

CERTIFICAT

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認証証書

CERTIFICATE

ZERTIFIKAT

Member of



Industrie Service

CERTIFICATE

**EC Type - Examination (Module B)
Acc. To Directive 97/23/EC
Pressure Equipment Directive**

Certificate-No.: USA-10-12-003-004

for

**Continental Disc Corporation
3160 West Heartland Drive
Liberty, MO 64068, USA**

We hereby certify, that the type described below meets the provisions of
Directive 97/23/EC

Description of the type:
Tension Acting Composite Bursting Disc Safety Devices
drawing: PEDTACOMP Rev B
Design Examination Report#: **P- USA-10-10-003-004**

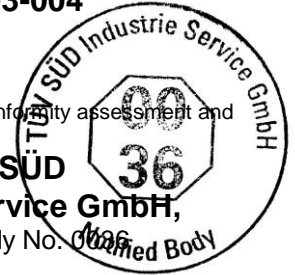
The validity of this certificate expires in 10 years from date of issuance
It may be extended upon request.

A module combination as described in Annex II of Directive 97/23/EC is required for conformity assessment and
CE marking

Austin

December 29, 2010

TÜV SÜD
Industrie Service GmbH,
Notified body No. 0036



Test Laboratory for Pressure Equipment

N. Mueller
Norbert Mueller

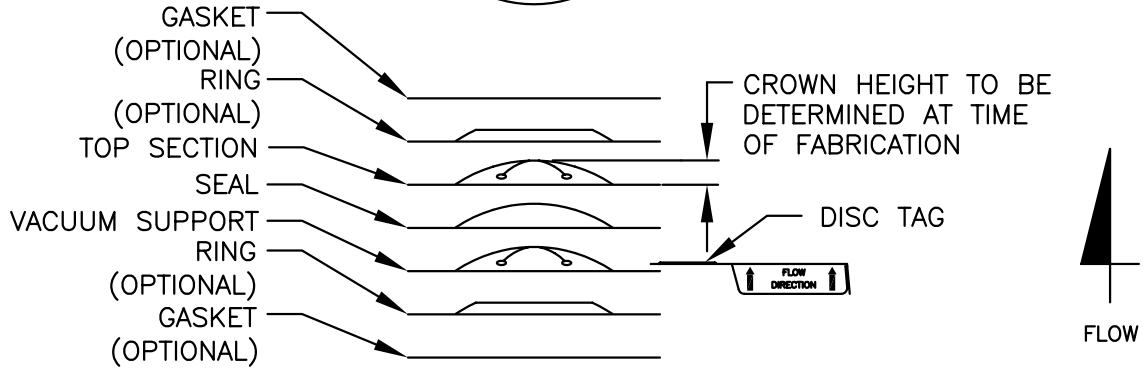
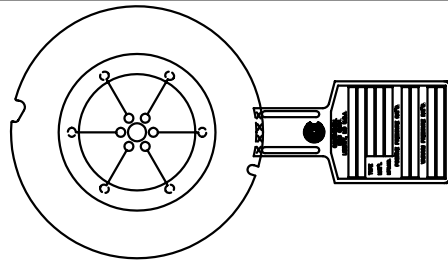
TÜV SÜD
Industrie Service GmbH
Westendstrasse 199
D-80686 München

Contact:
TUV SUD America
Industry Service
5 Cherry Hill Drive
Danvers, MA 01923

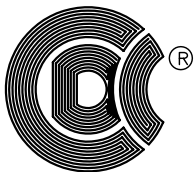
Member of
CONFÉDÉRATION EUROPÉEN



D'ORGANISMES DE CONTROLE



NAME	SIZE	PRESSURE	HOLDER
CDC, CDCV, PL, PLV, LD, LDV, LPL & LPLV	11/16"-36"	1.5-1,440 PSIG	7I INSERT
			FULL BOLTED
			UNION
			SCREW TYPE
			TITE-SEAL
			UNISERT
			RHI
			CLEAN SWEEP
			QUICK CHANGE
SANITARY			
CM, CMV	11/16"-36"	1.5-1,440 PSIG	FA INSERT
CAL-VAC/ POS-A-SET	3"-12"	2-150 PSIG	CAL-VAC
			POS-A-SET
ENVIRO-SEAL / ISOLATION SEAL	1"-36"	1-59 PSIG	NONE REQUIRED
			NONE REQUIRED
TANK SERT	2"	25-165 PSIG	NONE REQUIRED
PC-SERT	2 1/2"-3"	20-200 PSIG	NONE REQUIRED



Continental Disc Corporation

3160 West Heartland Drive
Liberty, Missouri 64068

LOG NUMBER: PECTACOMP

10-27-10
DATE

DATE

UNLESS OTHERWISE NOTED:
INCHES
DIMENSIONS ARE IN [MILLIMETERS]

