CUSTOMS UNION

CERTIFICATE OF CONFORMITY

CU No. **RU C-DE.ГБ04.В.00713**

Series RU No. 0148806

CERTIFICATION BODY
The Certification Agency for explosion-proof, mining and industrial electrical equipment of Independent Inspection Services "Certification Centre "STV".
Registered office: 607190, the Nizhni Novgorod region Sarov city, ul.Mira d.37.
Telephone: (83130) 67225,E-mail: stv@stv.vniief.ru
The Accreditation Certificate No. RA.RU.11ГБ04, 18.11.2015 issued by the Federal Service for Accreditation

APPLICANT
OOO (Limited liability company) KROHNE Engineering
Principle State Registration Number (OGRN): 1057747042671
Address:443532, Russia, Volga district, Stromilovo settlement
Telephone: (846)2300470, E-mail: samara@krohne.su

MANUFACTURER
KROHNE Messtechnik GmbH
Registered office: Ludwig-Krohne-Strasse 5, 47058 Duisburg, Germany

PRODUCTS
Variable area flowmeters H250/M8-Ex, H250/M40-Ex – in explosion-proof version.
Description of products, marking requirements and application conditions — in the Annex to the Certificate on the forms No.0103788, No.0103789, No.0103790, No.0103791, No.0103792, No.0103793, No.0103794.
Serial production.

CU HS CODE 9026 10 210 0, 9026 80 800 0, 9026 10 810 0, 9026 80 200 0

MEET THE REQUIREMENTS OF
Customs Union Technical Regulation
TR CU 012/2011 "On the safety of equipment for use in explosive environments"

THE CERTIFICATE IS ISSUED ON THE BASIS OF
- Test report No. A0072.1.CT/18 dated 23.04.2018 of the Test Centre for Industrial Products of the Russian Federal Nuclear Center "All-Russian Research Institute of Experimental Physics" (No. RA.RU.21ME17);
- Report on production status analysis results No. C3.0072.4/184 dated 16.04.2018 of the Certification Agency for "Certification Centre "STV" (No. RA.RU.11ГБ04).
The certification scheme 1c.

ADDITIONAL INFORMATION
Name and designation of the standards, as a result of which voluntary compliance to the requirements of TP NC 012/2011 is ensured – in the Annex to the certificate on form No.0103788.
Storage conditions and life — in accordance with the manufacturer's operating instruction.

VALID FROM 28.04.2018 **TO** 27.04.2023 **INCLUSIVE**

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Head (authorized person) of the Certification Body _____ (signature) V.V. Bairak (initials, surname)

Expert (auditing expert) (experts (auditing experts)) _____ (signature) Y.S. Kovtun (initials, surname)

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ANNEX
TO THE CERTIFICATE OF CONFORMITY CU No. RU C-DE.ГБ04.B.00713

Series RU No. 0103788
Sheet 1, Total sheets 8

1 NAME AND DESIGNATION OF THE STANDARDS, AS A RESULT OF WHICH VOLUNTARY COMPLIANCE TO THE REQUIREMENTS OF TP TC 012/2011 IS ENSURED

Item No.	Designation	Name
1	GOST 31610.0-2014 (IEC 60079-0:2011)	Explosive atmospheres. Part 0. Equipment. General requirements.
2	GOST IEC 60079-1-2011	Explosive atmospheres. Part 1. Equipment protection by flameproof enclosures “d”.
3	GOST 31610.11-2014 (IEC 60079-11:2011)	Explosive atmospheres. Part 11. Equipment with type of explosion protection intrinsically safe electrical circuit “i”.
4	GOST R IEC 60079-31-2010	Explosive atmospheres. Part 31. Equipment with dust ignition protection by enclosure “t”.
5	GOST 31441.1-2011 (EN 13463-1:2011)	Non-electrical equipment for potentially explosive atmospheres. Part 1. General requirements.
6	GOST 31441.5-2011 (EN 13463-5:2003)	Non-electrical equipment for potentially explosive atmospheres. Part 5. Protection by constructional safety “c”.
7	GOST 31610.15-2014/ IEC 60079-15:2010	Explosive atmospheres. Part 15. Equipment protection by type of protection “n”.

