

STANDARDS UPDATE NOTICE (SUN) ISSUED: December 3, 2024

STANDARD INFORMATION

Amendment 1: See updated effective date in blue below.

Standard: UL 60335-2-40 / CSA C22.2 No. 60335-2-40

Standard ID:

Household and Similar Electrical Appliances - Safety - Part 2 - 40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners, and Dehumidifiers [UL 60335-2-40:2022 Ed.4] Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers [CSA C22.2#60335-2-40:2022 Ed.4]

Previous Standard ID:

Household and Similar Electrical Appliances - Safety - Part 2 - 40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners, and Dehumidifiers [UL 60335-2-40:2019 Ed.3] Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers [CSA C22.2#60335-2-40:2019 Ed.3]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: June 1, 2025 January 1, 2026

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes: Specific details of new/revised requirements are found in table below.

Note: Per UL 60335-2-40 3rd Edition SUN issued March 3, 2023, all products are required to be certified to the 3rd edition of UL/CSA 60335-2-40 prior to the effective date of January 1, 2024.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



STANDARD INFORMATION

| CLAUSE | COMMENT |
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| | Added A1 P1 P21 P2 and A21 A2 and A2 refrigerants with malar mass not loss than A2 |
| 1DV.2 | Added A1, B1, B2L, B3 and A2L, A2 and A3 refrigerants with molar mass not less than 42 kg/kmol as not being covered by the standard. |
| | NOTE: Intertek will not certify appliances using B2L or B3 refrigerants. |
| 2 | All references are now dated to specific editions. |
| 2 | Note: File review required to determine which standards were used and re-evaluate as required based on impact to both component certification and test procedures. |
| 4DV.1 | Added additional general requirements |
| 5.2DV | Modification of Clause 5.2 pertaining to testing and testing order |
| 6.2DV | Additional classification in conjunction with testing |
| 6.102DV | Added method of shipping in conjunction with testing. |
| 7.1DV.2 | Added marking requirements. |
| 7.1DV.3 | Added requirement for refrigerant(s) as designated under ISO 817 |
| 7.1DV.4 | Added requirement for pre-charged pipe sets |
| 7.1DV.5 | Added marking requirements for ITE cooling appliances |
| 7.1DV.6 | Added partial unit or auxiliary devices marking requirements |
| 7.1DV.7 | Added requirement if an A2 or A3 flammable refrigerant is used |
| 7.1DV.8 | Added requirement for symbol of the United Nations GHS or a combination of the United Nations GHS and ISO 7010-W021 symbols |
| 7.1DV.9 | Added requirement where alternative refrigerants are marked on the nameplate |
| 7.1DV.10 | Added requirement for appliances using flammable refrigerants |
| 7.1DV.11 | Added requirement for marking symbol ISO 7000-1701 |
| 7.1DV.12 | Added requirement for reference made to ISO 7010-W021 |
| 7.1DV.13 | Added requirement for refrigerant to water heat exchangers intended to heat water not intended for human consumption |
| 7.1DV.14 | Added classification "For Installation Only in Locations Not Accessible to the General Public" |
| 7.1DV.15 | Added marking requirement for outdoor use |
| 7.1DV.16 | Added marking requirement for maximum allowable pressure |
| 7.1DV.17 | Added marking for flame symbols of the United Nations GHS and the operator's manual symbol |
| 7.1DV.18 | Added marking for ITE cooling applications |
| 7.1DV.19 | Added marking for Pressurized control panels |
| 7.1DV.20 | Added refrigerant warning symbol requirements |
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| CLAUSE | COMMENT |
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| 7.2DV | Added requirement for letter marking size |
| 7.4DV | Added wiring diagram requirements for fixed appliances |
| 7.6DV | Replace symbol ISO 7010-W021 with the UN GHS |
| 7.12.1DV | Added warning when symbol IEC 60417-6412 (2019-03) is used |
| 7.12.9DV.1 | Added requirements for instructions (languages) and information for appliances using flammable refrigerants |
| 7.12.9DV.2 | Added requirements for documentation |
| 7.101DV | Addition where marking to be located |
| 7.103DV | Added check compliance for more than one factory location |
| 7.104DV | Added that compliance to UL 60335-2-40/CSA C22.2 No. 60335-2-40, or UL 1995/CSA C22.2 No 236 |
| 7.105DV | Added marking requirements for appliances using flammable refrigerants |
| 7.106DV | Added marking requirement for indoor and any partial unit |
| 7.107DV | Added label/marking requirement location |
| 7.108DV | Added height of the symbol |
| 7.111DV | Added warning for appliance employing refrigerating systems with maximum allowable pressure greater than 7 MPa |
| 7.112DV.1 | Added caution |
| 7.112DV.2 | Added caution for ETRS |
| 7.112DV.3 | Added warning for construction per Cl. 13.2DV.1 |
| 7.112DV.4 | Added warning for construction per Cl. 13.2DV.1 |
| 7.112DV.5 | Added equipment intended to utilize a transcritical refrigerating system requirements |
| 7.112DV.6 | Added pressure vessel within a transcritical refrigerating system requirements |
| 8.1.1DV.2 | Added test probe 18 and 19 |
| 10.101DV | Added exception for appliances other than cord connected |
| 11.1DV | Added steady state requirements |
| 11.2DV.1 | Added requirements for maximum static pressure, minimum static pressure as well as the conditioned airflow |
| 11.2DV.2 | Added test requirement for appliances with air filters |
| 11.2.1DV.2 | Added the condition that both a) and b) need to be performed |
| 11.2.1DV.3 | Added the requirement for appliances with water heat exchangers |
| 11.2.3DV | Added requirements for testing of evaporator unit and condenser unit |
| 11.4DV | Added requirements for single-phase equipment |
| 11.5DV.2 | Added operational requirements for appliances with supplementary heaters or provision for supplementary heaters |

