
GENERAL ASSEMBLY



ZOOK ENTERPRISES, LLC
16809 PARK CIRCLE DR
CHAGRIN FALLS, OH 44022

DRAWN BY	JAD
APPRD. BY	JAD
DATE	12/19/96
SCALE	NONE
DRAWING NO	ZP 3842B