2 PRODUCTS COVERED BY THE CERTIFICATE

Item No.	Device designation and type	Ex marking	Marking of combustible dust ignition protection
1	The variable area flowmeters H250/M8-Ex	1Ex ia IIB T6…T2 Gb X II Gb c T6…T2 X	Ex ia IIIC T65° C Db III Db c T70°C…T300° C X
2	The variable area flowmeters H250/M9-Ex	1Ex ia IIC T6…T3 Gb X II Gb c T6…T3 X	Ex ia IIIC T75°C…T200°C Db X III Db c T75°C…T200°C X
3	The variable area flowmeters H250/M40-Ex	1Ex db IIC T6…T1 Gb X 1Ex ia IIC T6…T1 Gb X 0Ex ia IIB T6…T1 Ga X II Gb c T6…T1 X 2Ex na IIC T6…T1 Gc X 2Ex na IIB T6…T1 Gc X	Ex ia IIIC T85°C Db Ex tb IIIC T70°C…T300°C Db X III Db c T70°C…T300°C X

3 INTENDED USE

The variable area flowmeters H250/M8-Ex, H250/M9-Ex and H250/M40-Ex in explosion-proof version (hereinafter referred to as – variable area flowmeters) are designed for volume flow measurement of gases and liquids and are used in the industry as an automatic process control system elements.

4 BASIC TECHNICAL DATA

4.1 Marking of explosion protection and combustible dust ignition protection — in accordance with the Section 2 of the Annex

4.2 Degree of ingress protection provided by enclosure:
- H250/M8-Ex and H250/M40-Ex flowmeters — IP65 (according to GOST 14254-2015)
- H250/M40-Ex flowmeters — IP66/IP68 (according to GOST 14254-2015)

4.3 The electrical values for intrinsically safe electrical circuits of the flowmeters H250/M9-Ex are designed for connection to the certified intrinsically safe electrical circuits of the level “ia” of the group IIB with maximum values:

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Expert (auditing expert) (experts (auditing experts)) _____ (signature) Y.S. Kovtun (initials, surname)

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ANNEX
TO THE CERTIFICATE OF CONFORMITY CU No. RU C-DE.ГБ04.В.00713

Series RU No. 0103789

Item No.	Circuit name	Ui, V	Li, mA	Pi,mW	Li,uH	Ci, nF
1	circuits of the signal transmitter ESK2A	30	100	1000	≈0	20
2	circuits of the signal transmitter ESK3-PA (connection through FISCO-model)	24	380	5320	-	-
3	circuits of the limit switches SC3,5-NO-Y, 17S23,5-N	16	25	64	150	150
			52	169		
4	circuits of the limit switches SJ3,5-SN and SJ3,5-S1N	16	25	64	30	100
			52	169		
Note: The parameter value in the numerator is specified for the two-pin switch, and in the denominator for the three-pin switch.						

4.4 The electrical values for intrinsically safe electrical circuits of the flowmeters H250/M8 Ex with explosion protection type «intrinsically safe electrical circuits i» designed for connection to the certified intrinsically safe electrical circuits of the protection level “ia” with maximum values:

H250/…/M8EG
2-wire connection with HART-protocol:
Ui: 30 V; Li: 120 mA; Pi: 1.0 W; Ci: ≈0; Li: 10 uH

H250/…/M8MG/./K
With limit switches Peppert + Fuchs GmbH, model SC2-N0, type 2 and type 3;
Type 2: Ui: 16 V; Li: 25 mA; Pi: 64 W; Ci: ≈165; Li: 150 uH
Type 3: Ui: 16 V; Li: 52 mA; Pi: 169 W; Ci: ≈165; Li: 150 uH

H250/…/M8MG/./K
With limit switches Peppert + Fuchs GmbH, model SJ2-SN, type 2 and type 3;
Type 2: Ui: 16 V; Li: 25 mA; Pi: 64 W; Ci: ≈45; Li: 100 uH
Type 3: Ui: 16 V; Li: 52 mA; Pi: 169 W; Ci: ≈45; Li: 100 uH