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| CLAUSE | COMMENT |
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| 11.6DV | Added operational requirements for appliances with supplementary heaters or provision for supplementary heaters |
| 11.8DV | Added allowance for components in protective electronic circuits to operate |
| Table 3DV | Modification to footnotes from Table 3 |
| 13.2DV.1 | Added touch current requirements |
| 13.2DV.2 | Added for cord-connected CLASS I appliances leakage current requirements |
| 13.3DV | Added for Class I appliances electric strength test requirements as well as appliances not accessible to the general public requirements |
| 15.1DV.2 | Added requirement for appliances with an outdoor service receptacle |
| 16.2DV | Added Appliances may exceed the leakage current if Item 2, 3, or 4 of Clause 13.2DV.1 are met |
| 16.3DV.101 | Added for class I appliances, the insulation of the appliance test set up description as well as appliances not accessible to the general public requirements |
| 19.1DV.2 | Added testing clauses 19.2 to 19.10, 19.101, 19.102, 19.103, and 19.106, as applicable |
| 19.1DV.3 | Added additional test conditions |
| 19.7DV | Added test requirements for motors |
| 19.13DV.2 | Added modification of Part 1 functional insulation of components |
| 19.14DV | Modified test requirements removing the allowance for only one set of contacts to be tested |
| 19.102DV | Added modification of the operation conditions |
| 19.104DV.1 to 19.104DV.8 | Added appliances with supplementary air heaters or provisions for supplementary air heaters testing requirements |
| 19.105DV.2 | Identical to but added all non-self-resetting thermal cut-outs |
| 19.106DV | Added requirements for appliances with a heat exchanger for the purpose of heating water, appliances with a heat exchanger. heat pump pool heaters, units with storage tanks and units without storage tanks |
| 21.1DV.102 | Added pressure requirement for appliances with refrigerant to water heat exchanger |
| 21.1DV.103 | Added mechanical strength test impact energy of 6,8 J |
| 21.2DV | Added requirements for vibration during transport requirements, test requirements, as well as manufacturer evidence requirements |
| 21.101DV.1 | Added test requirements for vertical load test |
| 21.101DV.6 | Modified from 21.101DV.6 to include compliance to cl. 8, 15, and 29 |
| 21.101DV.7 | Added requirements for suspended appliances |
| 21.101DV.8 | Added appliance load test requirements |
| 22.2DV.2 | Added requirements for the controller for a motor-compressor |
| 22.8DV | Added requirement for appliances having walk-in service compartments accessible by doors or hinged panels to have a tool for entry |



