



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

DEKRA Testing and Certification S.r.l.
Via Martiri della Liberazione 12, 23875- Osnago (LC), Italia

(Hereinafter called the Organization) and hereby declares that Organization 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 (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Electrical Testing
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:

March 1, 2019

Issue Date:

March 1, 2019

Expiration Date:

May 31, 2021

Accreditation No.:

101871

Certificate No.:

L19-110

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjilabs.com



Certificate of Accreditation: Supplement

DEKRA Testing and Certification S.r.l.
 Via Martiri della Liberazione 12, 23875-Osnago (LC), Italia
 Contact Name: Sig. Franco Vasta Phone: 0399280293

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT	
Electrical ^F	Household and similar electrical appliances	Classification	IEC 60335-1:2001 +A1:2004+A2:2006;	Visual Evaluation	
		Marking and instructions	IEC 60335-1:2010 +A1:2013+A2:2016;		
		Construction Internal cables	EN 60335-1:2002 +A1:2004+A11:2004+A2:2006+		
		Components	A12:2006+A13:2008+A14:2010+A15:2011;		
		Terminals for external cables	EN 60335-1:2012+ A11:2014		
		Protection against access to live parts	CEI EN 60335-1:2008 +A13:2009+A14:2012+A15:2012;		Force up to 20 N
		Starting of Motor Appliances	CEI EN 60335-1:2013+A11:2015		Up to 63 A
		Protection against overload of transformers and associated circuits			
		Power and current absorbed			
		Heating			Climatic chamber: 5 °C to 60 °C
		Abnormal operation			Data Recorder: -10 °C to 400 °C
		Leakage current and dielectric strength at operating temperature			Up to 1 mA/kW; Up to 5 000 Vac
		Leakage current and Dielectric strength			
		Resistance to humidity			Up to 95 % RH
		Stability and Mechanical Hazards			Up to 20°
		Mechanical Resistance			Up to 1 J
		Connection to the mains and external flexible cables			Flexing test up to 10 N; 20 000 flexing; 360°
		Grounding Provisions			Pull force up to 100 N; Torque 0.35 Nm
Screws and Connections		Up to 12 V; 0.01 Ω to 0.5 Ω			
Surface distances, in the air and distances through a solid insulation		Up to 2.5 Nm			
			0.01 mm to 1 m		



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Electrical ^F	Household and similar electrical appliances	Resistance to Heat and Fire	IEC 60335-1:2001 +A1:2004+A2:2006;	Up to 960 °C
		Toxicity Radiation and Similar Hazards	IEC 60335-1:2010 +A1:2013+A2:2016;	EMF: Up to 100 %
Protection against rust		EN 60335-1:2002 +A1:2004+A11:2004+A2:2006+A12:2006+A13:2008+A14:2010+A15:2011; EN 60335-1:2012+ A11:2014 CEI EN 60335-1:2008 +A13:2009+A14:2012+A15:2012; CEI EN 60335-1:2013+A11:2015	100 °C ± 5 °C; 10 min	
Safety of household and similar electrical appliances – Part 2: Particular requirements for vacuum cleaners and water suction cleaning devices	Classification	Classification	IEC 60335-2-2:2009 +A1:2012+A2:2016;	Visual Evaluation
		Marking and instructions	EN 60335-2-2:2010+A1:2013;	
		Construction Internal cables	CEI EN 61335-2-2:2011 +A11:2013+A1:2014	
		Components		
		Terminals for external cables		
		Protection against access to live parts		
		Starting of Motor Appliances		
		Power and current absorbed		
		Protection against overload of transformers and associated circuits		
		Heating		
		Abnormal operation		
		Leakage current and dielectric strength at operating temperature		
		Leakage current and Dielectric strength		
		Resistance to humidity		
		Stability and Mechanical Hazards		
Mechanical Resistance				
		Force up to 20 N		
		Up to 63 A		
		Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C		
		Up to 1 mA/kW; Up to 5 000 Vac		
		Up to 95 % RH		
		Up to 20°		
		Up to 1 J		



