

International Accreditation Service

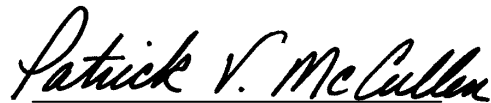
# CERTIFICATE OF ACCREDITATION

*This is to signify that*

**CSA INTERNATIONAL**  
178 REXDALE BOULEVARD  
TORONTO, ONTARIO M9W 1R3  
CANADA

Testing Laboratory TL-218  
(Revised: December 22, 2010)

has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ANS/ISO/IEC Standard 17025:2005, *General criteria for the competence of testing and calibration laboratories*, and has been accredited, commencing December 29, 2009, for the test methods listed in the approved scope of accreditation.



Patrick V. McCullen  
Vice President



ACCREDITED

*(see attached scope of accreditation for fields of testing and accredited test methods)*



C. P. Ramani, P.E.  
President

Print Date: 12/22/2010

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# International Accreditation Service

## SCOPE OF ACCREDITATION

CSA International TL-218  
(Revised December 22, 2010)

CSA International  
178 Rexdale Blvd.  
Toronto, Ontario M9W 1R3  
Canada

Walter Vance  
Manager Accreditation and Conformity Assessment  
(216) 524-4990

FIELDS OF TESTING	ACCREDITED TEST METHODS
Plumbing products	ANSI A112.21.1M, ANSI Z124.1,.2,.3,.4,.6,.9, ASME/ANSI A112.18.1, .19, .19.5, .19.6 ASME/ANSI A112.19.1, .3, .7, .8, ASME/ANSI A112.19.2,.4, ASSE 1001, 1002, 1005, 1011,1012, 1013, 1014, 1015, 1016, 1018, 1019, 1020, 1024, 1025, 1029, 1035, 1037, 1052, 1056; ASTM Standards D 2239, D 2241, D 2466, D 2564, D 2661, D 2665, D 2683, D 2737, D 2235, D 2846, D 3034, D 3035, D 3138, D 3261, D 3309, F 493, F 789, F 845, F 876, F 877, F 949, F 1281, F 1282; CSA Standards A60.1, .2, .3 CSA B45.0, .1, .2, .3, .4, .5, .6, .7, B45 Series Supplement No. 1, B64.0, .1.1, .1.2, B64.2, 2.1, 2.2, B64.3, .3, .5, .6, .7, .8, .10, B 64, 67, 70, 79, B66, B125, B127.1, .2, B137.0, .1, .3, B137.4, .4.1, B137.6, .7, .8, .9, .10, .11, .16, B181.1, .2, .3, B182.1, .2, .4, .6, B196.3, B272, B281, Z240.3.1 and .3.2; NSF 42, 53, 60 and 61
Factory constructed buildings and structures	CSA Standards A93, C260.2, C22.2 148, Z240-RV Series, -MH Series, Z241 Series, Z240 RV Series and Z240.6.2

