



DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

[2] **EQUIPMENT OR PROTECTED SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**

[3] EC-Type Examination Certificate Number: **DNV-2004-OSL-ATEX-0375** Rev. 1

[4] Equipment or Protective System: **Valves**

[5] Applicant – Manufacturer or Authorized representative: **Groth Corporation**

[6] Address: **13650 N. Promenade Blvd, Stafford, TX 77477
USA**

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.



The examination and test results are recorded in confidential report no. : **2004-3409 Rev 2**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 13463-1: 2001 and EN 13463-5: 2003

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.

[12] The marking of the equipment or protective system shall include the following:

 II 1 G c T6 or  II 2 G c T6

Høvik, 2009-11-03
for Det Norske Veritas Certification AS


Marianne Spæren
Certification Manager




Bjørn Spongsveen
Technical Reviewer

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 300 000. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13]

Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No.: DNV-2004-OSL-ATEX-

Rev. 1

Certificate History

Revision	Description	Issue date
	Original certificate	2004-10-18
1	Range of valves is extended	2009-11-03

[15] Description of Equipment or Protective System

Category 1 spring, weight or pilot operated valves of varying designs that are manufacture from cast steel, stainless steel or painted aluminium and fitted with Buna-N, viton or PTFE (Teflon) valve seats.

Category 2 spring, weight or pilot operated valves of varying designs that are manufacture from cast steel, stainless steel or aluminium and fitted with Buna-N, viton or PTFE (Teflon) valve seats.

Type Identification

Type Identification	Description
1200A, 1201B, 1220A, 1221B, 1720A, 1721B, 1722B, 1723A, 1800A, 1820A	Combination Pressure/Vacuum relief Valve
1260A, 1261A, 2300A, 2301A, 1760A, 1761A, 1830A, 1860A	Pressure relief Valve
1300A, 1301A, 1360A, 1361A, 1810A, 1870A	Vacuum relief Valve
1400, 1420, 1430, 1460, 1660A, 1661A, 1662A, 1663A, 2500C	Pilot Operated relief Valve
2000A, 2050A, 2400A, 2450A	Emergency relief Manhole Cover
2100A	High Pressure Emergency relief
3011L, 3011H	Blanket Gas Regulator
2100A	High Pressure Emergency relief
3011L, 3011H	Blanket Gas Regulator
6100	Sample and Gauge Hatch
8110	Back Pressure Check Valve
8170	Well Type Manometers
8200	Roof Manhole Cover
8330	Sediment Trap
8450	Automatic Sediment Trap
8460, 8470	Manual Sediment Trap
8530	Thermal Operated shut-off Valve
8860	Back Pressure Regulator and shut-off Valve
1200A-FRP, 1201B-FRP, 1220A-FRP, 1221B-FRP, 1720A-FRP, 1721B-FRP, 1722B-FRP, 1723A-FRP, 1800A-FRP, 1820A-FRP	Combination Pressure/Vacuum relief Valve
1260A-FRP, 1261A-FRP, 1760A-FRP, 1761A-FRP, 1860A-FRP	Pressure relief Valve
1300A-FRP, 1301A-FRP, 1360A-FRP, 1361A-FRP, 1810A-FRP, 1870A-FRP	Vacuum relief Valve
1830A-FRP, 2300A-FRP, 2301A-FRP	Combination Pressure/Vacuum relief Valve
2500B-FRP, 2500C	Pilot Operated relief Valve



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[16] Report No.: 2004-3409 Rev. 2
Project No.: 42035449 / PRJC-148744-2009-PRC-USA