WE CERTIFY TO THE BEST OF
OUR KNOWLEDGE THIS DRAWING
MEETS THE SPECIFICATIONS
SET FORTH

PREP. BY	B. HICKS	6-11-01
CHKD. BY	K. ADKINS	6-14-01
APPR. BY	R. DOELLING	6-15-01

TITLE

TENSION ACTING COMPOSITE
BURSTING DISC SAFETY DEVICES

DATE

P.O. # _____

S.O. # _____

SHEET

1 OF 1



Report No.:	P-USA-10-10-003-004	Page:	1 of 5
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EC Type-Examination Module B <input checked="" type="checkbox"/>		EC Design-Examination Module B ₁ <input type="checkbox"/> , Module H ₁ <input type="checkbox"/>		Examination of Design Module G <input type="checkbox"/>	
Manufacturer:		Manufacturing plant:		For:	
Continental Disc Corporation 3160 W. Heartland Drive Liberty, MO 64068, USA		3160 W. Heartland Drive Liberty, MO 64068, USA			
Drawing	PEDTACOMP	Rev:	B	Category:	IV
Intended use:	Tension acting composite bursting disk safety devices				
Name / model	CDC, CDCV, PL, PLV, LD, LDV, LPL, LPLV	CM, CMV	CAL-VAC / POS-A-SET		
Allowable range of operating pressure PS [bar]	0.1-100	0.1-100	0.01-10		
Min/Max. allowable Temperature TS [°C]					
Nominal Diameter [DN]	17 to 900	17 to 900	75 to 300		
Fluid/Fluid Group	Gas, liquid / 1	Gas, liquid / 1	Gas, liquid / 1		
Name / model	ENVIRO-SEAL / ISOLATION-SEAL	TANK-SERT	PC-SERT		
Allowable range of operating pressure PS [bar]	0.06-4	1.7-11.3	1.3-13.7		
Min/Max. allowable Temperature TS [°C]					
Nominal Diameter [DN]	25 to 900	50	63 to 80		
Fluid/Fluid Group	Gas, liquid / 1	Gas, liquid / 1	Gas, liquid / 1		
SPECIFICATIONS – DIRECTIVE 97/23/EC:					



Report No.:	P-USA-10-10-003-004	Page:	2 of 5
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1. Regulations/Codes:	AD 2000	TRD	ASME / ANSI B 31.B
Applied in full	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Applied in part	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parts applied:	AD 2000 Merkblatt A1		
2. Standards/other Specifications:	EN ISO 4126-2:2003		
Requirements: Directive 97/23/EC, Annex I, 2.11			
APPLICATION:			
Written declaration, that the application has not been lodged with any other notified body	<input checked="" type="checkbox"/>	Complete technical documentation (Paragraph 3 of the relevant module)	<input checked="" type="checkbox"/>
			Drawing #, and Rev PEDTACOMP REV. B
			<input checked="" type="checkbox"/>

Comments:

The stipulations of the test plan (# P-USA-10-05-003-004.) shall be fulfilled

The burst discs are manufactured without permanent joining processes.

The permanent joining procedures and the personnel involved with the manufacturing of the holders shall be approved by a notified body for the PED



Report No.:	P-USA-10-10-003-004	Page:	3 of 5
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Drawing No.: PEDTACOMP		Rev.: B			
	EXAMINATIONS AND RESULTING EVALUATIONS (CHECKLIST)	Acceptable	Not applicable	Remarks	
1.	Design Code / calculation method	X		EN ISO 4126-2:2003	
2.	Design for adequate strength <ul style="list-style-type: none"> • Internal/external pressure • Min/Max operational temperatures • Corrosion, erosion, wear, fatigue 	X X X		Compatibility with process operational conditions is the responsibility of the user	
3.	Suitability of materials for main pressure bearing parts <ul style="list-style-type: none"> • Particular material appraisal(s) PMA 		X	Compatibility with process fluids is to be determined in the responsibility of the user	
4.	Testing In compliance with the standard requirements	X		MP-7006 Rev. M	
5.	Marking and labeling	X		Conformance with EN ISO 4126-2 MP-7007 Rev. M	
6.	Installation manuals	X		GEP- 6002, 7004, 6051, 6009, 6010, 6036, 6019, 6020, 6021, 7007, 6037	
<p>Manufacturing:</p> <p>Manufacturing shall be performed in such a way, that the discs have uniform chemical and physical properties and shall be free from defects. If corrosion protection is applied, the corrosion protection shall not impair the performance of the bursting disc safety device. The manufacturing facility and the manufacturing procedures shall be subject to surveillance by TÜV SÜD Industrie service GmbH.</p> <p>Materials:</p> <p>The selection of materials used for the bursting discs shall take into account the suitability with regard to manufacture and the compatibility with the process fluid and the operational chemical and physical conditions.</p> <p>Material of the same specification coming from the same heat number and heat treatment batch with a specified thickness shall be defined as material lot.</p>					



Report No.:	P-USA-10-10-003-004	Page:	4 of 5
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The materials listed in table A1 of EN ISO 4126-2 and other materials*) can be selected for bursting discs and holders.

*) The suitability of a material for a specific application can be ensured by a particular material appraisal (PMA) by the notified body in charge.

