



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

**UNDERWRITERS LABORATORIES THAILAND LIMITED**  
888 MOO 5, SRINAKARIN ROAD, TAMBOL SOMRONG NUA, AMPHUR MUANG SAMUTPRAKARN  
SAMUTPRAKARN PROVINCE, THAILAND

**Testing Laboratory TL-820**

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date April 24, 2024



A handwritten signature in black ink, reading "Raj Nathan".

**President**

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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## UNDERWRITERS LABORATORIES THAILAND LIMITED

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*Accredited to ISO/IEC 17025:2017*

*Effective Date April 24, 2024*

<b>Electrical Appliances</b>	
EN 60335-1	Household and similar electrical appliances - Safety - Part 1: General requirements
EN 60335-2-7	Household and similar electrical appliances - Safety - Part 2-7: Particular requirements for washing machines
EN 62233	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure
EN IEC 60335-2-11	Household and similar electrical appliances – Safety Part 2-11: Particular requirements for tumble dryers
EN IEC 60335-2-24	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers
EN IEC 60335-2-34	Household and similar electrical appliances - Safety - Part 2-34: Particular requirements for motor-compressors
EN IEC 60335-2-40	Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
EN IEC 60335-2-89	Household and similar electrical appliances - Safety - Part 2-89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor
IEC 60335-1	Household and similar electrical appliances - Safety - Part 1: General requirements
IEC 60335-2-7	Household and similar electrical appliances - Safety - Part 2-7: Particular requirements for washing machines
IEC 60335-2-24	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers
IEC 60335-2-34	Household and similar electrical appliances - Safety - Part 2-34: Particular requirements for motor-compressors
IEC 60335-2-40	Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers

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IEC 60335-2-89	Household and similar electrical appliances - Safety - Part 2-89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor
IEC 62301	Household electrical appliances – Measurement of standby power
PNS IEC 60335-2-7	Household and similar electrical appliances - Safety - Part 2-7: Particular requirements for washing machines
PNS IEC 60335-2-24	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers
PNS IEC 60335-2-40	Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
SNI IEC 60335-2-7	Household and similar electrical appliances - Safety - Part 2-7: Particular requirements for washing machines
SNI IEC 60335-2-24	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers
SNI IEC 60335-2-40	Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
<b>Performance Rating</b>	
10 CFR 430, subpart B, appendix A	Uniform Test Method for Measuring the Energy Consumption of Refrigerators, Refrigerator-Freezers, and Miscellaneous Refrigeration Products
10 CFR 430, subpart B, appendix B	Uniform Test Method for Measuring the Energy Consumption of Freezers
10 CFR 430, subpart B, appendix D1	Uniform Test Method for Measuring the Energy Consumption of Clothes Dryers
10 CFR 430, subpart B, appendix D2	Uniform Test Method for Measuring the Energy Consumption of Clothes Dryers
10 CFR 430, subpart B, appendix J1	Uniform Test Method for Measuring the Energy Consumption of Automatic and Semi-automatic Clothes Washers
10 CFR 430, subpart B, appendix J2	Uniform Test Method for Measuring the Energy Consumption of Automatic and Semi-automatic Clothes Washers
10 CFR 430, subpart B, appendix J3	Uniform Test Method for Measuring the Moisture Absorption and Retention Characteristics of New Energy Test Cloth Lots
10 CFR 430, subpart B, appendix M	Uniform Test Method for Measuring the Energy Consumption of Central Air Conditioners and Heat Pumps
10 CFR 430, subpart B, appendix M1	Uniform Test Method for Measuring the Energy Consumption of Central Air Conditioners and Heat Pumps
10 CFR Part 431 Subpart C	Commercial Refrigerators, Freezers and Refrigerators-Freezers

