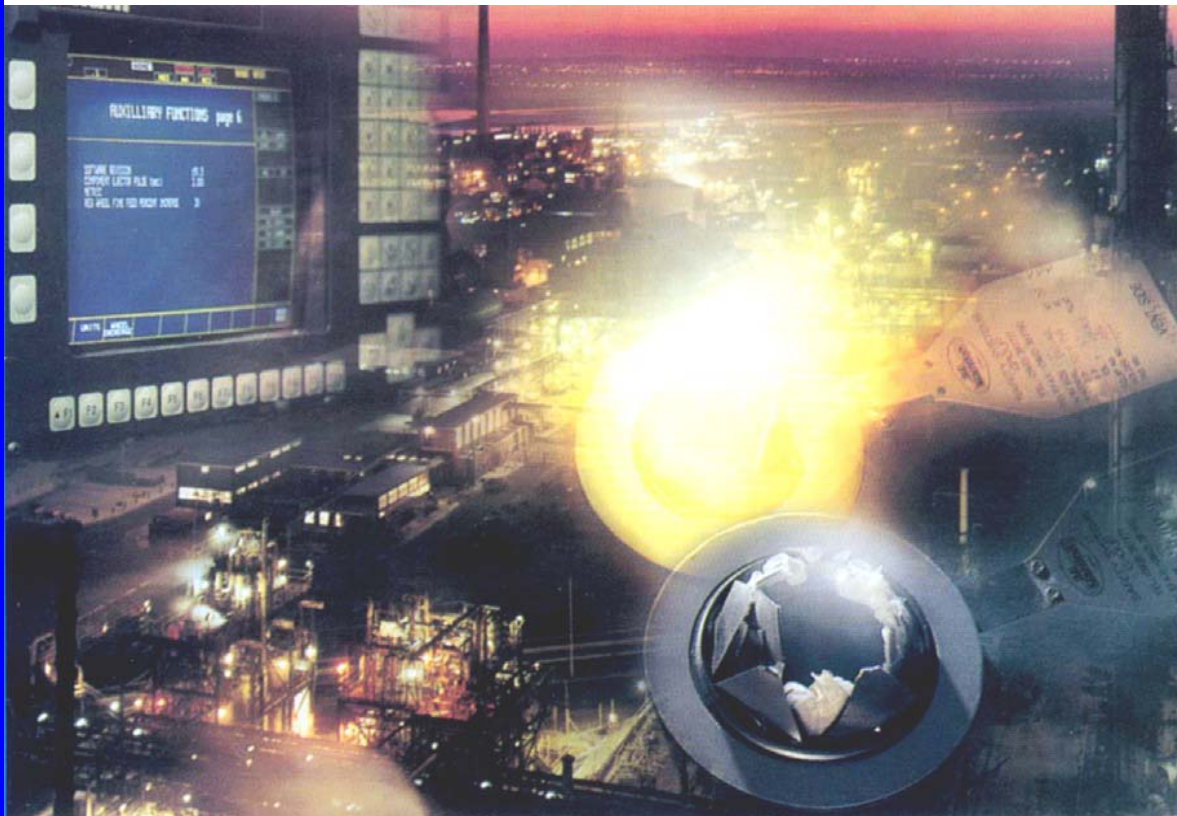


Marston



BURSTING DISCS

CS

Forward Acting Discs



Marston

Marston, a Division of Safety Systems UK Limited, has over 50 years experience of the design manufacture and application of bursting disc equipment.

The applications for bursting discs are as diverse as the Industries that use them. Chemical, Oil, Gas and food as well as cryogenic and transportation are typical examples. The selection of the most suitable bursting disc can be critical. The range of designs is extensive, and the optimum choice can be provided.