Testing:

A quantity of bursting discs from the same type and size manufactured from the same material lot shall be defined as "batch".

Rupture disc burst testing shall be performed in conformance to CDC Procedure MP-7006, Rev. M.

Tests previously performed:

DISC MODEL	Disc material	Lot/Batch No.	Ambient breaks [bar]	Breaks at temperature [°C]
1" CDC-G (FS)	316 ss/TEFLON	8166674A	8.28, 8.48	7.86, 7.66 @ 50° C
2" CDC (LL)	316 ss/TEFLON	8167693A	14.48, 14.48	
2" CDCV (LL)	316 ss/TEF/316 ss	8160833A	1.62, 1.62	
1 1/2" PLV (LL)	TEF/MONEL/TEF	8166965A	10.28, 10.28	
2" PLV (FS)	TEF/316 ss/TEF	8167419A	3.52, 3.45	
6" LD (LL) LAMOT	316 ss/TEFLON	8169024A	2.21, 2.24	
6" LDV (LL) LAMOT	316/316/316 ss	8149688A	15.86, 15.79, 15.52, 15.66	
1" LPL (LL) LAMOT	TEF/316 ss/TEF	8169727A	25.17, 25.52	
1" LPL (UL) LAMOT	TEF/316 ss/TEF	816868 A	5.48, 5.24	
2" LPLV (LL) LAMOT	TEF/ 316L ss/TEF	8170022A	2.62, 2.79	
2" LPLV (LL) LAMOT	TEF/ 316L ss/TEF	8162901A	2.83, 2.69	
1" CMV (TG)	Tantalum/TEF	8103437A	12.83, 12.76	
4" CMV (TG)	Tant/TEF/HC	8129447A	6.62, 6.66	
6" CAL-VAC (FS)	316 ss/FEP/316 ss	8160257 A	3.07, 3.10	
4" ENVIRO-SEAL I	316 ss/ TEFLON	8102853A	2.28, 2.34	
2" TANKSERT (FS)	316 ss/TEF/316 ss	8165898A	3.79, 3.69, 3.72, 3.72, 3.79	
2" TANKSERT (FS)	316 ss/TEF/316 ss	8168652A	4.00, 4.07, 4.00, 4.00	
2 1/2" PC-SERT	316 ss/TEF/316	8171100A	1.55, 1.45, 1.48,	



Report No.:	P-USA-10-10-003-004	Page:	5 of 5
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	SS		1.52	
3" PC-SERT	316 ss/TEF/316 SS	8160619A	3.24, 3.31, 3.31, 3.31, 3.28, 3.31, 3.31, 3.31,	

The tested burst discs comply with the drawing in essence.

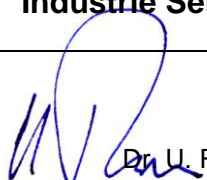
Marking:

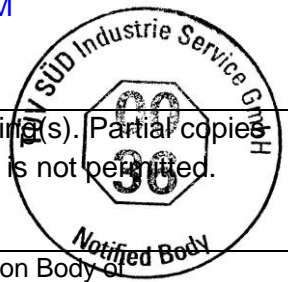
The marking shall be performed in conformance to CDC Procedure MP-7007, Rev. M and shall include the following:

- Manufacturers name or trade mark
- Model / type
- Nominal size (DN)
- Material identification
- Specified minimum and maximum burst pressure and temperature
- Performance tolerance
- Flow direction
- Standard if applicable
- Batch identification
- Reference to specified holder
- Year of manufacture



Report No.:	P-USA-10-10-003-004	Page:	6 of 5
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Result:			
The above-mentioned examinations were performed in accordance with the provisions of the stated requirements/specifications. The requirements of the Directive 97/23/EC are met.			
Declaration of Conformity :	CE marked product shall be accompanied by a Declaration of Conformity in conformance to Appendix A of CDC Procedure MP-7007, Rev. M		
Notes:	The examination results relate exclusively to the described drawing(s). Partial copies of this report without a written authorization by the notified body is not permitted.		
Location:	Palo Alto	Date:	December 23, 2010
			Inspection Body of TÜV SÜD Industrie Service GmbH
			 Dr. U. Rohlfs
Attachments:	<ul style="list-style-type: none"> • Drawing PEDTACOMP REV B • Sample declaration of conformity • GEP-6002 Rev. L, Gep-7004 Rev. H, GEP-6051 Rev. C, GEP-6009 K, Gep-6010 Rev, K, GEP-6019 Rev. K, GEP-6020 Rev. H, GEP-6021 Rev.H, GEP-7007 Rev, E, GEP-6036 Rev. D, GEP-6037 Rev. NR • MP-7006 Rev. M • MP-7007 Rev. M • MP-1002 Rev. AI • MP-1003 Rev. AE • MP-1004 Rev, H • MP-1008 Rev. T • MP-1010 Rev, F • MP-1011 Rev. U • MP-1073 Rev. E • MP-1082 Rev. NR 		





Report No.:	P-USA-10-10-003-004	Page:	7 of 5