Descriptive Documents

Number	Title	Rev.	Date
ATEX-92525	Model 1200A Pressure/Vacuum relief vent weight loaded	A	2001-08-22
ATEX-92525	Bill of Material Model 1200A	A	2004-06-28
ATEX-83844	Model 1201B Pressure/Vacuum relief vent spring loaded	P	2001-08-22
ATEX-83844	Bill of Material Model 1201B	A	2004-06-28
ATEX-84367	Model 1220A Pressure/Vacuum relief vent weight loaded	P	2001-09-20
ATEX-84367	Bill of Material Model 1220A	A	2004-06-28
ATEX-83771	Model 1221B Pressure/Vacuum relief vent spring loaded	P	2001-08-22
ATEX-84771	Bill of Material Model 1221B	A	2004-06-28
ATEX-84368	Model 1260A Pressure relief vent weight loaded	P	2001-08-22
ATEX-84368	Bill of Material Model 1260A	A	2004-06-28
ATEX-83702	Model 1261A Pressure relief vent spring loaded	G	2001-10-23
ATEX-83702	Bill of Material Model 1261A	A	2004-06-28
ATEX-92717	Model 1300A Vacuum relief vent weight loaded	A	2001-08-22
ATEX-92717	Bill of Material Model 1300A	A	2004-06-28
ATEX-83775	Model 1301A Vacuum relief vent spring loaded	F	2001-08-22
ATEX-83775	Bill of Material Model 1301A	A	2004-06-28
ATEX-84370	Model 1360A Vacuum relief vent weight loaded	P	2001-08-22
ATEX-84370	Bill of Material Model 1360A	A	2004-06-28
ATEX-92297	Model 1361A Vacuum relief vent spring loaded	A	2001-10-23
ATEX-92297	Bill of Material Model 1361A	A	2004-06-28
ATEX-92526	Model 1200A Series Flange drilling dimension tables	A	2001-08-22
ATEX-92139	Model 1400 Pilot operated valve pressure/vacuum relief	A	1999-12-27
ATEX-92139	Bill of Material Model 1400	A	2004-06-28
ATEX-91905	Model 1401E & 1401EL Pilot valve	A	1999-09-01
ATEX-91905	Bill of Material Model 1401E & 1401EL	A	2004-06-28
ATEX-92143	Model 1420 Pilot operated valve Pressure/vacuum relief	-	2002-11-13
ATEX-92143	Bill of Material Model 1420	-	2004-06-28
ATEX-92141	Model 1430 Pilot operated valve Pressure relief	A	1999-12-27
ATEX-92141	Bill of Material Model 1430	A	2004-06-28
ATEX-92003	Model 1460 Pilot operated valve pressure relief	A	1999-12-27
ATEX-92003	Bill of Material Model 1460	A	2004-06-28
ATEX-92144	Model 1400/1500 SRS pilot operated valve (pressure/vacuum) Pallet assembly-configuration details	B	2001-08-10
ATEX-92144	Bill of Material Pilot operated valve (pressure/vacuum) Pallet assembly	A	2004-06-28
ATEX-91927	Model 1660A P.O.V. Pressure relief standard	D	2001-08-22
ATEX-92028	Model 1660/61/62/63A film seat/O-ring pallet details	B	2001-08-22
ATEX-91927	Bill of Material Model 1660 2 pages	B	2004-06-28
ATEX- 93729	Model 1720A Pressure/Vacuum Relief Vent Same inlet/Outlet Flange	A	2005-08-03
ATEX- 93729	Bill of Material 1720A	-	2007-07-13
ATEX- 93937	Model 1721B Pressure/Vacuum Relief Vent Spring/Weight Loaded	-	2005-08-03
ATEX- 93937	Bill of Material 1721B	-	2007-07-13





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Descriptive Documents (continued)

