

Manual Supplement

Manual Title:	RUSKA 7250, 7250i, 7250xi & 7250LP Users	Supplement Issue:	3
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This supplement contains information necessary to ensure the accuracy of the above manual.



Change #1, 244, 351, 416, 439, 622, TPUBS309

On page A-6, under **General Specifications**, remove Ingress Protection, EMC, Electrical Safety, Pressure Safety and add:

Ingress Protection:	IEC 60529: IP20 Indoor Only
International	IEC 61326-1: Controlled Electromagnetic Environment CISPR 11: Group 1, Class A <i>Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.</i> <i>Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low-voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.</i> <i>Emissions that exceed the levels required by CISPR 11 can occur when the equipment is connected to a test object.</i>
Safety:	IEC 61010-1: Overvoltage, Category II, Pollution Degree 2
Operating Altitude:	2000 m
Transient RF energy exposure greater than 1 V/m in the frequency range of 400 MHz to 650 MHz can cause a momentary spike in pressure control outside of the control stability tolerance.	

On page A-7, replace **Table A-5** with:

Table A-5. Performance Specifications: RUSKA 7250

Pressure Range	5–1000 psi (0.34–68.9 bar)	1000–2500 psi (68.9–172 bar)	15–50 psi (1–3.45 bar)	3000 psi (210 bar)
Mode	Gauge	Gauge	Absolute	Absolute
Precision ¹	0.003 % FS	0.003 % FS	0.003 % FS	0.012 % RDG or 0.0036 % FS, whichever is greater
Stability Over 3 Months: Over 1 Year:	0.0019 % RDG/ 3 months 0.0075 % RDG/year			0.005 % RDG
Zero Drift ²	<0.00017 % FS / hr	<0.00017 % FS / hr	<0.00017 % FS / hr	N/A
Control Stability	0.001 % FS	0.001 % FS	0.001 % FS	0.001 % FS
Neg. Gauge Control Stability (opt.)	0.001 % FS	0.001 % FS	NA	
Control Low Limits ³	0 psig 0.15 psia	0 psig 0.15 psia	0.15 psia	0 psig
Typical Slew Rate ⁴	<20 Seconds	<20 Seconds	<20 Seconds	<60 Seconds
Neg. Gauge Typical Slew Rate (opt.) ⁵	<20 Seconds	<20 Seconds	NA	
Test Port Isolation	Standard	none	Standard	none

¹ Precision is defined as the combined effect of linearity, repeatability, and hysteresis throughout the operating temperature range. Some manufacturers use the word “Accuracy” in place of “Precision”, however the meaning is identical.

² Zero drift typically improves with sensor age. Routine zeroing is required to meet uncertainty specifications. i-Class, xi-Class and STD Class must be zeroed at least every 5 hours, LP-Class within 1 hour.

³ Requires vacuum pump to control 0 psig, or the vent mode can be used to obtain 0 psig.

⁴ Defined as 10% FS increments into a 15 cubic inch volume.

⁵ Defined as 10 % increments from 0 psig to control low limit into a 5 cubic inch volume.

Change #2, 622, TPUBS309

On page A-4, **Table A-1, Uncertainty Analysis for RUSKA 7250xi — Three Month Analysis** replace the Head Row with:

Uncertainty Analysis – <u>3 Month</u> Calibration Interval RUSKA 7250xi from 20 % to 100 % of Range	Uncertainty (2 sigma)
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On page A-4, **Table A-2, Uncertainty Analysis for RUSKA 7250xi — One Year Analysis** replace the Head Row with:

Uncertainty Analysis – <u>One Year</u> Calibration Interval RUSKA 7250xi from 20 % to 100 % of Range	Uncertainty (2 sigma)
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On page A-7, replace **Table A-6 Performance Specifications: Ruska 7250LP**, with:

Table -1. Performance Specifications: RUSKA 7250LP

Pressure Range	10/30, 20/60 & 35/100 inH2O (25/75, 50/150, & 85/250 mbar)
Mode	Gauge
Precision ¹	From 10% to 100% Max FS: 0.005% of Reading, Below 10% Max FS: 0.005% of 10% Max FS
Stability Over 3 Months:	0.0019% RDG/ 3 months
Over 1 Year:	0.0075% RDG/year
Zero Drift ⁴	<0.006% Max FS / 24hrs
Control Stability	0.004% of Range
Neg. Gauge Control Stability (opt.)	0.004 % of maximum FS
Control Low Limits ²	0 psig (-30in H2O w/option and external Vac. Pump)
Typcial Slew Rate ⁴	<20 Seconds
Neg. Gauge Typical Slew Rate (opt.) ⁵	<20 Seconds

¹ Precision is defined as the combined effect of linearity, repeatability, and hysteresis throughout the operating temperature range. Some manufacturers use the word "Accuracy" in place of "Precision", however the meaning is identical.

² Zero drift typically improves with sensor age. Routine zeroing is required to meet uncertainty specifications. i-Class, xi-Class and STD Class must be zeroed at least every 5 hours, LP-Class within 1 hour.

³ Requires vacuum pump to control 0 psig, or the vent mode can be used to obtain 0 psig.

⁴ Defined as 10% FS increments into a 15 cubic inch volume.

⁵ Defined as 10 % increments from 0 psig to control low limit into a 5 cubic inch volume.

On page A-8, replace **Table A-7 Performance Specifications: Ruska 7250i and 7250xi**, with:

Table -2. Performance Specifications: RUSKA 7250i and 7250xi

MODEL	RUSKA 7250i	RUSKA 7250xi
MODE	GAUGE	GAUGE
Precision ¹	From 25% to 100% FS: 0.005% RDG Below 25%FS: 0.005% of 25%FS	From 5% to 100%FS: 0.005% RDG Below 5%FS: 0.005% of 5%FS
Neg. Gauge Precision (opt.)	Greater of 0.005% of 25%FS or 0.0075 psi (0.05 kPa)	Greater of 0.005% of 5%FS or 0.00075 psi (0.005 kPa)
Stability Over 3 Months: Over 1 Year:	0.0019% RDG/ 3 months 0.0075% RDG/year	0.0019% RDG/ 3 months 0.0075% RDG/year
Zero Drift ²	<0.002%FS / 24hrs	<0.001%FS / 24hrs
Control Stability	0.001% of maximum FS	0.001% of maximum FS
Control Low Limit ³	0 psig 0.15 psia	0 psig 0.15 psia
Slew Rate ⁴	<20 Seconds	<20 Seconds
Test Port Isolation	standard	standard up to 1000 psi (6.89 MPa) full scale ranges

¹ Precision is defined as the combined effect of linearity, repeatability, and hysteresis throughout the operating temperature range. Some manufacturers use the word "Accuracy" in place of "Precision", however the meaning is identical.

² Zero drift typically improves with sensor age. Routine zeroing is required to meet uncertainty specifications. i-Class, xi-Class and STD Class must be zeroed at least every 5 hours, LP-Class within 1 hour.

³ Requires vacuum pump to control 0 psig, or the vent mode can be used to obtain 0 psig.

⁴ Defined as 10% FS increments into a 15 cubic inch volume.

⁵ Defined as 10 % increments from 0 psig to control low limit into a 5 cubic inch volume.

Change #3, 622

On page 2-11, last paragraph, change warm-up time to: 24-hour warm-up time required prior to the Calibrator operating at its optimum precision.

On page 3-2, Table 3-1, change Warm-up Period to:

Parameter	Value	Model
Warm-up Period	24 hrs	all