CS Bursting Discs

Composite Slotted discs usually comprise two parts. Firstly a vent side metallic slotted disc, with a process side seal membrane, usually of a fluorocarbon material for corrosion resistance. When the disc is subjected to excessive pressure the disc bursts and opens along the slots without fragmentation making it an ideal disc for the upstream protection of safety relief valves. Metal seal membranes can be used but may fragment on burst. When subjected to vacuum conditions, CS discs will always require a vacuum support.



The CS disc is suitable for all relieving phases and can generally be operated at up to 80% of minimum bursting pressure.

Quality

Marston is fully committed to an ongoing Total Quality Improvement programme. This was recognised with Marston audited and approved to design and manufacture bursting discs with its Quality Control procedures registered to the highest standards required by BS EN ISO 9001 Certification.

Quality is an integral part of all processes to provide customer satisfaction and confidence.

CS bursting discs are manufactured and tested in accordance with the requirements of the relevant standard, including BS2915, AD Merkblatt A1, ISPEL, ASME VIII, ISO 6718 and EN ISO 4126.

All of Marston standard disc designs have been approved for use in accordance with the requirements of the P.E.D., 97/23/EC.

Corrosion Resistance

CS bursting discs can be manufactured from all commonly used disc materials, including Tantalum, Nickel alloys and Stainless Steel. Fluorocarbon lining provides an excellent protection for corrosive duties.

The Effect of Temperature

Changes in temperature affect all bursting disc materials. Typically, as the temperature rises, the material strength reduces and the bursting pressure falls.

Allowable Temperature Ranges

Maximum Temp. °C	Seal Material	Minimum Temp. °C
200	FEP	-200
250	PTFE	-200
285	PFA	-200
425	Aluminium	-200
500	Nickel 200	-200
550	Monel 400	-200
550	Inconel 600	-200
500	St. St. 316	-200
500	Hastelloy C	-200
300	Tantalum	-200

Features

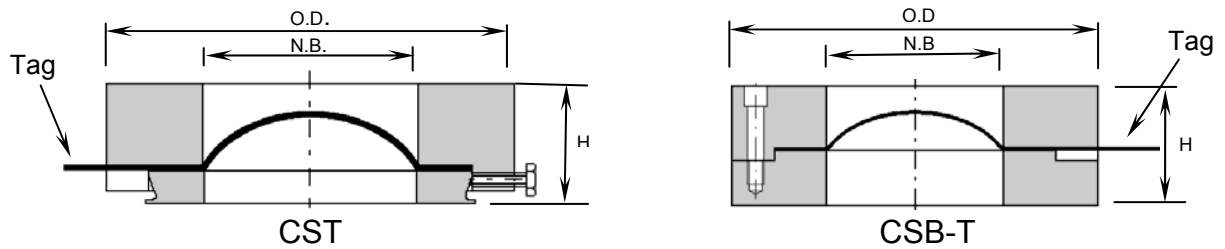
Feature	CS Performance
Fragmentation	None (With Fluorocarbon Seal)
Operating Ratio	Up to 80%
Vacuum Duty	Requires Vacuum Support
Pressure Cycling Duties	Satisfactory
Leak Tightness (To Vent)	<1 x 10⁻⁴ mbar.l.sec⁻¹
Leak Tightness (To Atmosphere)	<1 x 10⁻⁵ mbar.l.sec⁻¹
K _R Value	K_{RGL} 1.2 (With Vacuum Support)

Vacuum Supports

Where reverse pressure or vacuum conditions exist, a support will be required to prevent disc reversal. Fully opening supports are permanently attached to the disc, and open when the disc bursts. Supports fitted to the latest range of CS discs do not reduce the effective area of the assembly.

Holder

The standard holder is a two-piece unit designed to fit inside the flange bolts of a system. When necessary, a full-face assembly having through boltholes can be supplied. Special designs are always available, providing specific facings, foolproofing devices or pressure tapplings, for example. The bursting disc dome is fully protected during installation. Pre-torqued holder designs 'CSB-T' are also available. Marston standard holders are not sensitive to the flange bolt torque loading.



The tables below list the sizes of holders, for typical flat faced pipe flange ratings.