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Electrical ^F	Safety of household and similar electrical appliances – Part 2: Particular requirements for vacuum cleaners and water suction cleaning devices	Connection to the mains and external flexible cables	IEC 60335-2-2:2009 +A1:2012+A2:2016; EN 60335-2-2:2010+A1:2013; CEI EN 61335-2-2:2011 +A11:2013+A1:2014	Flexing test up to 10 N; 20 000 flexing; 360°
		Grounding Provisions		Pull force up to 100 N; Torque 0.35 Nm
		Screws and Connections		Up to 12 V; 0.01 Ω to 0.5 Ω
		Surface distances, in the air and distances through a solid insulation		Up to 2.5 Nm
		Resistance to Heat and Fire		0.01 mm to 1 m
		Toxicity Radiation and Similar Hazards		Up to 960 °C
		Protection against rust		EMF: Up to 100 %
				100 °C ± 5 °C; 10 min.
	Household and similar electrical appliances - Safety - Part 2: Particular requirements for kitchen machines	Classification	IEC 60335-2-14:2016; IEC 60335-2-14:2006 +A1:2008+A2:2012; EN 60335-2-14:2006 +A1:2008+A11:2012+AC:2016; EN 60335-2-14:2016; CEI EN 60335-2-14:2007 +A1:2009+A14:2012	Visual Evaluation
		Marking and instructions		
		Construction Internal cables		
		Components		
		Terminals for external cables		
		Protection against access to live parts		Force up to 20 N
		Starting of Motor Appliances		Up to 63 A
		Power and current absorbed		
		Protection against overload of transformers and associated circuits		
		Heating		
		Abnormal operation		Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C



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Electrical ^F	Household and similar electrical appliances - Safety - Part 2: Particular requirements for kitchen machines	Leakage current and dielectric strength at operating temperature	IEC 60335-2-14:2016; IEC 60335-2-14:2006 +A1:2008+A2:2012;	Up to 1 mA/kW; Up to 5 000 Vac
		Leakage current and Dielectric strength	EN 60335-2-14:2006 +A1:2008+A11:2012+AC:2016;	
		Resistance to humidity	EN 60335-2-14:2016;	Up to 95 % RH
		Stability and Mechanical Hazards	CEI EN 60335-2-14:2007 +A1:2009+A14:2012	Up to 20°
		Mechanical Resistance		Up to 1 J
		Connection to the mains and external flexible cables		Flexing test up to 10 N; 20 000 flexing; 360°
		Screws and Connections		Pull force up to 100 N; Torque 0.35 Nm
		Surface distances, in the air and distances through a solid insulation		Up to 2.5 Nm
		Resistance to Heat and Fire		0.01 mm to 1 m
		Toxicity Radiation and Similar Hazards		Up to 960 °C
		Protection against rust		EMF: Up to 100 %
				100 °C ± 5 °C; 10 min
		Household and similar electrical appliances - Safety - Part 2: Particular requirements for appliances for heating liquids	Classification	IEC 60335-2-15:2002 +A1:2005+A2:2008;
	Marking and instructions		IEC 60335-2-15:2012+A1:2016;	
	Construction Internal cables		EN 60335-2-15:2002+A1:2005+ EC:2005+EC:2006+A2:2008+ A11:2012+AC:2013;	
	Components		EN 60335-2-15:2016;	
	Terminals for external cables		CEI EN 60335-2-15:2003 +A1:2006+A2:2009+ A11:2012;	
	Protection against access to live parts		CEI EN 60335-2-15:2012+A11:2013	
	Starting of Motor Appliances			
	Power and current absorbed			
Protection against overload of transformers and associated circuits		Force up to 20 N		
		Up to 63 A		



