

Accuracy Specification and Vacuum Test Points with Tolerances

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Description

All values are in Torr unless otherwise stated and FS denotes the full scale or maximum reading of the CDG. Televac reserves the right to change tolerances for any controllers, active gauges, or sensors. Any modification to any unit without approval from Televac voids the unit's certificate of compliance. Additional NIST Calibration Test Points are available upon request.

Applicable Gauges

MC300 2A, 2A VacuMini, or 2A NASA Mini
MM200 2A, 2A VacuMini, or 2A NASA Mini
MX200 2A, 2A VacuMini, or 2A NASA Mini
MV2A, 2A VacuMini, or 2A NASA Mini
Compact 2A, 2A VacuMini, or 2A NASA Mini
Vacuguard, 2A VacuMini, or 2A NASA Mini
B2A Portable, 2A VacuMini, or 2A NASA Mini
MP2AR

Accuracy Specification

Range	Tolerance
1.0E-3 to 1.0E-2	±1.0E-3
1.0E-2 to 1.0E-1	±10%
1.0E-1 to 1.0E+0	±20%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-1	9.0E-2	1.1E-1
1.0E+0	8.0E-1	1.2E+0

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-2	9.0E-3	1.1E-2
2.0E-2	1.8E-2	2.2E-2
5.0E-2	4.5E-2	5.5E-2
1.0E-1	9.0E-2	1.1E-1
2.0E-1	1.6E-1	2.4E-1
5.0E-1	4.0E-1	6.0E-1
1.0E+0	8.0E-1	1.2E+0

GE Aviation Specification P10TF3 Compatible Calibration

The 2A sensor in combination with any of the controllers above can be calibrated to the GE Aviation Specification P10TF3.

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-2	9.0E-3	1.1E-2
2.0E-2	1.8E-2	2.2E-2
5.0E-2	4.5E-2	5.5E-2
1.0E-1	9.0E-2	1.1E-1
2.0E-1	1.7E-1	2.3E-1
5.0E-1	4.3E-1	5.8E-1
1.0E+0	8.5E-1	1.2E+0

Applicable Gauges

MX2A

Accuracy Specification

Range	Tolerance
1.0E-3 to 1.0E-2	±1.0E-3
1.0E-2 to 1.0E+0	±10%
1.0E+0 to 1.0E+2	±30%
1.0E+2 to 1.0E+3	±10%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-1	9.0E-2	1.1E-1
1.0E+0	9.0E-1	1.1E+0

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-2	9.0E-3	1.1E-2
2.0E-2	1.8E-2	2.2E-2
5.0E-2	4.5E-2	5.5E-2
1.0E-1	9.0E-2	1.1E-1
2.0E-1	1.8E-1	2.2E-1
5.0E-1	4.5E-1	5.5E-1
1.0E+0	9.0E-1	1.1E+0

Applicable Gauges

MC300 4A

MM200 4A

MP4AR

Accuracy Specification

Range	Tolerance
1.0E-3 to 1.0E-2	±1.0E-3
1.0E-2 to 1.0E+1	±10%
1.0E+1 to 1.0E+2	±20%
1.0E+2 to 1.0E+3	±10%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E+0	9.0E-1	1.1E+0
7.6E+2	6.8E+2	8.4E+2

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-2	9.0E-3	1.1E-2
5.0E-2	4.5E-2	5.5E-2
1.0E-1	9.0E-2	1.1E-1
5.0E-1	4.5E-1	5.5E-1
1.0E+0	9.0E-1	1.1E+0
1.0E+1	9.0E+0	1.1E+1
1.0E+2	8.0E+1	1.2E+2
7.6E+2	6.8E+2	8.4E+2

Applicable Gauges

MX4A

MX200 4A

Accuracy Specification

Range	Tolerance
1.0E-3 to 1.0E-2	±1.0E-3
1.0E-2 to 1.0E+3	±10%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E+0	9.0E-1	1.1E+0
7.6E+2	6.8E+2	8.4E+2

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.0E+0	-1.0E-3	1.0E-3
1.0E-2	9.0E-3	1.1E-2
5.0E-2	4.5E-2	5.5E-2
1.0E-1	9.0E-2	1.1E-1
5.0E-1	4.5E-1	5.5E-1
1.0E+0	9.0E-1	1.1E+0
1.0E+1	9.0E+0	1.1E+1
1.0E+2	9.0E+1	1.1E+2
7.6E+2	6.8E+2	8.4E+2

Applicable Gauges

MC300 7B
MM200 7B
MX200 7B

Accuracy Specification

Range	Tolerance
1.0E-6 to 1.0E-3	±.2 decade (-37% to 58%)

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-5	6.3E-6	1.6E-5
1.0E-4	6.3E-5	1.6E-4

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-6	6.3E-7*	1.6E-6
5.0E-6	3.2E-6	8.0E-6
1.0E-5	6.3E-6	1.6E-5
5.0E-5	3.2E-5	8.0E-5
1.0E-4	6.3E-5	1.6E-4

*The tolerance for the MM200 and MC300 is 6E-7.