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| 22.11DV.1 | Added requirements for doors where fuses are behind |
| 22.11DV.2 | Added tool requirement for doors and covers as well as added interlocking mechanism compliance |
| 22.46DV | Added of the software requirements as well as added when Annex R evaluation required |
| 22.103DV | Added sensing and switching elements requirements |
| 22.104DV | Added sanitary water system and the standards required as applicable |
| 22.112DV.3 | Added the requirement to be designed and tested in accordance with the ASME Unfired Pressure Vessel Code |
| 22.112DV.4 | Added requirements for water side components |
| 22.112DV.5 | Added requirement for protective means |
| 22.112DV.9 | Modified reference clause to cl. 22.112DV.8 and added standards references |
| 22.112DV.10 | Added requirement to meet standard requirements for calculation of the discharge capacity of a pressure relief device or fusible plug |
| 22.112DV.11 | Added requirements for pressure relief devices and added standards requirements |
| 22.112DV.14 | Added standards requirements for when flammable refrigerant is used |
| 22.112DV.18 | Added electrical connections requirement |
| 22.112DV.19.1 | Added requirement for output signal for leak detection system |
| 22.112DV.19.2 | Added requirements for signals on ITE cooling appliances |
| 22.112DV.20 | Added requirements for refrigerant-containing components |
| 22.113DV | Added requirement for appliances using flammable refrigerants |
| 22.114DV | Added requirement when flammable refrigerant is used |
| 22.115DV | Added requirements for refrigerating system with flammable refrigerants |
| 22.116DV.1 | Added requirements for electrical components with arcing and sparking |
| 22.116DV.1.2 | Added requirements for appliances with flammable refrigerants with pressurized enclosures |
| 22.116DV.2 | Added explanation for components which are not considered to be ignition sources |
| 22.116DV.3 | Added component testing requirements |
| 22.116DV.4 | Added for A2L refrigerant components resistive load and inductive load test information |
| 22.116DV.5 | Added testing requirements for electrostatic air cleaners and similar devices |
| 22.116DV.6 | Added burning velocity determination |
| 22.117.1DV.1 | Added max allowable surface temp for non-listed A2L refrigerants |
| 22.117.1DV.2 | Added clarification of compliance of refrigerant sensors tested |
| 22.117.2DV | Added requirements for temperatures on surfaces |
| 22.118DV | Added requirements for all joints |
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| CLAUSE | COMMENT |
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| 22.119DV.1 | Added requirements for pressure limiting devices |
| 22.119DV.2 | Added explanation when pressure limiting devices are not required |
| 22.119DV.3 | Added maximum allowable pressure |
| 22.119DV.4 | Added requirement for stop valve location |
| 22.121DV.1 | Added requirements for add on heat pumps, refrigerant sensors not factory installed and refrigerant sensors that have been relocated |
| 22.122DV | Added requirements for refrigerant detection systems signals |
| 22.123DV | Added requirements for location of refrigerant containing components |
| 22.125DV.1 | Added conditions to be considered enhanced tightness refrigerating systems |
| 22.126DV | Added limitation of type of lamps or arrays |
| 22.131DV | Added appliances that employ refrigerants in a transcritical refrigerating system |
| 22.131DV.1 | Added requirements for pressure release valves used in secondary loop or a cascade system |
| 22.131DV.2 | Added high side and low side pressure relief values |
| 22.131DV.3 | Added requirements equipment utilizing a transcritical refrigerating system and that may contain a pressure vessel |
| 22.131DV.4 | Added provisional exception for need of pressure relief valve |
| 22.132DV.3 | Added condition for simultaneous operation of the heat pump and furnace contamination of the sanitary water |
| 22.132DV.5 | Added requirements for appliances with heat exchangers |
| 2.132DV.8 | Added requirement for spacing or barriers for the prevention of accidental contact with live or moving parts |
| 22.132DV.9 | Added requirement for appliances with refrigerant to water heat exchangers |
| 22.133DV | Added requirements for Safety Shut-Off Valves |
| 22.134DV | Added construction requirements for appliances with particle foam material |
| 22.135DV | Added requirement for alternative refrigerants compliance |
| 22.136DV | Added requirement for water and steam containing heat exchangers to withstand water pressure |
| 22.137DV 22.138DV.1 | Added requirement for switch or controller with a marked off position |
| 22.138DV.1 | Added requirement for receptacle |
| 22.138DV.2 | Added provisional requirement for overcurrent protection for appliances with receptacles |
| 22.138DV.3 | Added requirement for line side receptacles |
| 22.138DV.4 | Added requirement for receptacle compliance for outdoor and indoor use appliances |
| 22.139DV | Added requirements for polymeric material enclosures |
| 22.140DV | Added evaluation requirements for polymeric enclosures |
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| 22.141DV | Added investigation for motor-compressors that are not tested and in compliance to UL 60335-2-34 |
| 23.101DV.1 | Added requirement for protection of wire from contact with piping |
| 23.101DV.2 | Added a requirement of using a fuse or circuit breaker and added compliance determination of short circuit test |
| 23.102DV | Added wiring routing requirements |
| 23.103DV.1 | Added requirement that conductors used to be selected from table 23.103DV |
| 23.103DV.2 | Added requirements for wire material referenced in Group B of table 23.103DV to be enclosed |
| 23.103DV.3 | Added requirements for thermoplastic-insulated hazardous voltage wiring materials that are referenced in Group A |
| 23.103DV.4 | Added requirement of no splicing for wires from Group B |
| 24.1DV.1 | Added requirement for components to comply to relevant requirements within this standard |
| 24.1DV.1.1 | Added requirement for components to be evaluated |
| 24.1DV.1.2 | Additional requirements for: capacitors, switches and automatic controls |
| 24.1DV.3 | Added requirement for components |
| 24.1DV.4 | Added requirements for motor compressors |
| 24.1.4DV.2 | Added additional components and their applicable cycle requirements |
| 24.1.4DV.3 | Added cycle requirement for interlocks |
| 24.1.4DV.101.1 | Added clause for when the manufacturer declares the appliance has the functionality to remotely update safety firmware or software. |
| 24.1.4DV.101.2 | Added compliance requirement for Class B firmware or software |
| 24.1.4DV.101.3 | Added requirement for remotely actuated control function |
| 24.1.4DV.101.4 | Added requirement for user authorization |
| 24.1.10DV | Added requirement for lamps and lamp systems which were not previously tested |
| 24.1.11DV | Added compliance requirement for appliances incorporating electrostatic air cleaners |
| 24.1.12DV | Added compliance requirement for appliances incorporating ultraviolet radiation generating wavelengths less than 250 nm |
| 24.103DV.1 | Removed the waiver for equipment intended for use on branch circuits rated less than 30 amps |
| 25.4DV | Modification of wording as well as modification to c) and added requirement for knockouts intended for field wiring connections |
| 25.7DV | Added supply cord length requirements |
| 25.101DV.1 | Added rating requirements for room air conditioners as well as a definition and requirements for the cord connected room air conditioners |
| 25.101DV.2 | Added information for field-installed conductor arrangement |
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| CLAUSE | COMMENT |
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| 25.101DV.3 | Added length requirements for leads |
| 27.5DV.2 | Added requirements for heat pump pool heaters bonding |
| 29.101DV.1 | Added applicability of cl. 101.DVH.29 |
| 30.101DV.2 | Added requirement for ball pressure test to be performed for particle foam material |
| 30.102DV.1 | Added cord-connected appliances compliance requirement with Annex 101.DVI |
| 30.103DV.1 | Added an evaluation for material |
| 32.102DV.1 | Added UV-C irradiance test for LED arrays, mixed gas lamps, and excimer lamps requirements |
| Annex ADV | Added Annex ADV which is normative |
| ADV.2 | Added requirement if solid-state components are in unit for dielectric potential |
| ADV.101.1 to ADV.11 | Added pressure tests for leakage and strength |
| DD.1DV.1 | Added requirements for the numerical values to be added to the manuals |
| DD.3.1DV | Added requirement for information shall be specified in the manual |
| DD.3.2DV.1 | Added requirement for appliances using A2L refrigerants connected via an air duct system to one or more rooms |
| DD.3.2DV.3 | Added requirement that appliances installed in a room with less than Amin or installed in a room with VED less than min |
| DD.3.2DV.4 | Added requirement for a warning for non-fixed appliance |
| DD.3.2DV.5 | Added requirement for instructions |
| DD.5DV | Added requirement for sealed electrical components to be replaced |
| DD.6DV | Added requirement for intrinsically safe components to be replaced |
| DD.9DV | Added requirements for refrigerant charge and for appliances containing flammable refrigerants |
| DD.13DV | Added that recovered refrigerant to be processed according to local legislation and added requirement for the compressor body |
| EE.1DV | Added requirements all refrigerating system parts |
| EE.3DV | Added Strength pressure test |
| EE.4DV | Added Fatigue test |
| FF.1DV | Added the requirement that the simulation in the refrigerating system be at the potential leak points |
| FF.2.1DV | Added test methods |
| FF.2.4DV | Added room volume requirements for testing |
| FF.2.5DV | Added normative table |
| GG.1.1DV.1 | Added the releasable charge (mREL) |
| GG.1.1DV.2 | Added appliances with multiple refrigerating systems charge limits standards |