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Electrical ^F	Household and similar electrical appliances - Safety - Part 2: Particular requirements for appliances for heating liquids	Heating	IEC 60335-2-15:2002	Climatic chamber: 5 °C to 60 °C
		Abnormal operation	+A1:2005+A2:2008; IEC 60335-2-15:2012+A1:2016; EN 60335-2-15:2002+A1:2005+	Data Recorder: -10 °C to 400 °C
		Leakage current and dielectric strength at operating temperature	EC:2005+EC:2006+A2:2008+ A11:2012+AC:2013; EN 60335-2-15:2016;	Up to 1 mA/kW; Up to 5 000 Vac
		Leakage current and Dielectric strength	CEI EN 60335-2-15:2003	
		Resistance to humidity	+A1:2006+A2:2009+ A11:2012; CEI EN 60335-2-15:2012+A11:2013	Up to 95 % RH
		Stability and Mechanical Hazards		Up to 20°
		Mechanical Resistance		Up to 1 J
		Connection to the mains and external flexible cables		Flexing test up to 10 N; 20 000 flexing; 360°
		Grounding Provisions		Pull force up to 100 N; Torque 0.35 Nm
		Screws and Connections		Up to 12 V; 0.01 Ω to 0.5 Ω
		Surface distances, in the air and distances through a solid insulation		Up to 2.5 Nm
		Resistance to Heat and Fire		0.01 mm to 1 mm
		Toxicity Radiation and Similar Hazards		Up to 960 °C
		Protection against rust		EMF: Up to 100 % 100 °C ± 5 °C; 10 min



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Electrical ^F	Household and similar electrical appliances - Safety - Part 2: Particular requirements for appliances for skin or hair care	Classification	IEC 60335-2-23:2003 +Ec1:2004+A1:2008+A2:2012; IEC 60335-2-23:2016; EN 60335-2-23:2003 +A1:2008+A2:2015; CEI EN 60335-2-23:2004 +A1:2009+A11:2011+Ec:2012+A2:2016	Visual Evaluation	
		Marking and instructions		Force up to 20 N	
		Construction Internal cables		Up to 63 A	
		Components		Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C	
		Terminals for external cables			Up to 1 mA/kW; Up to 5 000 Vac
		Protection against access to live parts			Up to 95 % RH
		Starting of Motor Appliances			Up to 20°
		Power and current absorbed			Up to 1 J
		Protection against overload of transformers and associated circuits			Flexing test up to 10 N; 20 000 flexing; 360°
		Heating			Pull force up to 100 N; Torque 0.35 Nm
		Abnormal operation			Up to 12 V; 0.01 Ω to 0.5 Ω
		Leakage current and dielectric strength at operating temperature			Up to 2.5 Nm
		Leakage current and Dielectric strength			0.01 mm to 1 m
		Resistance to humidity			
		Stability and Mechanical Hazards			
		Mechanical Resistance			
		Connection to the mains and external flexible cables			
		Grounding Provisions			
Screws and Connections					
Surface distances, in the air and distances through a solid insulation					



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Electrical ^F	Household and similar electrical appliances - Safety - Part 2: Particular requirements for appliances for skin or hair care	Resistance to Heat and Fire	IEC 60335-2-23:2003 +Ec1:2004+A1:2008+A2:2012;	Up to 960 °C
		Toxicity Radiation and Similar Hazards	IEC 60335-2-23:2016; EN 60335-2-23:2003	EMF: Up to 100 %
Protection against rust		+A1:2008+A2:2015; CEI EN 60335-2-23:2004 +A1:2009+A11:2011+Ec:2012+A2:2016	100 °C ± 5 °C; 10 min.	
Safety of household and similar electrical appliances - Part 2: Particular requirements for electric kitchen machines for collective use	Classification	Classification	IEC 60335-2-64:2002+A1:2007; EN 60335-2-64:2000+A1:2002; CEI 60335-2-64:2000; CEI EN 60335-2-64+A1:2004;	Visual Evaluation
		Marking and instructions		
		Construction Internal cables		
		Components		
		Terminals for external cables		
		Protection against access to live parts		Force up to 20 N
		Starting of Motor Appliances		Up to 63 A
		Power and current absorbed		
		Protection against overload of transformers and associated circuits		
		Heating		Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C
		Abnormal operation		Up to 1 mA/kW; Up to 5 000 Vac
		Leakage current and dielectric strength at operating temperature		
		Leakage current and Dielectric strength		
		Resistance to humidity		Up to 95 % RH
		Stability and Mechanical Hazards		Up to 20°
		Mechanical Resistance		Up to 1 J
Connection to the mains and external flexible cables		Flexing test up to 10 N; 20 000 flexing; 360° Pull force up to 100 N; Torque 0.35 Nm		



