



## ABS GROUP LIMITED THE PRESSURE EQUIPMENT DIRECTIVE EC TYPE-EXAMINATION CERTIFICATE

CERTIFICATE NUMBER: 0528-2002-003-PED-T

OFFICE: LONDON

This is to certify that ABS Group Ltd, a Notified Body appointed under the requirements of the Pressure Equipment Directive 97/23/EC and The Pressure Equipment Regulations 1999 of the United Kingdom, did undertake an EC Type Examination of the subject equipment in accordance with the requirements of the said Directive and Regulations. The equipment was found to be in compliance.

This certificate is issued to: Circle Seals Controls, Inc.

Address: 2301 Wardlow Circle  
Corona  
CA 92880  
United States

Description of the equipment: 5100 Series Relief Valves

Type: Safety Relief Valves

Standard: ASME/ANSI B31.1

Maximum allowable pressure: 925 psi (63.78 bar): 5100-4-BB brass model only  
1425 psi (98.25 bar): 5100-8-BB brass model only  
2280 psi (157.2 bar): 5100-12-BB brass model only  
925 psi (63.78 bar): 5100-1-MP & -M brass models only  
1425 psi (98.25 bar): 5100-2 & -3 -MP & -M brass models only  
2280 psi (157.2 bar): 5100-4 -MP & -M brass models only  
875 psi (60.33 bar): 5100-6 & -8-MP & M brass models only  
1125 psi (77.57 bar): 5100-10-MP & -M brass models only  
990 psi (68.26 bar): 5100-4-BB stainless steel models only  
1525 psi (105.15 bar): 5100-8-BB stainless steel models only  
2400 psi (165.47 bar): 5100-12-BB stainless steel models only  
990 psi (68.26 bar): 5100-1-MP & -M stainless steel models only  
1525 psi (105.15 bar): 5100-2 & -3-MP & -M stainless steel models only  
2400 psi (165.47 bar): 5100-4-MP & -M stainless steel models only  
935 psi (64.47 bar): 5100-6 & -8-MP & -M stainless steel models only



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1200 psi (82.74 bar) 5100-12-MP & -M stainless steel models only

Maximum allowable temperature: 400°F (204.44°C) (Stainless Steel)  
100.4°F (38°C) (Brass)

Minimum allowable temperature: -320°F (-196°C)

Capacity / Nominal Diameter: 5100-BB Series:  
5100-4, 5100-8 & 5100-12

5100-MP & M Series:  
5100-1, 5100-2, 5100-3, 5100-4, 5100-6, 5100-8 & 5100-10

Category under the Regulations: IV

**Prototype Examined:**

Equipment: Relief Valve

Type: PED5159B-6M-U

Serial Number: 102502-3

ABS Group Ltd. report numbers: 2202-6260-H

Maximum allowable pressure: 875 psi

Maximum allowable temperature: 100°F

Minimum allowable temperature: -320°F

Capacity / Nominal Diameter: ¾" NPT male inlet

**Technical Documents Reviewed:**

Refer to Attached Schedule

Name of representative: Michael Cooper

Date of Issue: 17 December 2002

Date of Expiry: 16 December 2012

Signature: 



## ABS GROUP LIMITED THE PRESSURE EQUIPMENT DIRECTIVE SCHEDULE TO TYPE EXAMINATION CERTIFICATE

REFERENCE NUMBER: 11112069

DATE: 17 December 2002

### Technical Documents Reviewed:

Stress Calculations	
PED rating	
Hazard Analysis No. 500	Rev A
5100-*BB	87/08/19
5100-4BB	97/08/19
5100-8BB	8/29/88
5100-12BB	8/29/88
5100-*MP	5/20/80
5100-1MP	01/03/07
5100-2MP	5/26/92
5100-3MP	8/29/88
5100-4MP	8/29/88
5100-6MP	00/12/18
5100-8MP	6/13/80
5100-10MP	6/26/79
510 Housing	97/10/16
511 Housing	97/10/16
520 Housing	97/10/16
521 Housing	97/10/16
540 Housing	95/10/20
541 Housing	5/24/94
556 Housing	97/10/16
560 Housing	97/10/16
561 Housing	97/10/16
569 Housing	21/1/73
570 Housing	8/20/93
571 Housing	8/20/93
583 Housing	4/28/78
584 Housing	8/18/65
10510 Housing	97/01/16
10511 Housing	97/10/16
10520 Housing	8/17/65
10521 Housing	8/24/84
10550 Housing	Rev A
10560 Housing	13/11/77
12303 End	8/11/78
12304 End	5/22/79
12516 End	7/21/76
12571 End	11/16/66
12573 End	9/23/68
12574 End	6/26/68
12576 End	1/28/69
12960 End	98/03/10
12974 End	4/12/88
20207 Housing	2/12/80
20214 End	97/10/16
20218 End	97/10/16
20219 End	97/10/16



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20220 End	5/24/94
20224 End	97/10/28
20225 End	97/10/28
20242 End	97/10/16
20243 End	97/10/16
20244 End	97/10/16
20245 End	5/24/94
20246 End	97/10/28
20247 End	97/10/28
20279 End	97/11/03
26867 End	8/5/92
National Board Report 16313A	12 December 2002
Particular Material Appraisal: ASTM B16	16 October 2002
Particular Material Appraisal: ASTM A479 316	16 October 2002

M. H. Cooper  
For ABS Group Ltd.