| GG.1.2DV.2 Added if appliance is a non-fixed sealed single package unit to use GG.2DV equation GG.1.3DV.2 Added requirement that a room not have a total area of not less than Amin and added that room area be not less than 20 % Amin GG.1.3DV.3 Added requirement of 1,6 m with 1,8 m GG.1.4DV Added requirement with regards to openings extending to floor height GG.2.1DV Added requirements for refrigerant charge (mc) GG.2.1DV Added Continuous circulation airflow requirements GG.2.2.1DV Added continuous circulation airflow requirements GG.2.2.2DV Added continuous circulation airflow requirements GG.2.2.3DV Added requirements for when leak detection system is activated GG.7.2.5DV Added requirements on refrigerant leak to be detected GG.7.2.5DV Added requirements for molenak detection system GG.8.3.1DV Added requirements for mechanical ventilation system GG.8.3.1DV Added requirements for openings of mechanical ventilation GG.9.1DV.2 Added requirements for openings of mechanical ventilation GG.9.1DV.1 Added requirements for Charge limits for appliances using A2L refrigerant nd < mc ≤ m3 GG.9.1DV.2 Added requirements for Charge limits for appliances using A2L refrigerant sconnected via an air duct system to one or more rooms | CLAUSE | COMMENT |
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| GG.1.3DV.2 that room area be not less than 20 % Amin GG.1.3DV.3 Added replacement of 1,6 m with 1,8 m GG.1.4DV Added requirement with regards to openings extending to floor height GG.2.1DV Added requirements for refrigerant charge (mc) GG.2.1.1DV Added requirements for appliance in unventilated areas requirements GG.2.2.1DV Added continuous circulation airflow requirements GG.2.2.2DV Added requirements for when leak detection system is activated GG.4.2.3DV Added requirements for when leak detection system is activated GG.4.1DV.2 Added requirements for when leak detection system is activated GG.7.1DV.2 Added requirements minimum circulation airflow velocity GG.7.2.5DV Added requirements of no refrigerant leak to be detected GG.7.3DV Added requirements for mechanical ventilation system GG.8.2.3DV Added requirements if leak detection system is activated GG.8.3.1.1DV Added requirements if or openings of mechanical ventilation GG.9.1DV.1 Added charge limits for appliances using A2L refrigerant m1 < mc ≤ m3 | GG.1.2DV.2 | Added if appliance is a non-fixed sealed single package unit to use GG.2DV equation |
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| GG.8.3.1.2DVAdded requirements if leak detection system is activatedGG.8.3.3DVAdded requirements for openings of mechanical ventilationGG.9.1DV.1Added Charge limits for appliances using A2L refrigerant m1 < mc ≤ m3 | GG.8.2.3DV | Added natural ventilation requirements |
| GG.8.3.3DVAdded requirements for openings of mechanical ventilationGG.9.1DV.1Added Charge limits for appliances using A2L refrigerant m1 < mc ≤ m3 | GG.8.3.1.1DV | Added requirements for mechanical ventilation system |
| GG.9.1DV.1Added Charge limits for appliances using A2L refrigerant m1 < mc ≤ m3GG.9.1DV.2Added requirements for Charge limits for appliances using A2L refrigerants connected via an air duct system to one or more roomsGG.9.2DVAdded that an output signal need be provided for reduced airflowGG.9.3DVAdded requirement for if a leak detection system is activatedGG.10DVAdded requirements for allowable charge for enhanced tightness refrigerating systems using A2L refrigerantGG.10.2DVAdded required measures for allowable refrigerant chargeGG.10.3DVAdded requirements for maximum refrigerant charge mmax | GG.8.3.1.2DV | Added requirements if leak detection system is activated |
| GG.9.1DV.2Added requirements for Charge limits for appliances using A2L refrigerants connected via an air duct system to one or more roomsGG.9.2DVAdded that an output signal need be provided for reduced airflowGG.9.3DVAdded requirement for if a leak detection system is activatedGG.10DVAdded requirements for allowable charge for enhanced tightness refrigerating systems using A2L refrigerantGG.10.2DVAdded required measures for allowable refrigerant chargeGG.10.3DVAdded requirements for maximum refrigerant charge mmax | GG.8.3.3DV | Added requirements for openings of mechanical ventilation |
| GG.9.1DV.2an air duct system to one or more roomsGG.9.2DVAdded that an output signal need be provided for reduced airflowGG.9.3DVAdded requirement for if a leak detection system is activatedGG.10DVAdded requirements for allowable charge for enhanced tightness refrigerating systems using A2L refrigerantGG.10.2DVAdded required measures for allowable refrigerant chargeGG.10.3DVAdded requirements for maximum refrigerant charge mmax | GG.9.1DV.1 | Added Charge limits for appliances using A2L refrigerant $m1 < mc \le m3$ |
| GG.9.3DVAdded requirement for if a leak detection system is activatedGG.10DVAdded requirements for allowable charge for enhanced tightness refrigerating systems using A2L refrigerantGG.10.2DVAdded required measures for allowable refrigerant chargeGG.10.3DVAdded requirements for maximum refrigerant charge mmax | GG.9.1DV.2 | |
| GG.10DVAdded requirements for allowable charge for enhanced tightness refrigerating systems using A2L refrigerantGG.10.2DVAdded required measures for allowable refrigerant chargeGG.10.3DVAdded requirements for maximum refrigerant charge mmax | GG.9.2DV | Added that an output signal need be provided for reduced airflow |
| GG.10DVusing A2L refrigerantGG.10.2DVAdded required measures for allowable refrigerant chargeGG.10.3DVAdded requirements for maximum refrigerant charge mmax | GG.9.3DV | Added requirement for if a leak detection system is activated |
| GG.10.3DV Added requirements for maximum refrigerant charge mmax | GG.10DV | |
| | GG.10.2DV | Added required measures for allowable refrigerant charge |
| GG.10.4.1DV Added Requirement for units with incorporated circulation airflow to prevent stagnation | GG.10.3DV | Added requirements for maximum refrigerant charge mmax |
| | GG.10.4.1DV | Added Requirement for units with incorporated circulation airflow to prevent stagnation |
| GG.10.4.2DV Added requirements for continuous circulation airflow | GG.10.4.2DV | Added requirements for continuous circulation airflow |
| GG.10.4.3DV Added requirements for circulation airflow activated by a leak detection system | GG.10.4.3DV | Added requirements for circulation airflow activated by a leak detection system |
| GG.11.1DV Added requirements for ventilation for enhanced tightness refrigerating systems using A2L refrigerants | GG.11.1DV | |
| GG.11.2DV Added requirements for if natural ventilation is applied | GG.11.2DV | Added requirements for if natural ventilation is applied |
| GG.11.3.1DV Added requirements for operation of mechanical ventilation | GG.11.3.1DV | Added requirements for operation of mechanical ventilation |
| GG.11.3.3DV Added requirements for mechanical ventilation openings | GG.11.3.3DV | Added requirements for mechanical ventilation openings |