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Electrical ^F	Safety of household and similar electrical appliances - Part 2: Particular requirements for electric kitchen machines for collective use	Grounding Provisions	IEC 60335-2-64:2002+A1:2007; EN 60335-2-64:2000+A1:2002; CEI 60335-2-64:2000; CEI EN 60335-2-64+A1:2004;	Up to 12 V; 0.01 Ω to 0.5 Ω	
		Screws and Connections		Up to 2.5 Nm	
		Surface distances, in the air and distances through a solid insulation		0.01 mm to 1 m	
		Resistance to Heat and Fire		Up to 960 °C	
		Toxicity Radiation and Similar Hazards		EMF: Up to 100 %	
		Protection against rust		100 °C ± 5 °C; 10 min.	
	Household and similar electrical appliances - Safety - Part 2: Particular requirements for wet and dry vacuum cleaners, including power brush, for industrial and commercial use	Classification	IEC 60335-2-69:2002 +A1:2004+A2:2007; IEC 60335-2-69:2012; IEC 60335-2-69:2016; EN 60335-2-69:2009; EN 60335-2-69:2012; CEI EN 60335-2-69:2014	Visual Evaluation	
		Marking and instructions			
		Construction Internal cables			
		Components			
		Terminals for external cables			
		Protection against access to live parts			Force up to 20 N
		Starting of Motor Appliances			Up to 63 A
		Power and current absorbed			Up to 63 A
		Heating			Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C
		Protection against overload of transformers and associated circuits			Up to 63 A
		Abnormal operation			Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C



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Electrical ^F	Household and similar electrical appliances - Safety - Part 2: Particular requirements for wet and dry vacuum cleaners, including power brush, for industrial and commercial use	Leakage current and dielectric strength at operating temperature	IEC 60335-2-69:2002 +A1:2004+A2:2007; IEC 60335-2-69:2012; IEC 60335-2-69:2016; EN 60335-2-69:2009; EN 60335-2-69:2012; CEI EN 60335-2-69:2014	Up to 1 mA/kW; Up to 5 000 Vac
		Leakage current and Dielectric strength		Up to 95 % RH
		Resistance to humidity		Up to 20°
		Stability and Mechanical Hazards		Up to 1 J
		Mechanical Resistance		Flexing test up to 10 N; 20 000 flexing; 360°
		Connection to the mains and external flexible cables		Pull force up to 100 N; Torque 0.35 Nm
		Grounding Provisions		Up to 12 V; 0.01 Ω to 0.5 Ω
		Screws and Connections		Up to 2.5 Nm
		Surface distances, in the air and distances through a solid insulation		0.01 mm to 1 m
		Resistance to Heat and Fire		Up to 960 °C
		Toxicity Radiation and Similar Hazards		EMF: Up to 100 %
		Protection against rust		100 °C ± 5 °C; 10 min.
		Household and similar electrical appliances - Safety - Part 2: Particular requirements for commercial dispensing appliances and vending machine		Classification
	Marking and instructions		Force up to 20 N	
	Construction Internal cables		Up to 63 A	
	Components		Up to 63 A	
	Terminals for external cables			
	Protection against access to live parts			
	Starting of Motor Appliances			
	Power and current absorbed			
Protection against overload of transformers and associated circuits				



