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ZERO-LENGTH WINDOW

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DISCLAIMER

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ZERO-LENGTH WINDOW*

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"Zero-length" windows with bakeout capability to the limit of fluoroeleastomer type of seal such as Viton[1] ($\approx 150^{\circ}C$) for use with ConFlat[2] type flanges can be readily provided by using standard parts and replacing the rotatable insert of 2.75-in. o.d. ConFlat flange assembly with a 0.25-in.-thick disc of borosilicate glass or quartz.

Assembly (Fig. 1) consists of the flange ring, 1.75-in. i.d. by 1.85-in. o.d. by 0.0625-in. backup O ring, glass or quartz window, and sealing gasket or O ring at the seal interface.

This design is also applicable to larger diameter flanges by employing thicker windows and proper gaskets. For example, in the case of a 6-in. o.d. flange, a 4.5-in. i.d. by 4.75-in. o.d. by 0.125-in. cross section O ring is used with a 0.375-in.-thick window and the seal interface gasket is also a 4.5-in. i.d. by 4.75-in. o.d. by 0.125-in. cross section O ring.

FOOTNOTES

*Work performed under the auspices of the U. S. Atomic Energy Commission.

1. Viton fluoroelastomer rubber, product of E. I. duPont de Nemours and Co., Inc. Wilmington, Delaware.
2. ConFlat flange, product of Varian Associates, Vacuum Division, 611 Hansen Way, Palo Alto, Calif. 94303.

FIGURE LEGENDS

Fig. 1. Zero-length window assembly.

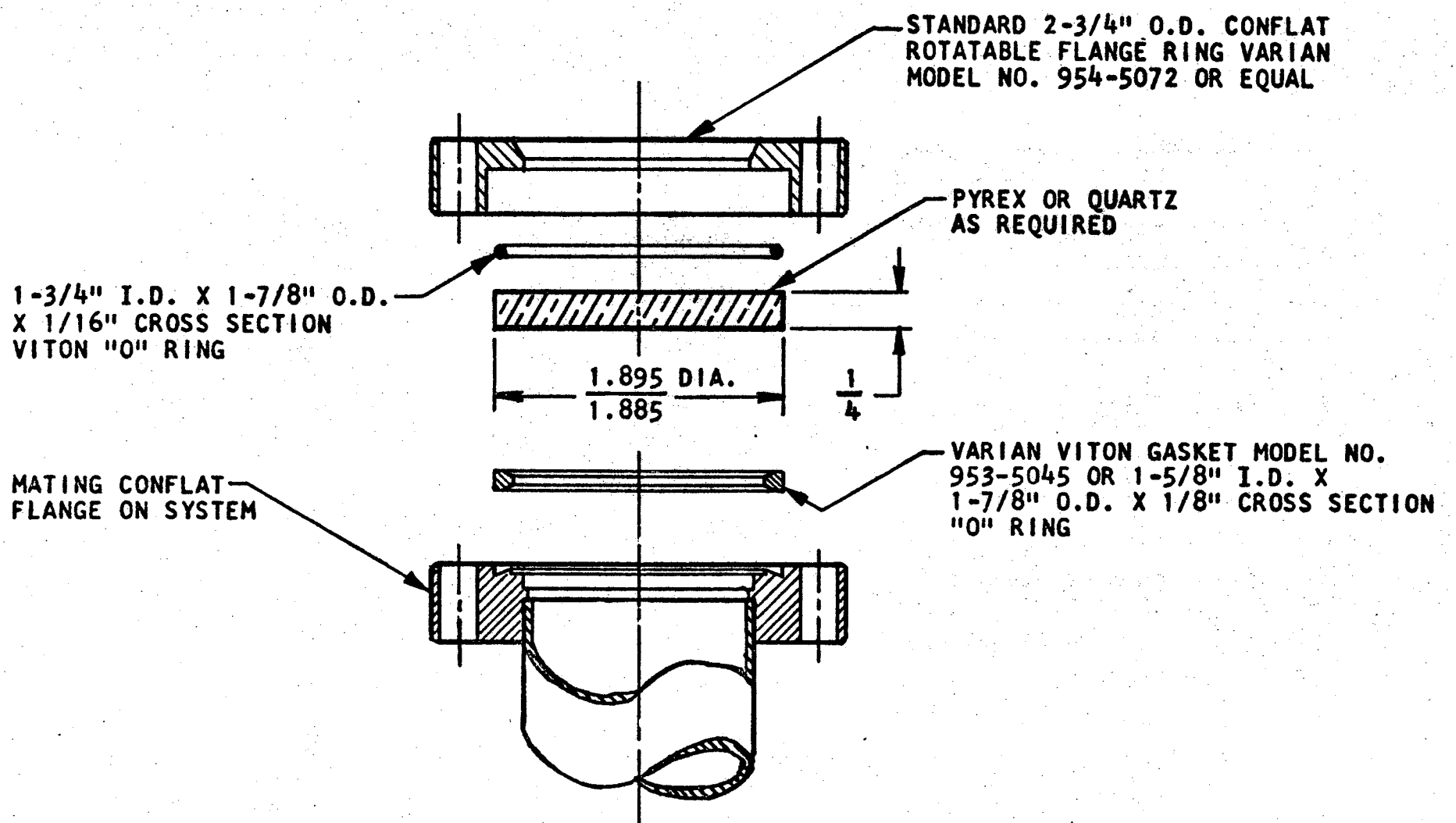
STANDARD 2-3/4" O.D. CONFLAT
ROTATABLE FLANGE RING VARIAN
MODEL NO. 954-5072 OR EQUAL
PYREX OR QUARTZ
AS REQUIRED
1-3/4" I.D. X 1-7/8" O.D.
X 1/16" CROSS SECTION
VITON "O" RING
1.895 DIA.
1.885
1/4
VARIAN VITON GASKET MODEL NO.
953-5045 OR 1-5/8" I.D. X
1-7/8" O.D. X 1/8" CROSS SECTION
"O" RING
MATING CONFLAT
FLANGE ON SYSTEM

Fig. 1

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