H250/…/M8MG/JK
With limit switches Peppert + Fuchs GmbH, model SJ2-S1N, type 2 and type 3;
Type 2: Ui: 16 V; Li: 25 mA; Pi: 64 W; Ci: ≈75; Li: 100 uH
Type 3: Ui: 16 V; Li: 52 mA; Pi: 169 W; Ci: 7565; Li: 100 uH

H250/…/M8MG/JK
With limit switches IFM Electronic GmbH, model I7S2002-N;
Ui: 16 V; Li: 25 mA; Pi: 64 W; Ci: ≈165; Li: 120 uH
Ui: 16 V; Li: 52 mA; Pi: 169 W; Ci: ≈165; Li: 120 uH

4.5 Parameters of the intrinsically safe electric circuits of the variable area flowmeters H250/M40-Ex with explosion protection type «intrinsically safe electrical circuits i» designed for connection to the certified intrinsically safe electrical circuits of the protection level “ia” with maximum values:

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CUSTOMS UNION
ANNEX
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<table>
<tr><th>Indicator and module type</th><th>Parameters of intrinsically safe circuits</th></tr>
<tr><td>Indicator M40 ESK4
with signal output ESK4…
(terminals 11, 12 / HAN outputs 5, 6)</td><td>designed for connection only to the certified intrinsically safe circuit of level Ex ia IIC (or Ex ib IIC) with maximum values:
Ui: 30 V; Li: 130 mA; Pi: 1.0 W; Ci: ≈0; Li: 10 uH</td></tr>
<tr><td>Indicator M40 ESK4-T
with signal output ESK4…
(terminals 11, 12 / HAN outputs 5, 6)

I/O Module (terminals 1, 2, 3 or 4, 5, 6 or 7, 8 HAN outputs 1, 2 or 3, 4)</td><td>designed for connection only to the certified intrinsically safe circuit of level Ex ia IIC (or Ex ib IIC) with maximum values:
Ui: 30 V; Li: 130 mA; Pi: 1.0 W; Ci: ≈0; Li: 10 uH

designed for connection only to the certified intrinsically safe circuit of level Ex ia IIC (or Ex ib IIC) with maximum values:
Ui: 30 V; Li: 130 mA; Pi: 1.0 W; Ci: ≈10; Li: 0 uH</td></tr>
<tr><td>Indicator M40
module ESK4-FF / ESK4-PA
(terminals D, D⊥)</td><td>designed for connection only to the certified intrinsically safe circuit of level Ex ia IIC (or Ex ib IIC) with maximum values:
Ui: 24 V; Li: 380 mA; Pi: 5.32 W; Ci: ≈0; Li: 0 uH
or for connection to FISCO bus</td></tr>
<tr><td>Indicator M40 K
(terminals 1, 2 or 4, 5 HAN outputs 1, 2 or 3, 4)</td><td>designed for connection only to the certified intrinsically safe circuit of level Ex ia IIC (or Ex ib IIC) with maximum values depending on the applied limit switches
<table>
<tr><th>Type of the limit switch</th><th>Ui, V</th><th>Ii, mA</th><th>Pi, mW</th><th>Li, uH</th><th>Ci, nF</th></tr>
<tr><td rowspan="2">SC3.5-NO-Y…
174S23.5-N</td><td>16</td><td>25</td><td>64</td><td>150</td><td>150</td></tr>
<tr><td>16</td><td>52</td><td>169</td><td>150</td><td>150</td></tr>
<tr><td rowspan="2">SJ3.5-SN
SJ3.5-S1N</td><td>16</td><td>25</td><td>64</td><td>30</td><td>100</td></tr>
<tr><td>16</td><td>52</td><td>169</td><td>30</td><td>100</td></tr>
</table></td></tr>
</table>