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Electrical products	ANSI/ISA S82.01, ANSI/ISA-S12.3, Part I, C300, CAN/CSA B44, B44.1/ ASME-A17.5, B355, B613, C22.2 0.3, 0.4, 0.5, 0.8, C22.2 3, 4, C22.2 5.1, 5.2, C22.2 8, 9.0, 14, 18, C22.2 13, 15, 24, 27, 31, 41, C22.2 16, 17, 33, C22.2 19, C22.2 21, 26, 36, 40, 67, C22.2 23, C22.2 23.1, 25, 30, C22.2 29, C22.2 34, C22.2 35, 38, 39, 44, 48, 49, C22.2 42, 46, 66, C22.2 43, C22.2 45, 47, 60, 72, 73, 83, C22.2 51, 52, 56, 58, 62, C22.2 55, 57 65, 80, 111, 115, C22.2 59.1, 59.2, 59.3, C22.2 68, 71.2, 74, 77, C22.2 75, 79, 82, 84, 106, 116, C22.2 76, 86, 92, 93, 94, 102, 103, C22.2 85, 88, 89, 91, 98, 99, 100, C22.2 104, 105, C22.2 107.1, 107.2, 108, 109, 112, C22.2 110, C22.2 140.2, 140.3, 153, C22.2 114, C22.2 117, 119, 120, 132, C22.2 123, 124, 127, 131, 134, 135, C22.2 113, 125, 128, 133, C22.2 126, 129, 130.1, 130.2, 137, C22.2 136, 188, C22.2 138, 145, 144, 152, 157, 174, C22.2 139, 156, C22.2 141, 142, 143, 159, 164, 165, C22.2 151, 155, 158, C22.2 166, 177, 187, 217, 218.1, C22.2 178, 179, 180, C22.2 182.1, 182.2, 182.3, 182.4, 189, C22.2 184, 190, C22.2 186.1, 186.2, 186.3, 199, 22.2 192, 193, 197, C22.2 195, 205, 207, 221, 231, 950, C22.2 198, 198.2, 198.3, 210.2, 204, C22.2 201, 203, 203.1, 213, 218.2, C22.2, 208, 211.0, 211.1, 211.2, 211.3, C22.2 209, C22.2 214, 222, 232, 233, 239, 248.1, C22.2 224, 226, 247, 243, C22.2 225, 236, 1010.1, C22.2 227.1, 227.2, 227.3, C22.2 248.4, 912, C68.3, C747, C802, CSA C191.0, C191.1, C309, C390, C654, C744, E79-0,-2, -5, -6, -7, -11, -15, -18, E491, E691, E730-1, E730-2-1, E730-2-2, -2-3, -2-4, -2-5, -2-6, -2-7, E730-2-8, -2-9, -2-10, -2, -11, -2-12, E742, E1241-1-1, Notice 516, FM 3600, 3610, 3611, 3810, 6310, 6320; NFPA Standards 79 and 496; UL Standards 1, 3, 4, 5A, 44, 62, 83, 133, 209, 224, 5, 6, 183, 187, 347, 22, 48, 50, 65, 67, 73, 130, 197, 69, 207, 416, 141 150 234, 291 325, 399, 430, 464, 94, 355, 174, 303, 310, 353, 351, 360, 444, 452, 543, 486A, B, C, D, 372, 559, 412, 429, 465, 467, 484, 458, 467, 497A, 595, 674, 698, 466, 496, 498, 499, 506, 507, 508, 519, 471, 474, 551, 561, 621, 497, 497B, 493, 510 651, 651A, 719,

