

제 359 호 (1/7)

국제공인시험기관인정서

기 관 명 : (재)부산테크노파크

대 표 자 : 안 병 만

법 인 등 록 번 호 : 185022-0000490

사업자등록번호 : 606-82-09159

법 인 주 소 : 부산광역시 강서구 지사동 1276

사 업 장 소 재 지 : 부산광역시 강서구 지사동 1276

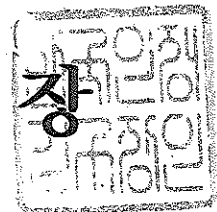
유효 기 간 : 2008년 7월 2일 ~ 2012년 7월 1일

인정분야 및 범위 : 별첨 참조

상기 시험기관을 KS Q ISO/IEC 17025:2006 인정요건 및 국가표준기본법 제23조의 규정에 의거하여 국제공인시험기관으로 인정합니다. 또한 ISO-ILAC-IAF 공동성명(2009.1.8)에 언급된 바와 같이 인정된 분야 및 범위에 대한 기술적 능력과 시험기관 품질경영시스템이 적절함을 인정합니다.

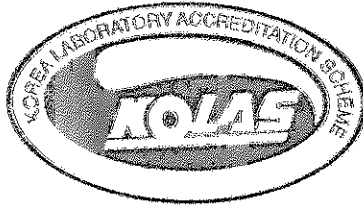
2011년 12월 9일

한 국 인 정 기 구



“이면사항기재”

1. 2008. 07. 02 : 최초인정
2. 2008. 12. 24 : 추가인정(3.전기시험 3.007 가정용전기기기 5개 규격, 3.013 에너지효율 2개 규격)
3. 2009. 8. 25 : 추가 인정(3. 전기시험 3.007 가정용 전기기기(5개 규격) 3.013 에너지효율(3개 규격))
4. 2011. 03. 31 : 대표자 변경 - 이승갑 → 김동철
기관명 변경 - (재)부산테크노파크 기계부품소재기술지원센터
→ (재)부산테크노파크
사업자 등록번호 변경 - 606-82-09334 → 606-82-09159
인정범위 변경 - KT359, KT389, KT433 통합
5. 2011. 07. 05 : 인정범위 변경(3.전기시험 3.007 가정용 전기기기 5개 규격, 3.013 에너지효율 2개 규격)
6. 2011. 10. 26 : 대표자 변경(김동철 → 안병만)
7. 2011. 12. 09 : 인정범위 확대(3.013 에너지효율 지식경제부 고시 제2011-241호 효율관리기자재운용규정 1개 품목추가)

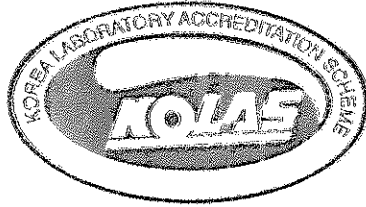


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3. 전기시험

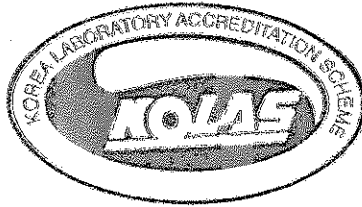
3.007 가정용 전기기기

규격번호	규격명
KS B ISO 15042:2006	멀티에어컨 및 히트펌프의 성능시험방법
	4.2 공기엔탈피방식에 의해 측정되는 무덕트형 실내기의 풍량조정
	4.3 덕트 접속형 실내기의 풍량조정
	5.1 냉방능력시험
	5.2 과부하냉방능력시험
	5.3 냉방저온 및 결빙통풍방해성능시험
	5.4 결빙시 물방울 떨어짐 시험
	5.5 이슬 맺힘 시험
	6.1 난방능력시험
	7.1 열회수능력시험
KS C 9306:2010	에어컨디셔너
	9.4 냉방능력시험
	9.5 냉방소비전력시험
	9.6 전용제습능력시험
	9.7 전용제습능력소비전력시험
	9.8 난방능력시험
	9.9 난방소비전력시험
	9.10 전열장치의 난방능력시험
	9.11 전열장치의 소비전력시험
	9.12 풍량정압시험
	9.13 온도시험
	9.22 저온결빙시험
	9.23 자동제상(서리제거)시험
	9.24 냉방과부하시험
	9.25 전용제습과부하시험
	9.26 난방과부하시험
KS B 6879:2007	열회수형환기장치
	9.3 풍량시험
	9.4 정압손실시험
	9.5 유효환기량시험
	9.6 열교환효율시험
	9.7 누설률시험
	9.8 결로시험
	9.15 급배기풍량시험



