



**Continental Disc Corporation**

A Siegel-Robert Company

# HEAT SHIELDS

7-7704-7

## USE OF HEAT SHIELDS FOR TEMPERATURE REDUCTION

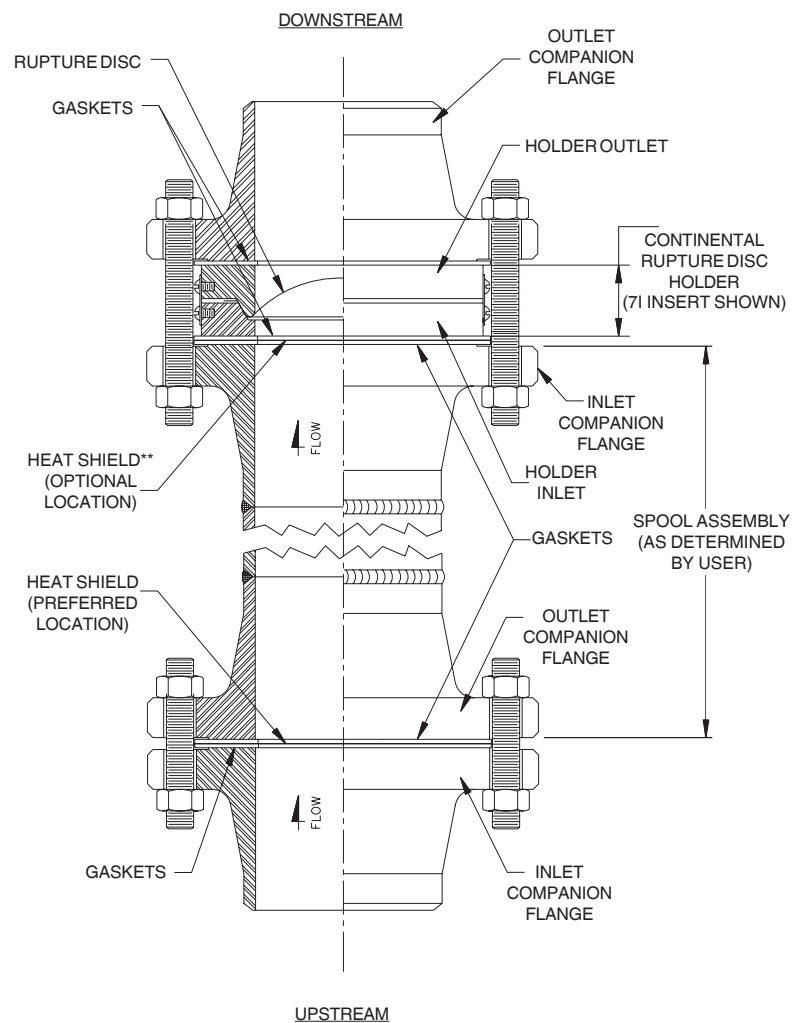
Heat Shields are typically used to reduce the process temperature to which a rupture disc is exposed. This may be necessary when the rupture disc is manufactured from materials which are not capable of withstanding high process temperatures. Heat Shields are used where Teflon®\* or other exotic material liners are required for corrosion resistance or as part of the rupture disc itself in combination with high process temperature.

The C.D.C. Heat Shield is constructed as a flat metal component for direct installation between bolted pipe flanges upstream of the rupture disc. It is slotted to allow the transmission of pressure to the rupture disc and to provide full opening upon bursting of the rupture disc. It functions as a barrier restricting the continuous flow of high-temperature gases or vapors. This allows the piping between the Heat Shield and rupture disc to act as a heat sink to the dead space and effectively reduce the temperature to which the rupture disc is exposed.

There are many factors which must be considered in evaluating the required length of the spool assembly to achieve an adequate heat sink. Therefore, no single rule can be suitable for all of the possible applications. The actual temperature drop is best determined by the end user taking into consideration the following design parameters.

- Maximum (rated) temperature of the rupture disc.
- The maximum expected temperature exposed to the exterior of the assembly. (Note that the rupture disc and spool assembly can not be insulated.)
- Attachment of other exterior cooling devices.
- Process media.

- Total surface area of the spool assembly and rupture disc.
- The transmission of heat to rupture disc by radiation, conduction, and convection.



**Performance Under Pressure®**

Teflon is a registered trademark of E.I. du Pont de Nemours and Company used under license.

\*\*For reverse-buckling type rupture discs, the Heat Shield cannot be located directly under the holder inlet.

Heat Shields are available in the sizes and mating flange classes listed below.

**Table I. Sizes and Flange Ratings for C.D.C. Heat Shields**

SIZE (INCHES) (MM)	ANSI CLASS	DIN CLASS	JIS CLASS	SIZE (INCHES) (MM)	ANSI CLASS	DIN CLASS	JIS CLASS
1	150	10/40	10/20	14	150	10	5
25	300/600	—	30/40	350	300	16/25	10/20
1.5	150	10/40	10/20	16	150	10	5
40	300/600	—	30/40	400	300	16/25	10/30
2	150	10/40	10/40	18	150	—	5
50	300/600	64	64	450	300	—	10
3	150	10/40	10/20	20	150	10	5
80	300/600	64	30/40	500	300	16/25	10/20
4	150	10/16	10/20	24	150	6/10	5/10
100	300	25/40	30/40	600	300	10/25	16/20
6	150	10/16	10	30	150	—	5
150	300	25/40	16/20	750	—	—	10
8	150	10/16	10	32	150	—	5
200	300	25	16/30	800	—	—	10
10	150	10/16	10	36	150	—	5
250	300	25	16/30	900	—	—	10
12	150	10	5				
300	300	16/25	10/20				

For additional sizes and mating flange classes not shown, consult your Continental Disc representative or the factory.

Continental Disc Corporation has representatives located throughout the world.  
Contact the C.D.C. office nearest you for the authorized representative in your area.

**CORPORATE HEADQUARTERS**

Continental Disc Corporation  
3160 W. Heartland Drive  
Liberty, MO 64068-3385 USA

Phone: (816) 792-1500  
FAX: (816) 792-2277 / 5447  
E-mail: pressure@contdisc.com  
Website: www.contdisc.com

**THE NETHERLANDS**

Continental Disc Corporation  
Energieweg 20  
2382 NJ Zoeterwoude-Rijndijk  
The Netherlands  
Phone: + (31) 71-5412221  
FAX: + (31) 71-5414361  
E-mail: odcnl@contdisc.com

**GERMANY**

Continental Disc Deutschland GmbH  
Virmondstrasse 151  
47877 Willich  
Germany  
Phone: + (49) 2156-490802  
FAX: + (49) 2156-492547  
E-mail: cdd@contdisc.com

**UNITED KINGDOM**

Continental Disc UK Ltd.  
Unit C, The Business Centre  
Faringdon Avenue,  
Harold Hill, Romford  
Essex RM3 8EN  
United Kingdom  
Phone: + (44) 1708-386444  
FAX: + (44) 1708-386486  
E-mail: cduk@contdisc.com

**CHINA**

Continental Disc Corporation  
2026 The Executive Center  
20/F The Center  
989 Changle Rd.  
Shanghai, 200031  
P.R. China  
Phone: + (86) 21-5117-5848  
Fax: + (86) 21-5117-5849  
Mobile: + (86) 137-8897-2291  
E-mail: jyang@contdisc.com

**DUBAI**

Continental Disc Corporation  
P.O. Box 2234  
Dubai, U.A.E.  
Phone: + (971) 43214490  
FAX: + (971) 43438840  
Mobile: + (971) 508129525  
E-mail: kannan@contdisc.com