| CLAUSE | COMMENT |
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| GG.12.1DV | Added requirements for safety shut-off valves for enhanced tightness refrigerating systems using A2L refrigerants |
| GG.12.3.1DV | Added determination of releasable charge |
| GG.12.3.2DV | Added test setup for determination of releasable charge |
| GG.12.3.3DV | Added test method for determination of releasable charge |
| GG.12.4.1DV | Added releasable charge calculation |
| GG.12.4.2DV | Added refrigerant amount released between the leak detection system and closing the safety shut-off valves |
| GG.12.4.3.1DV | Added determination of the releasable charge after closing the shut-off valves |
| GG.12.4.3.2DV | Added determination of the apparent volumetric density |
| GG.12.4.3.3DV | Added determination of the apparent volumetric density by default values |
| GG.12.4.3.4DV | Added determination of the apparent volumetric density by measurement the recovered refrigerant |
| GG.12.5.1DV | Added time before a leak detection |
| GG.12.5.2DV | Added determination of leak detection by default time |
| GG.12.5.3DV | Added determination of leak detection based on effective room concentration |
| GG.12.6DV | Added test conditions for releasable charge limited system |
| GG.12.7.1DV | Added alternate method for determination of releasable charge |
| GG.12.7.2DV | Added the releasable charge in the heating mode |
| GG.12.7.3DV | Added the releasable charge in the cooling mode |
| GG12.7.4DV | Added the releasable charge in off/standby mode |
| HH.2.7DV.1 | Added the requirements for when brazing is required under repairs |
| HH.2.7DV.2 | Added the requirements for disposal when flammable refrigerants are used |
| JJ.1DV | Added but is identical to IEC JJ.1 |
| JJ.2DV | Added but is Identical to IEC JJ.2 |
| JJ.3DV | Added but is Identical to IEC JJ.3 |
| KK.1DV | Added note referencing ASTM D8211 |
| KK.3DV | Similar to IEC K.3 but modified step 6) by replacing 800 °C with 1000 °C. |
| LL.1.1DV to LL.1.4DV | Added requirements for refrigerant detection systems for flammable refrigerants |
| LL.2.1DV to LL.2.4DV | Added test gases and default test conditions requirements |
| LL.3.1DV to LL.3.3DV | Added response time of the refrigerant detection system requirements |
| LL.4.1DV to LL.4.3DV | Added refrigerant detection system calibration and short-term stability requirements |



