Certificate of Compliance

Certificate: 70043951 (064210_0_000) **Master Contract:** 168668

Project: 70067647 **Date Issued:** 2016-05-16

Issued to: **Metso Flow Control**
Vanha Porvoontie 229
Vantaa, 01380
FINLAND

Attention: Juho Pörhönen

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Sorin Tat
Sorin Tat

PRODUCTS
CLASS - C225804 - PROCESS CONTROL EQUIPMENT-Intrinsically Safe, Entity - For Hazardous Locations-
CLASS - C225884 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity-- For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C, and D; T4/T5/T6

Ex ia IIC T4/T5/T6 Ga
Class I, Zone 0 AEx ia IIC T4/T5/T6 Ga

- Valve Controller, model Neles ValvGuard VG9 series followed by suffixes **abHUcde**, input loop rated max. up to 9.7Vdc, 4 - 20 mA with entity parameters: Ui (Vmax) = 28 V, Ii (Imax) = 120 mA, Pi = 1.0 W, Ci = 9.6 nF, Li = 53 µH; output loop rated max.12-28Vdc, 4-20mA with entity parameters: Ui (Vmax) = 28 V, Ii (Imax) = 120 mA, Pi = 1.0 W, Ci = 8 nF, Li = 53 µH; Intrinsically safe when connected in accordance with Installation Drawing No F68963 Control Wiring.

Ambient temperature range:
$-40°C \leq Ta \leq +50°C$ for temperature class T6
$-40°C \leq Ta \leq +65°C$ for temperature class T5
$-40°C \leq Ta \leq +80°C$ for temperature class T4

Supply air pressure: 3 – 7.5 bar / 44 – 109 psi.

The structure of the VG9 series followed by suffixes **abHUcde** type code is the following:

		a	b			c	d	e
VG	**9**	**2**	**15**	**H**	**U**	**T**	**J**	**I02**

a. Enclosure type
- 2: Aluminium die cast
- 3: Stainless steel

b. Spool valve capacity and pneumatic connections
- 12: Restricted capacity
- 15: Standard Capacity
- 35: High Capacity
- 37: Extended Capacity

c. mA output usage
- none
- T (position transmitter)
- S (device status)

d. Options of valve controller
- None
- J: External Junction Box from wirings
- M: Special corrosion resistant finish. External aluminium surfaces protected by hard anodizing with PTFE
- L1: Housing Extension
- Y: Special Construction to be specified
- P: For partial stroke test. To be used together with additional solenoid valve for safety action. 4mA normal state, signal failure does not affect to the valve position.

e. Limit switch type
- I02: Pepperl+Fuchs NJ2-12GK-SN
- I09: Pepperl+Fuchs NCB2-12GM35-N0
- I45: Pepperl+Fuchs NJ3-18GK-S1N
- I57: Pepperl+Fuchs NJ2-V3-N, 2 pcs.
- I58: Pepperl+Fuchs NJ2-V3-N, 4 pcs.

APPLICABLE REQUIREMENTS

CSA C22.2 No. 0-M91	-General requirements — Canadian Electrical Code, Part II
CSA C22.2 No. 60079-0:11	-Explosive atmospheres — Part 0: Equipment — General requirements
CSA C22.2 No. 60079-11:14	-Explosive atmospheres — Part 11: Equipment protection by intrinsic safety “i”

UL 60079-0:13	-Explosives atmospheres –part 11: Equipment protection by intrinsic safety “i”
UL 60079-11:13	-Explosives atmospheres –part 11: Equipment protection by intrinsic safety “i”
CAN/CSA 61010-1-12	-Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
UL 61010-1	-Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition

Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70067647	2016-05-16	Update to report 70043951 to introduce a new VG9 device variant "P".
70043951	2015-12-07	Original certification of the ValvGuard VG9 valve controller for North American Div1 and Zone0