Number	Title	Rev.	Date
ATEX-96012	Model 1722B Pressure/Vacuum Relief Vent Spring/Weight Loaded	-	2009-09-09
ATEX-96012	Bill of Material 1722B	-	2009-09-09
ATEX-96013	Model 1723B Pressure/Vacuum Relief Vent Spring Loaded	-	2009-09-09
ATEX-96013	Bill of Material 1723A	-	2009-09-09
ATEX-93145	Model 1760A Pressure Relief Vent Same inlet/Outlet Flange	-	2004-08-04
ATEX-93145	Bill of Material 1760A	IR	2007-07-02
ATEX-93744	Model 1761A Pressure Relief Vent Spring Loaded	-	2004-08-31
ATEX-93744	Bill of Material 1761A	-	2007-07-13
ATEX-95892	Model 1800A Pressure/Vacuum Relief Valve Weight Loaded	-	2009-06-26
ATEX-95892	Bill of Material 1800A	-	2009-06-26
ATEX-95895	Model 1810A Vacuum Relief Vent Weight Loaded	-	2009-06-26
ATEX-95895	Bill of Material 1810A	-	2009-06-26
ATEX-95893	Model 1820A Pressure/Vacuum Relief Vent Weight Loaded	-	2009-06-26
ATEX-95893	Bill of Material 1820A	-	2009-06-26
ATEX-95897	Model 1830A Pressure Relief Vent Weight Loaded	-	2009-06-26
ATEX-95897	Bill of Material 1830A	-	2009-06-26
ATEX-95894	Model 1860A Pressure Relief Vent Weight Loaded	-	2009-06-26
ATEX-95894	Bill of Material 1860A	-	2009-06-26
ATEX-95896	Model 1870A Vacuum Relief Vent Weight Loaded	-	2009-06-26
ATEX-95896	Bill of Material 1870A	-	2009-06-26
ATEX-92085	Model 2000A Emergency pressure relief vent standard	A	2001-08-22
ATEX-92085	Bill of Material Model 2000A	-	2004-06-28
ATEX-92087	Model 2050A Emergency pressure/vacuum relief vent standard	C	2001-10-31
ATEX-92087	Bill of Material Model 2050A	-	2004-06-28
ATEX-91726	Model 2100 Emergency pressure relief vent	A	2001-10-17
ATEX-91726	Bill of Material Model 2100	-	2004-06-28
ATEX-92537	Model 2300A Pressure relief vent weight loaded	A	2001-09-20
ATEX-92537	Bill of Material Model 2300A	A	2004-06-28
ATEX-83846	Model 2301A pressure relief vent spring loaded	F	2001-10-18
ATEX-83846	Bill of Material Model 2301A	-	2004-06-28
ATEX-92086	Model 2400A Emergency pressure relief vent standard	A	2001-08-22
ATEX-92086	Bill of Material Model 2400A	-	2004-06-28
ATEX-92088	Model 2450A Emergency pressure/vacuum relief vent standard	B	2001-08-23
ATEX-92088	Bill of Material Model 2450A	-	2004-06-28
ATEX-92342	Model 2500C Emergency pressure relief vent pilot operated	A	2000-05-26
ATEX-92342	Bill of Material Model 2500C	-	2004-06-28
ATEX-92476	Model 3011H Blanket Gas regulator standard	D	2001-10-10
ATEX-92476	Bill of Material Model 3011H	A	2004-06-28
ATEX-92428	Model 3011L Blanket Gas regulator standard	D	2001-10-10
ATEX-92428	Bill of Material Model 3011L	A	2004-06-28
ATEX-82529	Model 6100 Gauge Hatch	A	1991-01-24
ATEX-85616	Model 8110 Back pressure check valve	-	-
ATEX-85616	Bill of Material 8110 Check valve Aluminum construction	-	-
ATEX-84714	Model 8170 Manometer, well type	B	2003-10-14
ATEX-87207	Model 8200 Roof manhole cover	-	-
ATEX-87207	Bill of Material Model 8200 Aluminum W/Buna-n	0	-
ATEX-87207	Bill of Material Model 8200 Carbon S/Buna-n	0	-





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Descriptive Documents (continued)