Holder Dimensions (mm)

N.B.	'CST' Height	'CSB-T' Height	Outside Diameter			
			ASA 150	ASA 300	PN10	PN16
25	21	38	66	73	73	73
40	21	38	85	95	94	94
50	21	38	104	111	109	109
80	25	38	136	149	144	144
100	30	38	174	181	164	164
150	41	46	222	251	220	220
200	50	56	279	308	275	275
250	60	68	339	362	330	331
300	76	76	409	422	380	386
350	83	83	450	485	440	446
400	92	92	514	539	491	498
500	106	106	606	654	596	620

CS Minimum Bursting Pressures (Barg @ 20° C)

N.B.(mm)	25	50	80	100	150	200	250	300	400	500
Seal Material										
FEP / PFA	1.5	0.75	0.5	0.35	0.3	0.25	0.2	0.2	0.12	0.12
PTFE	2.0	1.0	0.7	0.6	0.4	0.2	0.2	0.2	0.15	0.1
Aluminium	2.5	1.25	0.9	0.75	0.5	0.35	0.3	0.25	0.18	0.15
Nickel 200	8.0	4.0	2.75	2.0	1.5	1.0	0.8	2.0	1.5	1.2
Inconel 600	20.0	10.0	7.0	5.0	3.5	2.5	2.0	1.8	2.2	1.8
St St 316	20.0	10.0	7.0	5.0	3.5	2.5	2.0	1.8	2.75	2.25
Tantalum	30.0	15.0	10.0	10.0	8.0	7.0	5.5	4.5	3.5	2.5

- Lower Bursting Pressures may be available. Please consult Marston for further assistance.

Tolerances

Standard tolerance on all CS bursting discs over 1.0 Bar is +/-5%. Improved tolerances may be available. Please consult Marston for further assistance.

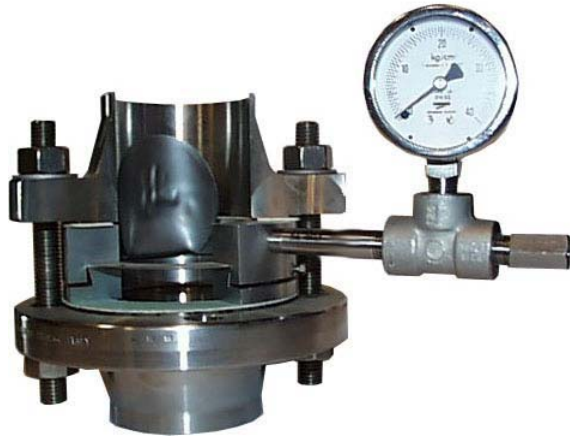
Marston

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Accessories:

EFV, Nipple, Tee and Pressure Gauge

An Excess Flow Valve (EFV) is a device to prevent the build up of any back pressure between a disc and any other equipment located downstream. This is recommended particularly when a disc is used upstream of a Safety Relief Valve. It is often used in conjunction with a Pressure Gauge which provides simple visual indication of disc failure.



Burst Disc Indicator



A Burst Disc Indicator is a simple circuit, usually fitted downstream of the bursting disc, which is broken on rupture. Marston manufacture burst indicators which are fitted directly to the disc as shown and to fit between the holder and the downstream pipe flange

BS EN ISO 9001
ASME
TÜV
Chinese SQL



Worldwide Regional Offices

As part of Marston's commitment to serving its customers, several regional offices have been established across the world.

Local representatives are also available for consultation throughout the world. Contact details can be supplied on request or obtained directly from our Web Site.

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Simply Photocopy and fax to us for more information on...

<input type="checkbox"/>	Conventional discs
<input type="checkbox"/>	Reverse Acting Discs
<input type="checkbox"/>	Graphite Discs
<input type="checkbox"/>	Explosion Vents
<input type="checkbox"/>	Accessories

Name:

Position:

Company:

Nature of business:

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