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규격번호	규격명
KS C IEC 62552:2010	가정용 냉장기기-특성 및 시험방법
	13. 저장온도 시험
	14. 이슬맺힘 시험
	15. 소비전력량 시험
	16. 저장실 온도 상승 시험
	17. 냉동능력 시험
	18. 제빙 시험
KS B 6367:2002	냉동 · 냉장 진열장 시험 방법
	6.2 보랭 성능 시험
	6.3 서리 제거 시험
	6.4 결로 시험
	6.5 소비전력량 시험
KS B 6031:2003	냉동 · 냉장 쇼케이스
	7.1 보랭 성능
	7.2 서리 제거 성능
	7.3 서리 붙음
	7.5 소비 전력
KS C 9321:2010	김치냉장고
	11.2 제품성능
	11.2.1 냉매 누설
	11.2.2 냉각 성능
	11.2.3 냉각 속도
	11.2.4 냉기 보존 성능
	11.2.5 소비전력량
	11.2.6 이슬맺힘
	12. 표준시험방법
	12.17 냉매 누설 시험
	12.18 냉각 성능 시험
	12.19 냉각 속도 시험
	12.20 냉기 보존 성능 시험
	12.21 소비전력량 시험
	12.22 이슬맺힘 시험
	부속서 1. 유효 내용적 측정방법 및 산출 방법
	부속서 2. 소비전력량 시험방법 및 산출 방법
	부속서 3. 월간 소비 전력량 및 에너지 소비효율등급 현황

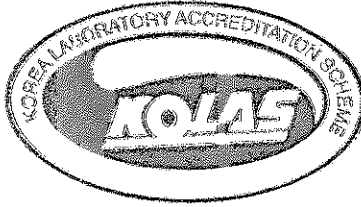


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3. 전기사험

3.011 전자기적합성

규격번호	규격명
ISO 11452-2:2004(E)	Road Vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2: Absorber-lined shielded enclosure Exception : 4. Test Condition : 3 GHz over 8.1 General : 3 GHz over
ISO 10605:2001	Road Vehicles - Test methods for electrical disturbances from electrostatic discharge
ISO 11452-4:2005	Road Vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4: Bulk Current Injections (BCI)
ISO 7637-2:2004	Road Vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient conduction along supply lines only
ISO 7637-3:2007	Road Vehicles - Electrical disturbances from conduction and coupling - Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines Exception : 3.4.3 Direct Capacitor Coupling(DCC) method
CISPR 25 Ed.3.0b	Vehicles, boats and internal combustion engines-Radio disturbance characteristics-Limits and methods of measurement for the protection of on-board receivers Exception : 6.1.4 single/control line filters 6.5 radiated emissions from components/modules - TEM cell method

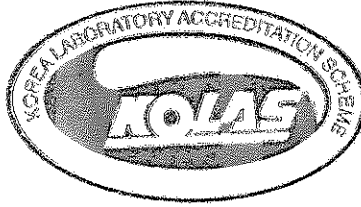


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3. 전기시험

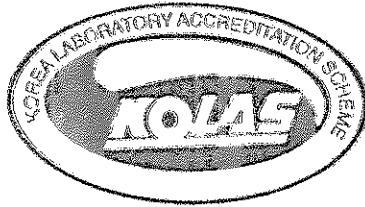
3.013 에너지효율

규격번호	규격명
지식경제부고시 제2011-241호	효율관리기자재운용규정
	1. 전기냉장고
	월간소비전력량
	냉장실유효내용적
	냉동실유효내용적
	자동제상기능여부
	디스펜서장착여부
	냉장실흡바가스켓길이
	냉동실흡바가스켓길이
	최대소비전력량
	1시간소비전력량
	1시간사용시CO ₂ 배출량
	소비효율등급
	2. 전기냉동고
	월간소비전력량
	냉장실유효내용적
	보정유효내용적
	최대 및 목표소비전력량
	1시간소비전력량
	1시간사용시CO ₂ 배출량
	소비효율등급
	3. 김치냉장고
	월간소비전력량
	김치저장실유효내용적
	냉동실유효내용적
	기타실유효내용적
	김치저장용기유효내용적
	보정유효내용적
	최대소비전력량
	김치저장실수
	1시간소비전력량
	1시간사용시CO ₂ 배출량
	소비효율등급