Number	Title	Rev.	Date
ATEX-87207	Bill of Material Model 8200 Stainless steel 316/Buna-n	0	-
ATEX-85930	Model 8330 Sediment trap	-	-
ATEX-85930	Bill of Material Model 8330 Carbon Steel	0	-
ATEX-85930	Bill of Material Model 8330 316SS	0	-
ATEX-85052	Model 8450 Automatic drip trap	A	1995-01-20
ATEX-85052	Bill of Material Model 8450 Automatic Drip Trap	B	2004-06-28
ATEX-85929	Model 8460/8470 Low/High pressure manual drip trap	B	1996-02
ATEX-85929	Bill of Material Model 8460/8470 aluminum	-	-
ATEX-85929	Bill of Material Model 8460/8470 316SS	0	-
ATEX-85757	Model 8530 Thermal operated shut-off valve	C	2001-01-22
ATEX-85757	Bill of Material Model 8530	C	2004-06-28
ATEX-85938	Model 8860 Back pressure regulator	A	1996-04-03
ATEX-85938	Bill of Material Model 8860 Alum 2 pages	0	-
ATEX-85938	Bill of Material Model 8860 316 SS 2 pages	0	2004-06-28
ATEX-91243	Model 8860 Back pressure regulators	A	2003-06-04
ATEX-91243	Bill of Material Model 8860	-	2004-06-28
ATEX-92218	1200A Pressure/vacuum relief valve fiberglass unit	-	-
ATEX-92218	Bill of Material Model 1200A	-	2004-06-28
ATEX-92219	Fiberglass units pressure/vacuum pallet assy. 1200A, 1220A, 1260A, 1300A, 1360A	-	-
ATEX-92219	Bill of Material Model 1200A, 1220A, 1260A, 1300A, 1360A		2004-06-28
ATEX-87494	Model 1220A Press./vac. relief valve fiberglass unit	D	1998-05-07
ATEX-87494	Bill of Material Model 1220A	-	2004-06-28
ATEX-87857	Model 1260A Pressure relief valve fiberglass unit	D	1997-02-21
ATEX-87857	Bill of Material Model 1260A Derakane 411-45	0	-
ATEX-87858	Bill of Material Model 1260A Derakane 470-36	0	-
ATEX-87858	Bill of Material Model 1260A Furan w/Hast	0	-
ATEX-87611	Model 1300A Vacuum relief valve fiberglass valve	D	1997-06-19
ATEX-87611	Bill of Material Model 1300A Derakane 411-45	0	-
ATEX-87611	Bill of Material Model 1300A Derakane 470-36	0	-
ATEX-87611	Bill of Material Model 1300A Furan w/Hast	0	-
ATEX-87408	Model 1360A Vacuum relief valve fiberglass valve	E	2000-07-27
ATEX-87408	Bill of Material Model 1360A Derakane 411-45	A	-
ATEX-87359	Model 1201B Pressure/Vacuum relief spring loaded, fiberglass	E	2002-02-05
ATEX-87359	Bill of Material Model 1201B	-	2004-06-28
ATEX-87585	Model 1221B Pressure/Vacuum relief spring loaded, fiberglass	D	2000-12-29
ATEX-87585	Bill of Material Model 1221B	-	2004-06-28
ATEX-87288	Model 1261A Pressure relief valve fiberglass	C	2003-01-15
ATEX-87288	Bill of Material Model 1261A Derakane 411-45	A	-
ATEX-87288	Bill of Material Model 1261A Furan	A	-
ATEX-92515	Model 2300A Pressure relief vent fiberglass unit	-	-
ATEX-92515	Bill of Material Model 2300A	-	2004-06-28
ATEX-91703	Model 2500B Emergency relief valve pilot operated corrosive service	-	-
ATEX-91703	Bill of Material Model 2500B	-	2004-06-28
ATEX-96011	Model 1720A Pressure/vacuum relief valve fiberglass unit	-	2009-09-09
ATEX-96011	Bill of Material 1720A	-	2009-09-09





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Descriptive Documents (continued)

Number	Title	Rev.	Date
ATEX-92748	Model 1721B Pressure/vacuum relief valve fiberglass unit	-	2009-09-09
ATEX-92748	Bill of Material 1721B	-	2009-09-09
ATEX-87411	Model 1760A Pressure relief valve fiberglass unit	-	2009-09-09
ATEX-87411	Bill of Material 1760A	-	2009-09-09
ATEX-91498	Model 1761A Pressure relief valve fiberglass unit	-	2009-09-09
ATEX-91498	Bill of Material 1761A	-	2009-09-09
ATEX-96022	Model 1800 Pressure/vacuum relief valve fiberglass unit	-	2009-09-09
ATEX-96022	Bill of Material 1800	-	2009-09-09
ATEX-96023	Model 1810 Vacuum relief valve fiberglass unit	-	2009-09-09
ATEX-96023	Bill of Material 1810	-	2009-09-09
ATEX-96024	Model 1820 Pressure/vacuum relief valve fiberglass unit	-	2009-09-09
ATEX-96024	Bill of Material 1820	-	2009-09-09
ATEX-96025	Model 1830 Pressure relief valve fiberglass unit	-	2009-09-09
ATEX-96025	Bill of Material 1830	-	2009-09-09
ATEX-96026	Model 1860 Pressure relief valve fiberglass unit	-	2009-09-09
ATEX-96026	Bill of Material 1860	-	2009-09-09
ATEX-96027	Model 1870 Vacuum relief valve fiberglass unit	-	2009-09-09
ATEX-96027	Bill of Material 1870	-	2009-09-09

[17] **Special Conditions for Safe Use**
None

[18] **Essential Health and Safety Requirements**
See part 9 of this certificate

END OF CERTIFICATE