Applicable Gauges

MC300 7E
MM200 7E
MX200 7E
MP7ER

Accuracy Specification

Range	Tolerance
1.0E-7 to 1.0E-2	±.2 decade (-37% to 58%)

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-5	6.3E-6	1.6E-5
1.0E-4	6.3E-5	1.6E-4

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-6	6.3E-7	1.6E-6
5.0E-6	3.2E-6	8.0E-6
1.0E-5	6.3E-6	1.6E-5
5.0E-5	3.2E-5	8.0E-5
1.0E-4	6.3E-5	1.6E-4

Applicable Gauges

MC300 7F/7FC
MM200 7F/7FC/7FCS
MX200 7F/7FC/7FCS
MP7FR

Accuracy Specification

Range	Tolerance
1.0E-9 to 1.0E-2	±.2 decade (-37% to 58%)

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-5	6.3E-6	1.6E-5
1.0E-4	6.3E-5	1.6E-4

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-6	6.3E-7	1.6E-6
5.0E-6	3.2E-6	8.0E-6
1.0E-5	6.3E-6	1.6E-5
5.0E-5	3.2E-5	8.0E-5
1.0E-4	6.3E-5	1.6E-4

Applicable Gauges

CC-10

Accuracy Specification

Range	Tolerance
1.0E-9 to 1.0E-1	±.2 decade (-37% to 58%)
1.0E-1 to 2.0E+2	±15%
2.0E+2 to 1.0E+3	±5%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-05	6.0E-6	1.6E-5
1.0E+00	8.5E-1	1.2E+0
7.6E+02	7.2E+2	8.0E+2

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-6	6.3E-7	1.6E-6
5.0E-6	3.2E-6	8.0E-6
1.0E-5	6.3E-6	1.6E-5
5.0E-5	3.2E-5	8.0E-5
1.0E-4	6.3E-5	1.6E-4
1.0E-3	6.3E-4	1.6E-3
1.0E-2	6.3E-3	1.6E-2
1.0E-1	8.5E-2	1.2E-1
1.0E+0	8.5E-1	1.2E+0
1.0E+1	8.5E+0	1.2E+1
1.0E+2	8.5E+1	1.2E+2
7.6E+2	7.2E+2	8.0E+2

Applicable Gauges

MM200 1E

MX200 1E

Accuracy Specification

Range	Tolerance
1.0E+0 to 1.0E+1	±1.0E+0
1.0E+1 to 1.0E+2	±10%
1.0E+2 to 1.0E+3	±5%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
5.0E+00	4.0E+0	6.0E+0
1.0E+2	9.0E+1	1.1E+2
7.6E+2	7.2E+2	8.0E+2

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
5.0E+00	4.5E+0	5.5E+0
1.0E+2	9.0E+1	1.1E+2
4.0E+2	3.8E+2	4.2E+2
7.6E+2	7.2E+2	8.0E+2

Applicable Gauges

MP3DR

MC300 Mini BA

MM200 Mini BA

Accuracy Specification

Range	Tolerance
1.0E-9 to 1.0E-2	±1 decade (-21% to 26%)

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-05	7.9E-06	1.3E-05
1.0E-04	7.9E-05	1.3E-04

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-06	7.9E-07	1.3E-06
5.0E-06	4.0E-06	6.3E-06
1.0E-05	7.9E-06	1.3E-05
5.0E-05	4.0E-05	6.3E-05
1.0E-04	7.9E-05	1.3E-04

Applicable Gauges

MM200 Capacitive Diaphragm Gauge

MX200 Capacitive Diaphragm Gauge

Accuracy Specification

Range	Tolerance
.01*FS to .1*FS	±.001*FS
.1*FS to FS	±2%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.1*FS	(0.1*FS)-2%	(0.1*FS)+2%
0.5*FS	(0.5*FS)-2%	(0.5*FS)+2%
FS	FS-2%	FS+2%

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
0.01*FS	0.01*FS-.001*FS	0.01*FS+.001*FS
0.1*FS	(0.1*FS)-2%	(0.1*FS)+2%
0.2*FS	(0.2*FS)-2%	(0.2*FS)+2%
0.3*FS	(0.3*FS)-2%	(0.3*FS)+2%
0.4*FS	(0.4*FS)-2%	(0.4*FS)+2%
0.5*FS	(0.5*FS)-2%	(0.5*FS)+2%
0.6*FS	(0.6*FS)-2%	(0.6*FS)+2%
0.7*FS	(0.7*FS)-2%	(0.7*FS)+2%
0.8*FS	(0.8*FS)-2%	(0.8*FS)+2%
0.9*FS	(0.9*FS)-2%	(0.9*FS)+2%
FS	FS-2%	FS+2%

Applicable Gauges

MX7B

Accuracy Specification

Range	Tolerance
1.0E-7 to 1.0E-3	±30%

Standard Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-05	7.0E-06	1.3E-05
1.0E-04	7.0E-05	1.3E-04

NIST Calibration Points with Tolerances

Test Point	Lower Tolerance	Upper Tolerance
1.0E-06	7.0E-07	1.3E-06
5.0E-06	3.5E-06	6.5E-06
1.0E-05	7.0E-06	1.3E-05
5.0E-05	3.5E-05	6.5E-05
1.0E-04	7.0E-05	1.3E-04