| CLAUSE | COMMENT |
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| LL.5.1DV to LL.5.9DV | Added selectivity test and poisoning test requirements |
| LL.6.1DV | Added refrigerant poisoning and oil spray test requirements |
| LL.6.2DV | Added test set-up requirements |
| LL.6.3DV | Added test procedure requirements |
| LL.6.4DV | Added compliance requirements |
| LL.7.1DV to LL.7.2DV | Added long-term stability requirements |
| LL.8DV | Added humidity test requirements |
| LL.9DV | Added temperature test requirements |
| LL.10DV | Added pressure test requirements |
| LL.11.1DV to LL.11.3DV | Added vibration test requirements |
| LL.12DV | Added electromagnetic compatibility test requirements |
| LL.13DV | Added ignition test requirements |
| LL.14DV to LL.14.2DV | Added Refrigerant detection system self-test routine requirements |
| LL.15DV | Added serviceability requirements |
| LL.16DV | Added refrigerant sensor identification requirements |
| MM.1DV | Added refrigerant sensor location confirmation test requirements |
| MM.2.1DV to MM.2.2DV | Added test method requirements |
| MM.2.3DV | Added test room requirements |
| MM2.4DV | Added Testing instrumentation requirements |
| MM2.5DV | Added compliance criteria |
| NN.2.1DV | Added Note |
| Annex 101.DVA | Added additional operating conditions |
| 101.DVB.1 | Added the requirement of minimum test conditions as specified in Annex 101.DVA multiplied by 0,95 |
| 101.DVB.2.1 | Added requirements if an outdoor section may supply power directly to one or more indoor sections |
| 101.DVB.5 | Added determination of short-circuit current ratings |
| 101.DVB.5.2 | Added methods |
| 101.DVB.5.3 | Added ratings requirements |
| 101.DVB.5.4 | Added determination of the overall short-circuit current rating of an equipment control panel, overall equipment panel or industrial control panel requirements |