4.6 Parameters of the electric circuits of the variable area flowmeters H250/M40-Ex with explosion protection type “n”:

Indicator and module type	Parameters of the electric circuits
Indicator M40, module ESK4 output signal ESK4… (terminals 11, 12)	Explosion protection equipment of type nA. Nominal values: U_N=14-32 V, I_N=4-20 mA
Indicator M40, module ESK4-T: output signal ESK4… (terminals 11, 12) IO Module (terminals 1, 3 (OC) or 4, 6 (OS) or 1, 2 (NAMUR) or 7, 8 (output))	Explosion protection equipment of type nA. Nominal values: U_N=14-32 V, I_N=4-20 mA Explosion protection equipment of type nA. Nominal values: U_N=8-32 V, I_N=1 mA-100mA U_N=8 V, I_N≤1/≥3 mA U_N=8-32 V, I_N<2 mA
Indicator M40, module ESK4-FF/ESK4-PA (terminals D, D⊥)	Explosion protection equipment of type nA. Nominal values: U_N=9-32 V, I_N≤1/≥3 mA
Indicator M40 K (terminals 1, 2 ot 4, 5) Limit switches: SC3.5-NO-Y… I7S23.5-N SJ3.5-SN SJ3.5-S1N	Explosion protection equipment of type nA. Nominal values: U_N=8 V, I_N≤1/≥3 mA
Output signal	Measuring signal 4-20 mA with HART-protocol, 2-wire connection. U_N=14-32 V DC
IO Module	Nominal values: U_N=12.7-32 V DC, I_N 1 mA or 3 mA (depending on the switch position) or output type open collector
ESK4-FF, ESK4-PA limit switch	Manchester-code signal 10±9 mA Nominal values: U_N=8 V DC, I_N 1 mA or 3 mA

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CUSTOMS UNION
ANNEX
TO THE CERTIFICATE OF CONFORMITY CU No. RU C-DE.ГБ04.В.00713

4.7 Parameters of the electric circuits of the variable area flowmeters H250/M40-Ex with explosion protection type “flameproof enclosure d”:

Indicator and module type	Parameters of the electric circuits
Indicator M40/ESK4 with signal output ESK4… (terminals 11, 12)	U_N=14-32 V, I_N =4-20 mA; Measuring signal 4-20 mA with HART protocol and 2-wire connection
Indicator M40/ESK4 indicator with ESK4 convector… (terminals 11, 12)	U_N=14-32 V, I_N =4-20 mA; Measuring signal 4-20 mA with HART protocol and 2-wire connection
IO Module binary output 1 (terminals 1, 3 (OC), binary output 2 (terminals 4, 6 (OC) or binary output 1 (terminals 1, 3 (NAMUR) binary output 2 (terminals 4, 6 (NAMUR) and status input (terminals 7, 8 (input))	U_N=8-32 V (open collector, pnp output), I_N <100 mA; U_N=8 V (depending on the switch position), I_N≤1/≥3 mA U_N=8-32 V, I_N <2 mA;
Indicator M40/ESK indicator with ESK-FF output or with ESK4-PA connection of output bus (terminals D, D⊥))	For connection to Fieldbus system U_N=9-32 V, I_N =16 mA; Manchester-code signal for connection using Foundation Fieldbus or Profibus-PA
Indicator M40 / K indicator 2-wire limit switch (terminals 1, 2 / 4, 5) or 3-wire limit switch (terminals 1, 2, 3 / 4, 5, 6)	U_N=5-25 V, I_N <100 mA (depending on the switch position) U_N=10-30 V, I_N ≤100 mA (depending on the switch position)
Indicator M40 / R indicator with sealed contact (terminals 1, 2, 3 / 4, 5, 6)	U_N=0-32 V, I_N ≤100 mA (depending on the switch position)

4.8 Permissible ambient temperature range win operation of the variable area flowmeters H250/M9-Ex depending on the temperature range of the measured media and variable are flowmeters H250/M9-Ex versions:

Type of signal transmitter and limit switch	High temperature version HT	Permissible ambient temperature range, °C	Permissible process temperature range, °C
Signal transmitters ESK, K1 and K2		-40 up to 60	-40 up to 200
	x	-40 up to 60	-40 up to 300
Signal transmitters K1, K2 and limit switch SJ3,5-S1N		-25 up to 60	-25 up to 200
	x	-25 up to 60	-25 up to 300

4.9 Permissible ambient temperature range win operation of the variable area flowmeters H250/M8-Ex depending on the temperature range of the measured media and variable are flowmeters H250/M8-Ex versions:

Temperature class	T6			T5				T4				T3			
Ambient air temperature, °C	40	50	60	40	50	60	65	40	50	60	65	40	50	60	65
Type	Maximum allowable process temperature, °C														
H250/…/M8EG	85	-	-	100	100	85	-	135	135	135	125	200	185	145	125
H250/…/M8MG/./K (64 mW)	85	85	85	100	100	100	100	135	135	135	135	200	200	200	190
H250/…/M8MG/./K (169 mW)	40	-	-	100	80	-	-	135	135	135	135	200	200	155	130

4.10 Minimum ambient air temperature
when variable area flowmeter H250/M8-Ex and H250/M9-Ex operation — minus 40°C

4.11 Minimum process temperature
when variable area flowmeter H250/M8-Ex and H250/M9-Ex operation — minus 40°C

4.12 Permissible ambient air temperature range when variable area flowmeter H250/M40-Ex with the explosion protection of type “intrinsically safe circuit i” and “protection of type n” operation — from minus 40°C to 65°C

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ANNEX
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4.13 Permissible ambient air temperature range when variable area flowmeter H250/M40-Ex with the explosion protection of type “explosion-proof enclosure d” and “protection with design safety c” from minus 70°C to 65°C

4.14 Maximum ambient air temperature in operation and temperature class depending on maximum process temperature and on the variable area flowmeters H250/M40-Ex versions with the explosion protection of type “explosion-proof enclosure d”:

Heating jacket		High temperature version HT	Temperature class						
without	with		T6	T5	T4	T3		T2…T1	
Flowmeter size			Maximum permissible ambient temperature,°C						
			≤60	≤65	≤65	≤60	≤65	≤60	≤65
			Maximum permissible process temperature,°C						
DN15, DN25, DN50	DN15, DN25		85	100	135	200	175	200	175
		x	85	100	135	200	200	300	300
DN80, DN100	DN50, DN80		85	100	135	165	165	185	165
		x	85	100	135	200	200	300	300
Use the connection cable and the cable glands designed for the operating temperature ≥ 90°C									

or

Heating jacket		High temperature version HT	Temperature class						
without	with		T6	T5	T4	T3		T2 and T1	
Flowmeter size			Maximum permissible ambient temperature,°C						
			≤60	≤60	≤65	≤60	≤65	≤60	≤65
			Maximum permissible process temperature, °C						
DN15, DN25, DN50	DN15, DN25		85	100	75	105	75	105	75
		x	85	100	95	135	95	175	95
DN80, DN100	DN15, DN25		85	90	75	90	75	90	75
		x	85	100	90	135	90	155	90
Use the connection cable and the cable glands designed for the operating temperature ≥ 70°C									

or:

Heating jacket		Temperature class		
without	with	T6…T1	T6	T5…1
Flowmeter size		Maximum permissible ambient temperature,°C		
		70	90	
		Maximum permissible temperature in the control point of the variable are flowmeters H250/M40-Ex and flow indicators M40, °C		
DN15 DN25 DN50 DN80 DN100	DN15 DN25 DN50 DN80	64	74	84
Note: The application of connection cable and cable glands with maximum operation temperature not less 70°C is necessary.				

4.15 Maximum ambient air temperature and temperature class of the variable area flowmeters H250/M40-Ex depending on the maximum process temperature and variable are flowmeter versions with protection type “intrinsically safe circuits i”:

Heating jacket		High temperature version (HT)	Temperature class									
without	with		T6	T5		T4		T3			T2…T1	
			Maximum permissible ambient temperature,°C									
			≤40	≤60	≤65	≤60	≤65	≤40	≤60	≤65	≤40	≤60	≤65
			Maximum permissible process temperature,°C									
ESK4												
DN15	DN15		85	100	90	135	135	200	160	140	235	160	140
DN25	DN25	x	85	100	100	135	135	200	200	200	300	300	270