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# SCOPE OF ACCREDITATION

CSA International TL-218  
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FIELDS OF TESTING	ACCREDITED TEST METHODS
Electrical products <i>(cont.)</i>	514A,B,C, 676, 541, 544, 547, 563, 603, 705, 710, 751, 542, 756, 964, 1577, 1676, 574, 1453, 773, 773A, 781, 783, 817, 863, 870, 732, 921, 1020, 746A, B, C, 879, 1030, 746D, E, 814, 854, 923, 977, 984, 763, 778, 813, 869A, 883, 894, 924, 797, 823, 844, 845, 877,884, 886, 887, 983, 1059, 1088, 1207, 834, 857, 867, 869, 891, 917, 998, 1635, 873, 1261, 1995, 913, 916, 969, 1002, 1010, 1037, 935, 1004, 1005, 1012, 1017, 1029, 987, 1008, 1236 1449, 1459, 1025, 1042, 1081, 1096, 1240, 1556, 1054, 1063, 1072, 1424, 1426, 1323, 1441, 1069, 1076, 1203, 1244, 1286, 1278, 1238, 1262, 1283, 1310, 1419, 1450, 1241, 1567, 1363, 1433, 1573, 1604, 1610, 1638, 1559, 1561, 1563, 1564, 1570, 1571, 1562, 1624, 1773, 1815, 1569, 1581, 1651, 1660, 1681, 1682, 1572, 1574, 1585, 1594, 1647, 1778, 1659, 1673, 1776, 1993, 2021, 2044, 1686, 1690, 1963, 1994, 3111-1, 1795 1812 1950, 2601.1 and 3101-1
Fuel products	B240.4.2, CAN/CGA 2.5, 2.8, 2.9, 3.8, 3.9, CAN/CGA 3.11, 3.16, 2.17, CAN/CGA-8.1-M86, -9.2-M88, CAN/CSA P.3, CAN/ULC-S629, -S610, CAN1-1.1, -1.4, CAN1-1.6, CAN1-1.9, -1.11, -1.15, -2.23, CAN1-1.10, -1.12, -1.16, -2.1, CAN1-2.15, -2.16, -2.17, -2.19, -2.20, -2.21, CAN1-2.27, -2.28, -3.1, -3.12, -4.4, CAN1-6.2, -6.4, -6.6, -6.9, -6.14, CAN1-8.3, -12.4, CAN3/CSA B140.9.3, CAN4-S605-77, CGA 1.14, 1.3, 2.24, 2.25, 3.2, 3.3, CGA 3.4, 4.8, 4.9, 5.1, 5.2, 6.12, 6.15, 7.3, CGA P.2, CSA B140, .0.1, .2.1, 2.2, .2.3, .3, .7.2, CSA B140 .4, .7.1, .14, CSA B140.8, .9.1, .10, .11, .12, B366.1, CSA B255, 336.2, B346, B51, CSA C22.2 22, CSA Z240.4.2, Z240.5, FM 3615, 3620, IES LM-10, -41, -46, -57, -59, UL 21, 79, 87, 441, 647, 726, UL 125, 132, 144, 495, 567, 729, 730 UL 180, 307A, 331, 343, 391, 404, 732, UL 296 727, UL 731, 733, UL 737, 896, 1482, UL 1238, ULC-S628, ULC S620-M1980, S627-M1983, ANSI Z21.1, ANSI Z21.5.1 - CAN/CGA 7.1, ANSI Z21.5.2 - CGA 7.2, ANSI Z21.10.1- CAN/CSA 4.1, ANSI Z21.10.3 - CAN/CSA 4.3, ANSI Z21.11.1, .2, ANSI Z21.12, ANSI Z21.13, .19, .20, .23, .42, .57, ANSI Z21.15 - CAN/CGA9.1, ANSI Z21.17 - CAN/CSA2.7, ANSI Z21.18 - CAN/CGA6.3, ANSI Z21.21 - CAN/CGA 6.5, ANSI Z21.24 - CAN/CGA 6.10, ANSI Z21.35 - CAN/CGA

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Fuel products <i>(cont.)</i>	6.8, ANSI Z21.40.1 - CAN/CGA 2.92, ANSI Z21.40.2 - CAN/CGA 2.91, ANSI Z21.40.4 - CAN/CGA 2.94, ANSI Z21.41 - CAN/CGA 6.9, ANSI Z21.47 - CAN/CGA 2.3, ANSI Z21.50 - CAN/CSA2.22, ANSI Z21.54 - CAN/CSA 8.4, ANSI Z21.56 - CAN/CSA 4.7, ANSI Z21.58 AN/CSA 2.32, ANSI Z21.87 - CAN/CSA 4.6, ANSI Z21.88 - CAN/CSA 2.33, ANSI Z83.4 - CAN/CSA 3.7, ANSI Z83.6, ANSI Z83.7 - CAN/CGA2.14, ANSI Z83.8 - CAN/CGA 2.6, ANSI Z83.11 - CAN/CSA 1.8, ANSI Z83.16, ANSI/AGA NGV1 - CGA NGV1, IAS 1-94, 1-97, 2-79, 2-86, 2-89, 2-94, IAS 3-90-92, IAS 4-88, IAS 4-96, 5-90, 5-94, 8-93, -96, 9-96, IAS 12-90, 13-90
Consumer products testing	16 CFR 1303 Lead in Paint/Surface Coatings in Toys and Children's Products AOAC 974.02
ENERGY STAR Program Requirements	<p><b>Residential Clothes Washers</b> ENERGY STAR Program Requirements Product Specification for Clothes Washers Version 5.1, 10 CFR 430, Subpart B, Appendix J1</p> <p><b>Residential Dishwashers</b> ENERGY STAR Program Requirements Product Specification for Residential Dishwashers Version 4.1, 10 CFR 430, Subpart B, Appendix C</p> <p><b>Residential Refrigerators</b> ENERGY STAR Program Requirements Product Specification for Residential Refrigerators and Freezers Version 4.1, 10 CFR 430, Subpart B, Appendix A1</p>