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10 CFR Part 431.64, 10 CFR Part 431.66 (d), 10 CFR Part 431.66 (e) (2)	Uniform Test Method for the measurement of Energy Consumption of Commercial Refrigerators, Freezers and Refrigerators-Freezers
AHAM HRF-1	Energy and Internal Volume of Refrigerating Appliances
AHRI STANDARD 340/360	Performance Rating of Commercial and Industrial Unitary Air-conditioning and Heat Pump Equipment
AHRI STANDARD 210/240	Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment
ANSI/AHAM RAC-1	Room air conditioners
CAN/CSA-C300	Energy performance and capacity of household refrigerators, refrigerator-freezers, freezers, and wine chillers
CAN/CSA-C360	Energy performance, water consumption and capacity of household clothes washers
CAN/CSA-C361	Energy performance and drum volume of household electric clothes dryers
CAN/CSA-C656	Performance standard for split-system and single-package air conditioners and heat pumps
EN 60456:2016	Clothes washing machines for household use - Methods for measuring the performance
EN 60456:2016+A11:2020	Clothes washing machines for household use - Methods for measuring the performance
EN 61121:2013	Tumble dryers for household use - Methods for measuring the performance
GSO IEC 60456	Clothes washing machines for household use - Methods for measuring the performance
IEC 60456:2010	Clothes washing machines for household use - Methods for measuring the performance
IEC 61121:2012	Tumble dryers for household use - Methods for measuring the performance
KWS 1898:2023	Electrical Clothes Dryers - Energy performance requirements and labeling
KWS 1899:2023	Electrical Clothes Washing Machines - Energy and water performance requirements and labeling
SANS 1695:2016	Clothes washing machines for household use – methods for measuring the performance
SANS 61121:2015	Tumble dryers for household use - methods for measuring the performance
SASO 2883:2017	Electrical Clothes Dryers - Energy Performance Requirements and Labelling
SASO 2885:2018	Electrical Clothes Washing Machines - Energy and Water Performance Requirements and Labelling

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SPAN TS 3006:2021	Washing machines - Water Efficiency Performance and related testing methods
TCVN 8526:2013	Clothes washing machines for household use - Energy efficiency and the method for determination of energy efficiency
UAE.S 5010 -2	Labeling - Energy efficiency label for electrical appliances Part 2: Washing Machines and Dryers
<b>Energy Star</b>	
ENERGY STAR®	Program Requirements Product Specification for Clothes Dryers
ENERGY STAR®	Program Requirements Product Specification for Clothes Washers
ENERGY STAR®	Program Requirements Product Specification for Residential Refrigerators and Freezers
ENERGY STAR®	Program Requirements for Commercial Refrigerators and Freezers
ENERGY STAR®	Program Requirements for Residential Air Source Heat Pump (ASHPs) and Central Air Conditioner Equipment
<b>Heating / Cooling</b>	
AS 1731	Refrigerated display cabinets
EN 50193-1:2016	Electric instantaneous water heaters – Methods for measuring the Performance – Part 1: General requirements
EN 50193-2-2:2016	Electric instantaneous water heaters – Part 2-2: Performance requirements – Single point of use electric instantaneous showers – Efficiency
EN 50440:2015	Efficiency of domestic electrical storage water heaters and testing methods
EN 62552:2013	Household refrigerating appliances - characteristics and test methods
EN ISO 23953-2	Refrigerated display cabinets - Part 2: Classification, requirements and test conditions
GSO ISO 5151	Non-ducted air conditioners and heat Pumps - Testing and rating for Performance
IEC 62552:2007	Household refrigerating appliances - Characteristics and test methods
IEC 62552-1:2015	Household refrigerating appliances - Characteristics and test methods - Part 1: General requirements
IEC 62552-2:2015	Household refrigerating appliances - Characteristics and test methods - Part 2: Performance requirements
IEC 62552-3:2015	Household refrigerating appliances - Characteristics and test methods - Part 3: Energy consumption and volume
IS 1391 (Part 1):2017	Room air conditioners - Specification - Part 1: Unitary air conditioners

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IS 1391 (Part 1):2017 with Amd1:2018	Room air conditioners - Specification - Part 1: Unitary air conditioners
IS 1391 (Part 2):1992	Room air conditioners - Specification - Part 2: Split air conditioners
IS 1391 (Part 2):2018 with Amd1:2018	Room air conditioners - Specification - Part 2: Split air conditioners
IS 1391 (Part 2):2018 with Amd2:2019	Room air conditioners - Specification - Part 2: Split air conditioners
IS 1391 (Part 2):2018 with Amd3:2020	Room air conditioners - Specification - Part 2: Split air conditioners
IS 1391 (Part 2):2018 with Amd4:2021	Room air conditioners - Specification - Part 2: Split air conditioners
IS 1391 (Part 2):2023	Room air conditioners - Specification - Part 2: Split air conditioners
IS 1476 (Part 1):2000	Performance of Household Refrigerating Appliance – Refrigerators With or Without Low Temperature Compartment
IS 1476 (Part 1):2000 (RA2016) with Amd3:2015	Performance of Household Refrigerating Appliance – Refrigerators With or Without Low Temperature Compartment
IS 8148:2003	Packaged Air Conditioners – Specification
IS 8148:2003 (RA2013) with Amd1:2014	Packaged Air Conditioners – Specification
IS 10617:2013	Hermetic Compressors – Specification
IS 15750:2006	Household frost-free refrigerating appliances – Refrigerators cooled by internal forced air circulation – Characteristics and test methods – Specification
IS 15750:2006 (RA2017) with Amd1:2014	Household frost-free refrigerating appliances – Refrigerators cooled by internal forced air circulation – Characteristics and test methods – Specification
IS 15750:2006 with Amd2:2019	Household frost-free refrigerating appliances – Refrigerators cooled by internal forced air circulation – Characteristics and test methods – Specification
IS 17550 (Part 1): 2021	Household Refrigerating Appliances Characteristics and Test Methods Part 1 General Requirements
IS 17550 (Part 2): 2021	Household Refrigerating Appliance- Characteristics and test methods Part 2 Performance requirements
IS 17550 (Part 3): 2021	Household Refrigerating Appliance- Characteristics and test methods Part 3 Energy Consumption and volume
ISO 5151:2017	Non-ducted air conditioners and heat pumps - Testing and rating for performance.
ISO 13253:2017	Ducted Air-Conditioners And Air-To-Air Heat Pumps - Testing And Rating For Performance