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ANNEX

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DN50													
DN80	DN50		85	100	85	135	130	200	150	130	220	150	130
DN100	DN80	x	85	100	100	135	135	200	200	200	300	300	255
ESK4-T													
DN15 DN25 DN50	DN15 DN25		85	90	70	135	120	200	140	120	220	140	120
		x	85	100	85	135	135	200	200	200	300	290	225
DN80	DN50		85	85	70	130	115	200	130	115	200	130	115
DN100	DN80	x	85	100	80	135	135	200	200	200	300	270	215
ESK4-FF / ESK4-PA													
DN15 DN25 and DN50	DN15 DN25		70	60	not allowed	135	125	200	150	125	235	150	125
		x	85	60		135	135	200	200	200	300	300	240
DN80	DN50		65	60		135	120	200	140	120	220	140	120
DN100	DN80	x	85	60		135	135	200	200	200	300	300	225
K1/K2 – 64 mW													
DN15 DN25 DN50	DN15 DN25		85	100	100	135	135	200	200	180	290	205	180
		x	85	100	100	135	135	200	200	200	300	300	300
DN80	DN50		85	100	100	135	135	200	185	170	260	185	170
DN100	DN80	x	85	100	100	135	135	200	200	200	300	300	300
K1/K2 (I7S23.5-N / SC3.5-NI-Y) – 169 mW													
DN15 DN25 DN50	DN15 DN25		not allowed			105	80	200	105	80	210	105	80
		x				135	115	200	200	115	300	200	115
DN80	DN50					105	80	200	105	80	195	105	80
DN100	DN80	x				135	110	200	190	110	300	190	110
K1/K2 (SJ3.5-SN or SJ3.5-S1N) – 169 mW													
DN15 DN25 and DN50	DN15 DN25		not allowed			135	135	200	195	170	295	195	170
		x				135	135	200	200	200	300	300	300
DN80	DN50					135	135	200	180	160	275	180	160
DN100	DN80	x				135	135	200	200	200	300	300	300
R1/R2 (Reed SPST)													
DN15 DN25 DN50	DN15 DN25	x	85	100	100	135	135	200	200	150	300	235	150
DN80 DN100	DN50 DN80	x	85	100	100	135	135	200	200	145	300	220	145

Note: 1 Maximum permissible temperatures in the control point of the indicator are specified in the supplementary operating manual.
2. Maximum permissible process temperatures for painted variable area flowmeters are specified in supplementary operating manuals.

4.16 Maximum ambient air temperature and temperature class of the variable area flowmeters H250/M40-Ex depending on the maximum process temperature and variable are flowmeter versions with protection type “type of protection “n”:

Heating jacket		High temperature version (HT)	Temperature class									
without	with		T6	T5		T4		T3			T2…T1	
			Maximum permissible ambient temperature,°C									
			≤40	≤60	≤65	≤60	≤65	≤40	≤60	≤65	≤40	≤60	≤65
			Maximum permissible process temperature, °C									
ESK4												
DN15 DN25 DN50	DN15 DN25		85	100	90	135	135	200	160	140	235	160	140
		x	85	100	100	135	135	200	200	200	300	300	270

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ANNEX

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DN80	DN50		85	100	85	135	130	200	150	130	220	150	130
DN100	DN80	x	85	100	100	135	135	200	200	200	300	300	255
ESK4-T220													
DN15 DN25 DN50	DN15 DN25		85	90	70	135	120	200	140	120	220	140	120
		x	85	100	85	135	135	200	200	200	300	290	225
DN80	DN50		85	85	70	135	115	200	130	115	200	130	115
DN100	DN80	x	85	100	80	135	135	200	200	200	300	270	215
ESK4-FF / ESK4-PA													
DN15 DN25 DN50	DN15 DN25		85	60	not allowable	135	125	200	150	125	235	150	125
		x	85	60		135	135	200	200	200	300	300	240
DN80	DN50		85	60		135	120	200	140	120	220	140	120
DN100	DN80	x	85	60		135	135	200	200	200	300	300	225
K1/K2													
DN15 DN25 DN50	DN15 DN25		85	100	100	135	135	200	200	180	290	205	180
		x	85	100	100	135	135	200	200	200	300	300	300
DN80	DN50		85	100	100	135	135	200	185	170	260	185	170
DN100	DN80	x	85	100	100	135	135	200	200	200	300	300	300

5 DESCRIPTION OF DESIGN AND EXPLOSION PROTECTION PROVIDING MEANS

5.1 The variable area flowmeters consist of two attached together units: the variable area flowmeter (variable area measuring tube with a float) with an heating jacket for coolant delivery and an indicator unit (M8, M9 or M40). Optionally the electronic unit is installed in the flow indicator, which converts the measured flow value in different output signals. For flow indication the scale with arrow, indicating the actual flow is applied. For indicator M8, M9 and M40 the digital display can be applied.