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<p>ENERGY STAR Program Requirements (continued)</p>	<p><b>Battery Charger</b> ENERGY STAR Program Requirements Product Specification for Battery Charging Systems Version 1.1 IEC Standard 61951-1: Secondary cells and batteries containing alkaline or other non-acid electrolytes – Portable sealed rechargeable single cells – Part 1: Nickel-cadmium. Ed. 2.1. January 2006 IEC Standard 61951-2: Secondary cells and batteries containing alkaline or other non-acid electrolytes – Portable sealed rechargeable single cells – Part 2: Nickel-metal hydride. Ed. 2.0. April 2003 IEC Standard 61960: Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications. Ed. 1.0. December 2003</p> <p><b>Televisions</b> ENERGY STAR Test Method for Televisions, ENERGY STAR Program Requirements for Televisions, Version 4.2 IEC 62087, Ed 2.0: Methods of Measurement for the Power Consumption of Audio, Video and Related Equipment CEA-2037: Determination of Television Average Power Consumption (December 2009) IEC 62301, Ed 1.0: Household Electrical Appliances – Measurement of Standby Power. CEA: Procedure for DAM Testing</p> <p><b>Audio/Video</b> ENERGY STAR Test Method for Audio/Video, ENERGY STAR Program Requirements Product Specification for Audio/Video, Version 2.1, page 13</p>

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ENERGY STAR Program Requirements (continued)	<p><b>Telephony</b> ENERGY STAR Program Requirements Product Specification for Telephony Version 2.2 ENERGY STAR Test Method for Telephony, ENERGY STAR Program Requirements for Telephony, Section 4, page 9, Version 2.2</p> <p><b>Imaging Equipment</b> ENERGY STAR Program Requirements Product Specification for Imaging Equipment Version 1.2</p> <p><b>1. DFE with Single Voltage External Power Supply</b> ENERGY STAR Imaging Equipment Test Method, ENERGY STAR Program Requirements Version 1.2, Product Specification for Imaging Equipment, page 20 IEC 62301 Ed 1.0: Household Electrical Appliances – Measurement of Standby Power Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies, Rev. August 11, 2004</p> <p><b>2. DFE with internal Power Supply or Multiple Voltage External Power Supply</b> ENERGY STAR Imaging Equipment Test Method, ENERGY STAR Program Requirements Version 1.2, Product Specification for Imaging Equipment, page 20 EC 62301 Ed 1.0: Household Electrical Appliances – Measurement of Standby Power EPRI Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies</p>

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ENERGY STAR Program Requirements (continued)	<p><b>Internal Power Supplies</b> EPRI Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies</p> <p><b>Computers</b> ENERGY STAR Program Requirements Product Specification for Computers Version 5.2 ENERGY STAR Computer Test Method, ENERGY STAR Program Requirements Product Specification for Computers, Version 5.2, page 22 EPRI Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies. (for products that have internal, multi-output, or single output with integral cooling power supplies) IEC 62301: Household Electrical Appliances - Measurement of Standby Power</p> <p><b>Computer (Enterprise) Servers</b> ENERGY STAR Program Requirements Product Specification for Computer Servers Version 1.1 ENERGY STAR Test Method for Computer Servers, ENERGY STAR Test Procedure for Determining the Power Use of Computer Servers at Idle and Full Load (Appendix A of specification) EPRI Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies. Available at. IEC 62301: Household Electrical Appliances - Measurement of Standby</p>

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ENERGY STAR Program Requirements (continued)	<b>Displays</b> ENERGY STAR Program Requirements Product Specification for Displays Version 5.1 <b>1. Less than 30 inch diagonal viewable area</b> ENERGY STAR Test Method for Displays, ENERGY STAR Program Requirements Product Specification for Displays, page 11 VESA FPDM Standard 2.0 IEC 62301 Ed 1.0: Household Electrical Appliances – Measurement of Standby Power  <b>2. 30–60 inch diagonal viewable area</b> ENERGY STAR Test Method for Displays, ENERGY STAR Program Requirements Product Specification for Displays, page 11 IEC 62087, Ed 2.0: Methods of Measurement for the Power Consumption of Audio, Video and Related Equipment IEC 62301 Ed 1.0: Household Electrical Appliances – Measurement of Standby Power

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