

## 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

ESZ-105-01-P01

Attachment B - Rev 0

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This certificate is granted subject to the condition that it is understood and agreed that nothing herein contained shall be deemed to relieve any designer, manufacturer, seller, supplier, repairer or operator of any warranty, express or implied and ABS Group Ltd liability shall be limited to the acts or omissions of its employees, agents and subcontractors. Under no circumstance whatsoever shall ABS Group Ltd be liable for any injury or damage to any person or property occurring by reason of negligent operation or any defect in materials, machinery, equipment or other items other than defects ascertainable by normally accepted testing standards, and only upon those items actually inspected by ABS Group Ltd and which are covered by this certificate or report.



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

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:

3/4" NPT male inlet

#### **Technical Documents Reviewed:**

Refer to Attached Schedule

Name of representative:

Michael Cooper

Signature:

Date of Issue:

17 December 2002

Date of Expiry:

16 December 2012

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### 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

5100-\*BB

5100-4BB

5100-8BB

5100-12BB

5100-\*MP

5100-1MP

5100-2MP

5100-3MP

5100-4MP

5100-6MP

5100-8MP

5100-10MP

510 Housing

511 Housing

520 Housing

521 Housing

540 Housing

541 Housing

556 Housing 560 Housing

561 Housing

569 Housing

570 Housing

571 Housing

583 Housing

584 Housing 10510 Housing

10511 Housing

10520 Housing

10521 Housing

10550 Housing

10560 Housing

12303 End 12304 End

12516 End 12571 End

12573 End

12574 End

12576 End

12960 End

12974 End

20207 Housing

20214 End

20218 End

20219 End

Rev A

87/08/19 97/08/19

8/29/88

8/29/88

5/20/80

01/03/07

5/26/92

8/29/88

8/29/88

00/12/18

6/13/80

6/26/79

97/10/16

97/10/16

97/10/16

97/10/16

95/10/20

5/24/94

97/10/16 97/10/16

97/10/16

21/1/73

8/20/93

8/20/93

4/28/78

8/18/65

97/01/16 97/10/16

8/17/65

8/24/84

Rev A

13/11/77

8/11/78

5/22/79

7/21/76

11/16/66

9/23/68

6/26/68 1/28/69

98/03/10

4/12/88

2/12/80

97/10/16

97/10/16

97/10/16



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

0011-0 10 111 20 111111	
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
(2.0)	

M. H. Cooper For ABS Group Ltd.