| CLAUSE | COMMENT |
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| 101.DVB.6 | Added Knockout and conduit dimensions |
| 101.DVF.1.1 | Added additional marking requirements |
| 101.DVH.1.1 to 101.DVH.13.3.3 | Added requirements for appliances not accessible to the general public |
| 101.DVH.24.1 to 101.DVH.24.2 | Added components requirements |
| 101.DVH.29.1 | Added creepage and clearance requirements |
| 101.DVI.1.1 to 101.DVI.1.3 | Added resistance to heat and fire requirements |
| 101.DVI.2.1 to 101.DVI.2.4 | Added flammability classifications |
| 101.DVI.3.1 to 101.DVI.3.9 | Added Nichrome wire test requirements |
| 101.DVJ.1.1 to 101.DVJ.1.3 | Added non-integral UV-C germicidal lamp systems requirements |
| 101.DVJ.2.1 to 101.DVJ.2.5 | Added additional markings requirements |
| 101.DVJ.3.1 to 101.DVJ.3.11 | Added Construction requirements |
| 101.DVJ.4.1 | Added instruction requirements |
| 101.DVK.1.1 | Added requirements for photovoltaic systems (PVs) |
| 101.DVK.2 to 101.DVK.2.10 | Added marking and Instruction requirements |
| 101.DVK.3.1 to 101.DVK.3.6 | Added construction requirements |
| 101.DVK.4.1 to 101.DVK.4.7 | Added internal wiring requirements |
| 101.DVK.5.1 to 101.DVK.5.5 | Added component requirements |
| 101.DVK.6.1 to 101.DVK.6.4 | Added provisions for earthing requirements |
| 101.DVK.7.1 | Added photovoltaic rapid shutdown protection |
| 101.DVK.8.1 | Added photovoltaic arc fault protection requirements |
| 101.DVL.1 | Added audibility test requirement |
| 101.DVL.1.2 | Added sound output measurement requirement |
| 101.DVL.1.2.1 to 101.DVL.1.2.3 | Added alarm mounting requirements |
| 101.DVL.1.3 | Added alarm duration test requirements |