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규격번호	규격명
지식경제부고시 제2011-241호	4. 전기냉방기
	냉방효율
	월간소비전력량
	냉방소비전력량
	소비효율등급
	11. 전기진공청소기
	청소효율
	측정소비전력
	최대흡입일률
	미세먼지방출량
	소비효율등급
	13. 공기청정기
	입자청정화능력시험
	탈취효율측정시험
	소비전력측정시험
	21. 전기냉난방기
	냉난방효율
	냉방효율
	난방효율
	냉방능력
	냉방소비전력
	난방소비전력
	보조히터용량
	소비효율등급
	27. 전기온풍기
	난방효율
	난방능력
	소비전력
	1시간소비전력량
	1시간사용시CO ₂ 배출량
	월간소비전력량
	월간에너지비용
지식경제부고시 제2010-223호	고효율에너지기자재 보급촉진에 관한 규정
	3. 열회수형환기장치
	급배기풍량비율
	유효환기량
	열교환효율
	33. 멀티에어컨디셔너
	냉방능력시험
	난방능력시험
	한랭지능력시험



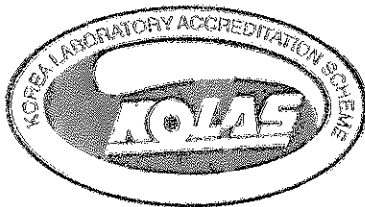
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9. 생물학적 시험

9.006 수중 생물학

규격번호	규격명
APHA 10200C(2005)	Concentration techniques
APHA 9215(2006)	Heterotrophic plate count
ASTM E1218-04 ^{e1} (2004)	Standard Guide for Conducting Static Toxicity Tests with Microalgae
ASTM E1440-91(2004)	Standard Guide for Acute Toxicity Test with the Rotifer Brachionus
EPA-821-R-06-009(2006) EPA1600	Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl- β -D-Glucoside Agar
EPA-821-R-06-011(2006) EPA1603	Method 1603: <i>Escherichia coli</i> (E. coli) in Water by Membrane Filtration Using Modified membrane-Thermo tolerant <i>Escherichia coli</i> Agar (Modified mTEC)
EPA445.0(1997)	in vitro determination of chlorophyll a and pheophytin a in marine and freshwater algae by fluorescence
EPA-821-R-02-014(2002)	Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms
UNESCO Manual on Harmful Marine Microalgae (2003)	Estimating cell numbers

끝.



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CERTIFICATE OF ACCREDITATION

Name of Laboratory : Busan Techno-Park

Representative : Byung-Man, Ahn

Address of Headquarters : 1276, Jisa Dong, Gangseo Gu, Busan, Korea

Address of Laboratory : 1276, Jisa Dong, Gangseo Gu, Busan, Korea

Duration : July. 2, 2008 ~ July. 1, 2012

Scope of Accreditation

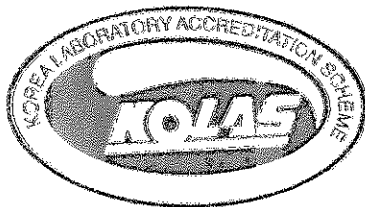
(Scope of Accreditation is described in the accompanying Annex)

This testing laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025 : 2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 8 January 2009).