5.2 The explosion protection of the H250/M8-Ex and H250/M9-Ex flowmeters is provided by the explosion protection type "intrinsically safe electrical circuits “i” according to GOST 31610.11-2014 (IEC 60079-11:2011) and “design safety “c” according to GOST 31441.5-2011 (EN 13463-5:2003).

The explosion protection of the H250/M40-Ex flowmeters is provided by the explosion protection type "intrinsically safe electrical circuits “i” according to GOST 31610.11-2014 (IEC 60079-11:2011), “explosion-proof enclosures “d” according to GOST IEC 60079-1-2011, explosion safety “n” according to GOST 31610.15-2014/IEC 60079-15:2010 and “design safety “c” according to GOST 31441.5-2011 (EN 13463-5:2003).

The variable area flowmeters H250/M40-Ex with dust ignition proof of level “tb” according to GOST R IEC 60079-31-2010 and GOST 31441.5-2011 (EN 13463-5:2003).

The constructions of the variable area flowmeters H250/M8-Ex, H250/M9-Ex and H250/M40-Ex correspond to the applicable requirements of GOST 31610.0-2014 (IEC 60079-0:2011) and GOST 31441.1-2011 (EN 13463-1:2011).

5.3 Mounting, operation, maintenance and repair of the variable area flowmeters H250/M8-Ex, H250/M9-Ex and H250/M40-Ex shall be carried out according to the requirements of the operational documentation.

GOST IEC 60079-14-2011, GOST IEC 60079-17-2011, GOST 31610.19-2014/IEC 60079-19:2010 and section 6 of this Annex.

6 SPECIAL CONDITIONS FOR SAFE USE

6.1 For each construction of the variable area flowmeters the marking shall define and indicate the temperature class and the maximum surface temperature depending on the permissible ambient temperature range at the installation place and the maximum process temperature according to the operational documentation and Section 4 of the Annex.

6.2 To prevent the accumulation of static electric discharge, the nonmetallic parts and surfaces of the H250/M9-Ex housing shall be cleaned only by the wet and clean cloths during the technical maintenance.

6.3 In the variable area flowmeters with the protection type “design safety “c”, the actual maximum surface temperature depends on the operation conditions, as the flowmeter does not generate heat. At that the surface flowmeter of the variable area flowmeters is defined by he process temperature and in case of the version with the heating jacket – coolant temperature.

7 MARKING

7.1 The marking is applied to special nameplate placed on the device housing and shall include the following data:

- manufacturer name or registered trademark;
- device type, factory serial number and year of manufacture;
- marking of explosion protection;
- marking of combustible dust ignition protection (for variable area flowmeters H250/M40-EEx)

STAMP HERE

Head (authorized person) of the Certification Body _____ (signature) V.V. Bairak (initials, surname)

Expert (auditing expert) (experts (auditing experts)) _____ (signature) Y.S. Kovtun (initials, surname)

Stamp:
The Certification Agency for explosion-proof, mining and industrial electrical equipment
Independent Inspection Services
"Certification Centre "STV" RA.RU.11ГБ04
For certificates EAC

CUSTOMS UNION
ANNEX
TO THE CERTIFICATE OF CONFORMITY CU No. RU C-DE.ГБ04.В.00713

- electrical values for intrinsically safe electrical circuits (for the H250/M9-EEx and H250/M40-EEx);
- abbreviation for the certification agency (ЦС СТВ) and certificate number;
- permissible ambient temperature range at the installation place.

