

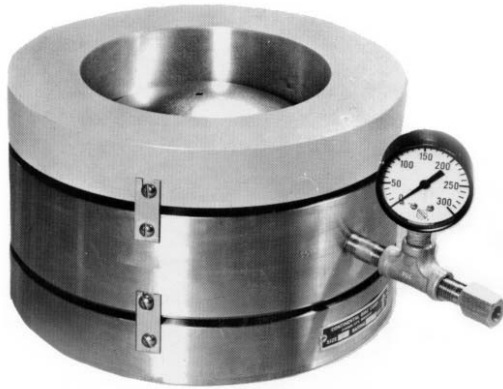


# Continental Double Disc Assembly

73-130

**Continental Disc®  
Corporation**

A Siegel-Robert Company



## FEATURES:

- Double Safe
- No product loss from leakage
- Immediate shut down unnecessary
- Quick opening valve on command
- Lower pressure discs
- No moving parts
- Fail Safe

Available in all standard materials, in all flange assemblies and ANSI ratings; standard, composite or reverse buckling discs.

## APPLICATION:

**Zero Leakage** - A must with toxic contents or very valuable contents. Extremely corrosive conditions or damage could cause the process exposed rupture disc to leak. A pressure gauge in the mid-flange would indicate the leak, while a second rupture disc maintains the system leak free. The first rupture disc could then be changed out at an opportune time.

**Quick - Opening Device** - By pressurizing the space between the two rupture discs in a Double Disc Assembly, one can obtain a quick opening device. Upon dumping the pressure between the two discs, full open area is obtained within a few milliseconds. The Double Disc Assembly, as a quick opening device, has been used in activating pressure systems, and to test systems for sudden pressure changes. Formulas on reverse side.

**Reaction Starter** - The Double Disc Assembly has been used in applications such as testing liquid media which ignites on contact. In this situation, mixing two fuels prematurely could cause an unwanted explosion. By use of a Double Disc Assembly, the fuels could be contained separately until the Double Disc were activated to release the fuels into the system for ignition.

**PRICE** - 1-3/4 times single disc assembly of same assembly, material and rating.

**DELIVERY** - Same as standard assembly of same size and material.

**TECHNICAL DATA** - See reverse side for how it works and design notes.

# CONTINENTAL DOUBLE DISC ASSEMBLY

## DOUBLE DISC ASSEMBLY TECHNICAL DATA

$D_1$  = outlet disc in psig

$D_2$  = inlet disc in psig

$P_1$  = pressure between in psig

$P_2$  = operating pressure in psig

The operating pressure must be pre-determined.

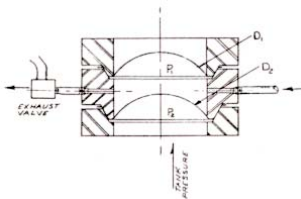
When application is Zero Leakage,  $P_1$  equals Zero.

$$\frac{P_1}{D_1} = \frac{P_2 - P_1}{D_2} = 70\% \text{ for Standard disc}$$

$$\frac{P_1}{D_1} = \frac{P_2 - P_1}{D_2} = 80\% \text{ for CDC or CDCV composite disc}$$

$$\frac{P_1}{D_1} = \frac{P_2 - P_1}{D_2} = 90\% \text{ for reverse buckling disc}$$

<p><math>D_2 = D_1</math></p> <p><math>P_1 = P_2 - P_1</math></p> <p><math>2 P_1 = P_2</math></p> <p><math>P_1 = \frac{P_2}{2}</math></p>	<p>Example:</p> <p><math>P_2 = 1000 \text{ psig}</math></p> <p><math>P_1 = \frac{P_2}{2} = \frac{1000}{2} = 500 \text{ psig}</math></p> <p><math>\frac{P_1}{D_1} = 80\%</math></p> <p><math>D_1 = \frac{500}{.80} = 625 \text{ psig}</math></p> <p><math>D_1 = D_2 = 625 \text{ psig both discs}</math></p>
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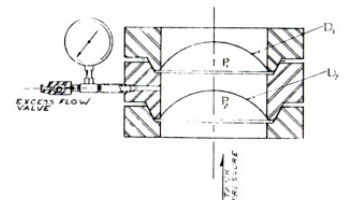
Double Disc Assembly for Reaction Starter or Quick-Opening Device.

### Design Notes:

The smaller  $P_1$  and the smaller  $D_1$ , the larger  $D_2$ .  
The larger  $P_1$  and the smaller  $D_2$ , the larger  $D_1$ .

Always use a pressure gauge in the mid flange, it is required by the ASME Code.

Consult the CDC factory for additional information or assistance.



Double Disc Assembly for Reaction Starter or Zero Leakage.