Dec. 9, 2011

Administrator,

Korea Laboratory Accreditation Scheme(KOLAS)

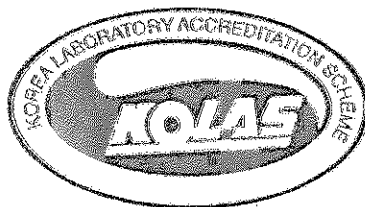


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3. Electric Test

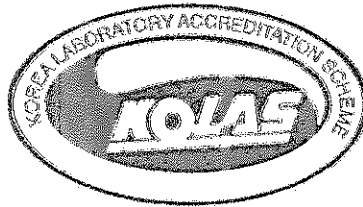
3.007 Household and similar equipment

Test method	Standard designation
KS B ISO 15042:2006	Multi-split systems and Heat pumps performance test method
	4.2 Air-flow of non-ducted air-conditioners by air-enthalpy method
	4.3 Air-flow test of ducted air-conditioners
	5.1 Cooling capacity test
	5.2 Cooling overload test
	5.3 Cooling-low temperature and freeze-up test
	5.4 Waterdrop test
	5.5 Enclosure sweat test
	6.1 Heating capacity test
	7.1 Heat-recovery efficiency test
KS C 9306:2010	Air-conditioners
	9.4 Cooling capacity test
	9.5 Cooling power input test
	9.6 Dehumidification test
	9.7 Dehumidification power input test
	9.8 Heating capacity test
	9.9 Heating power input test
	9.10 Electric heater heating capacity test
	9.11 Electric heater power input test
	9.12 Air-flow and external static pressure test
	9.13 Temperature test
	9.22 Freeze-up test
	9.23 Automatic defrosting test
	9.24 Cooling overload test
	9.25 Dehumidification overload test
	9.26 Heating overload test
KS B 6879:2007	Heat-recovery ventilators
	9.3 Air-flow test
	9.4 Static pressure loss test
	9.5 Effective Ra-flow rate
	9.6 Enthalpy effectiveness test
	9.7 Leakage rate test
	9.8 Enclosure sweat test
	9.15 SA, RA airflow rate test



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Test method	Standard designation
KS C IEC 62552:2010	Household electric refrigerating appliances
	13. Testing storage temperatures
	14. Water vapour condensation test
	15. Energy consumption test
	16. Temperature rise test
	17. Freezing test
	18. Ice-making test
KS B 6367:2002	Methods of test for commercial refrigerated cabinets
	6.2 Cool Air Performance Test
	6.3 Test of Defrosting
	6.4 Ice-making test
	6.5 Energy consumption test
KS B 6031:2003	Commercial refrigerated cabinets
	7.1 Cool Air Performance Test
	7.2 Test of Defrosting
	7.3 Ice-making test
	7.5 Power Consumption Test
KS C 9321:2010	Household electric refrigerating appliances for KIM-CHI
	11.2 Performance
	11.2.1 Refrigerant Leakage
	11.2.2 Freezing Performance
	11.2.3 Refrigeration speed
	11.2.4 Chill preservation performance
	11.2.5 Power Consumption
	11.2.6 Water vapour condensation
	12. Test method
	12.17 Test for Refrigerant Leakage
	12.18 Freezing Performance test
	12.19 Refrigeration speed test
	12.20 Test for chill preservation performance
	12.21 Power Consumption test
	12.22 Water vapour condensation test
	Appended document 1. Measurement of Effective Inner Volume and Calculation
	Appended document 2. Power Consumption test method
	Appended document 3. Energy consumption for month

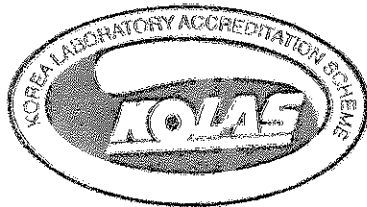


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3. Electric Test

3.011 Electromagnetic Compatibility

Test Method	Standard Designation
ISO 11452-2:2004(E)	Road Vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 2: Absorber-lined shielded enclosure Exception : 4. Test Condition : 3 GHz over 8.1 General : 3 GHz over
ISO 10605:2001	Road Vehicles - Test methods for electrical disturbances from electrostatic discharge
ISO 11452-4:2005	Road Vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 4: Bulk Current Injections (BCI)
ISO 7637-2:2004	Road Vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient conduction along supply lines only
ISO 7637-3:2007	Road Vehicles - Electrical disturbances from conduction and coupling - Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines Exception : 3.4.3 Direct Capacitor Coupling(DCC) method
CISPR 25 Ed.3.0b	Vehicles, boats and internal combustion engines-Radio disturbance characteristics-Limits and methods of measurement for the protection of on-board receivers Exception : 6.1.4 single/control line filters 6.5 radiated emissions from components/modules - TEM cell method