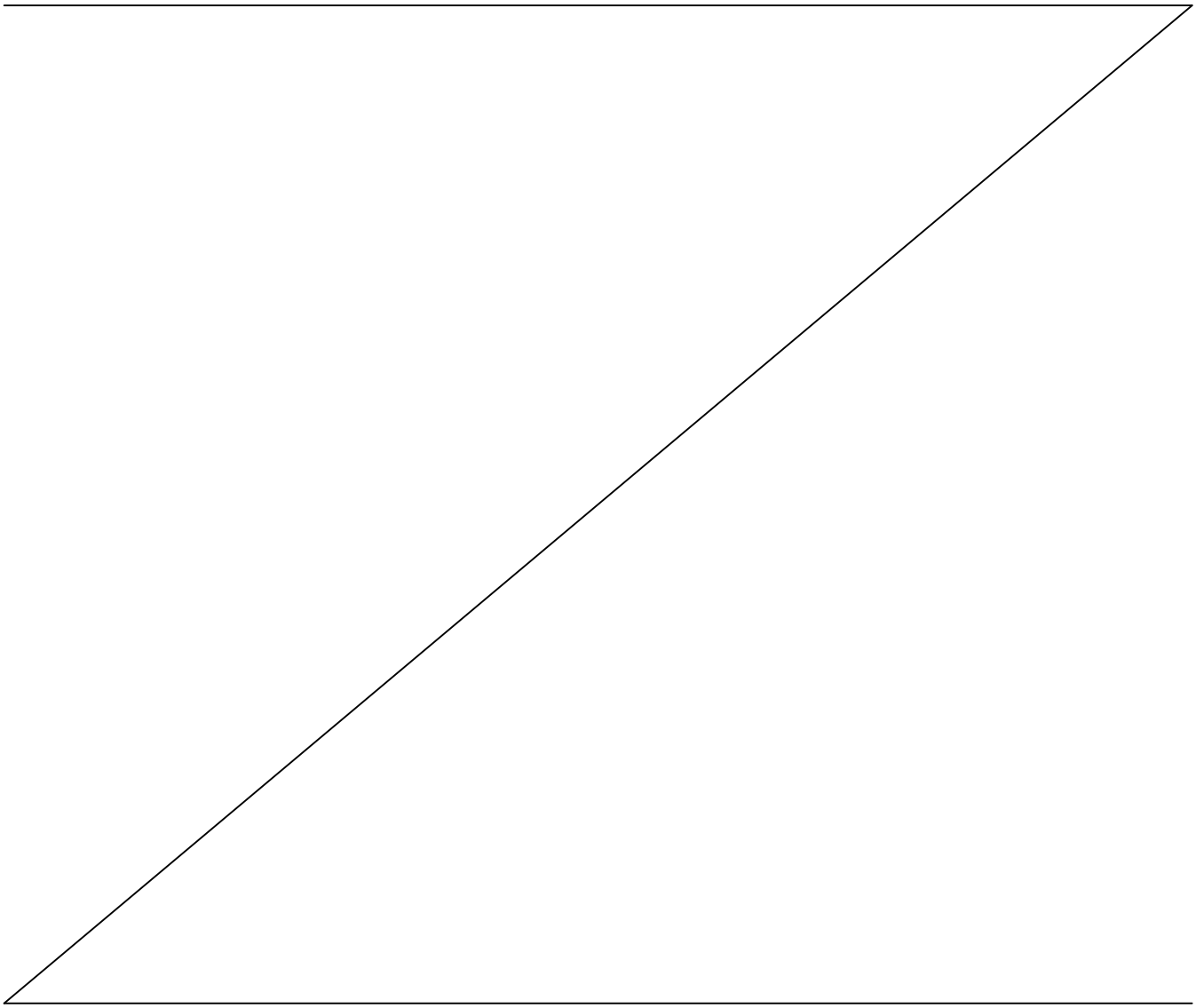
The nameplate shall be marked with the special Ex-sign in accordance with TR CU 012/2011 as well as with the Unified Conformity Mark of Member States of the Customs Union.

6.2 The removable covers of the H250/M40-Ex flowmeters with the explosion protection type “explosion-proof enclosure "d" shall have the warning message:

WARNING – OPEN AFTER DE-ENERGIZE
(For temperature classes T4…T1)

WARNING – BEFORE OPENING WAIT 8 MINUTES AFTER DE-ENERGIZE
(For temperature classes T5 and T6)

Any changes of construction and (or) technical documentation that can affect the explosion protection values of the device, shall be made only in accordance with TR CU 012/2011.



STAMP HERE	Head (authorized person) of the Certification Body	_____ (signature)	V.V. Bairak (initials, surname)
	Expert (auditing expert) (experts (auditing experts))	_____ (signature)	Y.S. Kovtun (initials, surname)

Stamp:
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