| CLAUSE | COMMENT |
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| 101.DVL.1.4 | Added supplementary remote sounding appliances requirements |
| 101.DVL.1.5 | Added refrigerant detection system audible alarm markings and instructions |
| 101.DVL.1.6 | Added instruction requirements |
| 101.DVN.1 | Added requirements only apply to refrigerant bearing appliances and their constituent parts and assemblies |
| 101.DVN.2 | Added application requirements |
| 101.DVN.3.1 | Added additional construction requirements of ITE cooling appliances requirements |
| 101.DVN.3.2.1 | Added circulating air fans requirements |
| 101.DVN.3.2.2 | Added ITE cooling appliances construction requirements |
| 101.DVN.3.3 to 101.DVN.3.4 | Added requirements for ITE cooling appliances employing secondary heat exchangers |
| 101.DVN.3.5.1 to 101.DVN.3.5.6 | Added requirements for ITE cooling appliances and partial units for indoor applications |
| 101.DVN.4 | Added allowable charge for ITE cooling appliances |
| 101.DVN.5 | Added Indoor circulation airflow requirements |
| 101.DVN.6 | Added continuous circulation airflow requirements |
| 101.DVN.7 | Added circulation airflow initiated by a leak detection system or refrigerant detection system requirement |
| 101.DVN.7.1 | Added requirements for ITE cooling appliances |
| 101.DVN.7.2 | Added refrigerant detections systems and group controllers requirements |
| 101.DVN.8 | Added Determination of allowable system charge for ITE cooling appliances |
| 101.DVN.8.1.3 | Added requirements for deductions from the overall space volume |
| 101.DVN.8.2 | Added how to calculate allowable system charge for an effective dispersal volume |
| 101.DVN.9 | Added requirements for safety shut-off valves |
| 101.DVN.10 | Added determination of the releasable charge for ITE cooling appliances |
| 101.DVN.11 | Added external ventilation requirements for ITE area and ITE rooms |
| 101.DVP.1.1 | Added leak detection system confirmation test for flammable refrigerants |
| 101.DVP.2.1 to 101.DVP.2.7 | Added test method for leak detection excluding detection systems based on system parameters |
| 101.DVP.3.1 to 101.DVP.3.4 | Added test method for leak detection systems based on system parameters |
| 101.DVQ.1 | Added test method for determining releasable charge |
| 101.DVQ.2 | Added test set-up |
| 101.DVQ.3 | Added Test method |