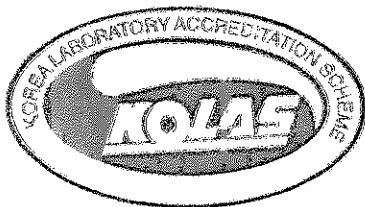


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3. Electric Test

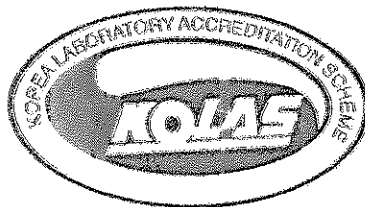
3.013 Energy efficiency

Test method	Standard designation
Korea Ministry of Knowledge Economy notice. 2011-241	Regulation on energy efficiency labeling and standard
	1. Household Electric Refrigerators
	Monthly consumption power
	Storage volume of fresh-food compartments
	Storage volume of ice-making compartments
	Automatic Defrosting
	Dispenser
	Fresh-food compartments Homebar gasket length
	Ice-making compartments Homebar gasket length
	Max energy consumption
	Energy consumption test for a hour
	1 hours use CO2 emissions
	Consumption efficiency rating
	2. Refrigerator-freezers and Freezers
	Energy consumption for a month
	Storage volume of fresh-food storage compartments
	Valid my gage calibration
	Maximum consumption and goals power
	1 hours power consumption
	1 hours use CO2 emissions
	Consumption efficiency rating
	3. Household electric refrigerating appliances for KIM-CHI
	Monthly consumption power
	Storage volume of KIM-CHI storage compartments
	Storage volume of fresh-food storage compartments
	Other storages available in volume
	KIM-CHI, the courage to save the valid capacity
	Valid gage calibration
	Maximum consumption power
	KIM-CHI to the storeroom
	1 hours power consumption
	1 hours use CO2 emissions
	Consumption efficiency rating



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Test method	Standard designation
Ministry of Knowledge Economy notice: 2011-241	4. Air-conditioners
	Cooling COP test
	Monthly power test
	Cooling power test
	COP test
	11. Vacuum cleaners
	Cleaning efficiency
	Power input test
	Maximum suction power
	Dust emission
	Power input rating
	13. Air-cleaner
	Particle cleaning capacity test
	Deodorization efficiency measurement test
	Power consumption(standby power) measurement test
	21. Air-conditioners(Heating & Cooling)
	Cooling & Heating COP test
	Cooling COP
	Heating COP
	Cooling capacity
	Cooling power input
	Heating power input
	Electric heater capacity
	27. Electric heater
	Heating COP
	Heating capacity
	Power input test
	1 hours power consumption
	1 hours use CO ₂ emissions
	Monthly consumption power
	Monthly consumption energy cost
Ministry of Knowledge Economy notice: 2010-223	Regulation on energy high-efficiency labeling and standard
	3. Heat recovery ventilators
	SA.RA Ratio
	Effective Ra flow rate
	Enthalpy effectiveness test
	33. Multi-split air-conditioners
	Cooling capacity test
	Heating capacity test
	Heating capacity test of cold latitudes



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9. Biological Test

9.006 Underwater Biology

Test method	Standard designation
APHA 10200C(2005)	Concentration techniques
APHA 9215(2006)	Heterotrophic plate count
ASTM E1218-04e1(2004)	Standard Guide for Conducting Static Toxicity Tests with Microalgae
ASTM E1440-91(2004)	Standard Guide for Acute Toxicity Test with the Rotifer Brachionus
EPA-821-R-06-009(2006) EPA1600	Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl- β -D-Glucoside Agar
EPA-821-R-06-011(2006) EPA1603	Method 1603: Escherichia coli (E. coli) in Water by Membrane Filtration Using Modified membrane-Thermo tolerant Escherichia coli Agar (Modified mTEC)
EPA445.0(1997)	in vitro determination of chlorophyll a and pheophytin a in marine and freshwater algae by fluorescence
EPA-821-R-02-014(2002)	Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms
UNESCO Manual on Harmful Marine Microalgae (2003)	Estimating cell numbers

End.