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ISO 15042:2017	Multiple split-system air-conditioners and air-to-air heat pumps - Testing and rating for performance
ISO 16358-1:2013	Air-Cooled Air Conditioners And Air-To-Air Heat Pumps - Testing And Calculating Methods for Seasonal Performance Factors - Part 1: Cooling Seasonal Performance Factor
ISO 16358-1:2013/Cor 1:2013	Air-Cooled Air Conditioners and Air-To-Air Heat Pumps - Testing And Calculating Methods for Seasonal Performance Factors - Part 1: Cooling Seasonal Performance Factor Technical Corrigendum 1
ISO 16358-1:2013/Amd 1:2019	Air-Cooled Air Conditioners and Air-To-Air Heat Pumps - Testing And Calculating Methods for Seasonal Performance Factors - Part 1: Cooling Seasonal Performance Factor - Amendment 1 2019:04
ISO 16358-2:2013	Air-Cooled Air Conditioners And Air-To-Air Heat Pumps - Testing And Calculating Methods for Seasonal Performance Factors - Part 2 : Heating Seasonal Performance Factor
ISO 16358-3:2013	Air-Cooled Air Conditioners And Air-To-Air Heat Pumps - Testing And Calculating Methods for Seasonal Performance Factors - Part 3: Annual Performance Factor
ISO 23953-2:2015	Refrigerated display cabinets – Part 2: Classification, requirements and test conditions ; Excluded Clause 4 Requirements of Construction and Material
KS 2463:2019	Non-ducted air conditioners-Testing and rating performance
KWS 1893/2018	Energy efficiency labelling and Minimum energy performance requirements for DX Air-conditioners up to 70,000 Btu/h
KWS 1900:2023	Refrigerators, refrigerators - freezers and freezers - energy performance, testing and labeling requirements
SNI 04-6958-2003	Household and similar electrical appliances - Energy labelling
SNI 19-6713-2002	Non-ducted air conditioning and heat pumps - Performance testing and assessment
SANS 62552:2008	Household refrigerating appliances - characteristics and test methods
SASO 2663:2018	Air Conditioners - Minimum Energy Performance, Labelling and Testing Requirements for Low Capacity Window and Single-Split Types
SASO 2663:2021	Air Conditioners - Minimum Energy Performance, Labelling and Testing Requirements for Low Capacity Window and Single-Split Types
SASO 2874:2016	Air Conditioners – Minimum Energy Performance Requirements and Testing Requirements
SASO 2884:2017	Water heaters – Energy performance requirements and labelling
SASO 2892:2018	Refrigerators, Refrigerator- Freezers and Freezers -Energy Performance, Testing and Labeling Requirements

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SS 646:2019	Specification for water heater for household use – Method for measuring energy performance
TCVN 6576:2013	Non-ducted air conditioners and heat pumps - Testing and rating for performance
TCVN 7828:2016	Refrigerator, refrigerator-freezer, and freezer - Energy efficiency
TCVN 7829:2016	Refrigerator, refrigerator-freezer, and freezer - Method for determination of energy efficiency
TCVN 7830:2015	Non-ducted air conditioners - Energy Efficiency
TCVN 10273-1:2013	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 1: Cooling seasonal performance factor
TCVN 10273-2:2013	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 2: Heating seasonal performance factor
TCVN 10273-3:2013	Air-cooled air conditioners and air-to-air heat pumps - Testing and calculating methods for seasonal performance factors - Part 3: Annual performance factor
TCVN 10289:2014	Commercial refrigerated cabinets - Energy efficiency
TCVN 10290:2014	Commercial refrigerated cabinets - Method for determination of energy efficiency
UAE.S 5010 -3	Labeling - Energy Efficiency Label for Electrical Appliances Part 3: Household Refrigerating Appliances