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Electrical ^F	Household and similar electrical appliances - Safety - Part 2: Particular requirements for commercial dispensing appliances and vending machine	Heating	IEC 60335-2-75:2002	Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C
		Abnormal operation	+A1:2004+A2:2008; IEC 60335-2-75:2012+A1:2015; EN 60335-2-75:2004	
		Leakage current and dielectric strength at operating temperature	+A1:2005+A11:2006+ A2:2008+A12:2010; CEI EN 60335-2-75:2005	Up to 1 mA/kW; Up to 5 000 Vac
		Leakage current and Dielectric strength	+A11:2007+ A2:2009+A12:2010	
		Resistance to humidity		Up to 95 % RH
		Stability and Mechanical Hazards		Up to 20°
		Mechanical Resistance		Up to 1 J
		Connection to the mains and external flexible cables		Flexing test up to 10 N; 20 000 flexing; 360°
		Grounding Provisions		Pull force up to 100 N; Torque 0.35 Nm
		Screws and Connections		Up to 12 V; 0.01 Ω to 0.5 Ω
		Surface distances, in the air and distances through a solid insulation		Up to 2.5 Nm
		Resistance to Heat and Fire		0.01 mm to 1 m
		Toxicity Radiation and Similar Hazards		Up to 960 °C
		Protection against rust		EMF: Up to 100 % 100 °C ± 5 °C; 10 min.



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Electrical ^F	Luminaires – Part 1: General requirements and tests	Appliance components / Components of luminaires	IEC 60598-1:2014 + AMD1:2017; EN 60598-1:2015 + AC:2015 + AC:2016 + A1:2018; CEI EN 60598-1: 2015 +EC:2015+EC:2016	No tools
		Equipment classification / Classification of luminaires /Marking		Visual Evaluation
		Construction		0.2 Nm to 20 Nm 0.2 J to 1 J 1 N to 1 200 N
		External and internal wiring		30 N to 120 N 0.08 Nm to 0.35 Nm
		Provision for earthing		0.01 Ω to 0.5 Ω
		Protection against electric shock		Test gauges D.L. = 100 Nm
		Capacitors discharge		Up to 250 Vac
		Protection against the penetration of dust, solid bodies and humidity / Resistance to dust, solid object and moisture		1 Nm to 3 Nm 0.07 l/m to 100 l/m
		Insulation resistance and dielectric strength, contact current and current in the protective conductor / Insulation resistance and electric resistance, current and protective conductor current		0.5 M Ω to 50 M Ω 1 V to 5 000 V 0 mA to 10 mA
		Surface and air insulation distances / Creepage distances and clearances		0.1 mm to 150 mm



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Electrical ^F	Luminaires – Part 1: General requirements and tests	Endurance and heating tests	IEC 60598-1:2014 + AMD1:2017; EN 60598-1:2015 + AC:2015 + AC:2016 + A1:2018; CEI EN 60598-1: 2015 +EC:2015+EC:2016	Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C
		Resistance to heat, fire and surface currents / Resistance to heat, fire and tracking		25 °C to 280 °C 550 °C to 960 °C
		Screw terminals		1 Nm to 100 Nm
		Terminals and electrical connections without screws / Screwless terminals and electrical connections		
	Part 2: Particular requirements Section 1: Fixed general purpose luminaires	Classification of luminaires/Marking	IEC 60598-2-1:1979 + AMD1:1987; EN 60598-2-1:1989; CEI EN 60598-2-1: 1997	Visual Evaluation
		Construction		0.2 Nm to 20 Nm 0.2 J to 1 J 1 N to 1 200 N
		Creepage Distances and Clearances		0.1 mm to 150 mm
		Provision for earthing		0.01 Ω to 0.5 Ω
		Terminals		1 Nm to 100 Nm
		External and internal wiring		30 N to 120 N 0.08 Nm to 0.35 Nm
		Protection against electric shock		Test gauges D.L. = 100 Nm
		Endurance tests and thermal tests		Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C
		Resistance to dust and moisture		1 Nm to 3 Nm 0.07 l/m to 100 l/m
		Insulation resistance and electric strength		0.5 M Ω to 50 M Ω 1 V to 5 000 V 0 mA to 10 mA
		Resistance to head, fire, and tracking		25 °C to 280 °C 550 °C to 960 °C
		Part 2: Particular requirements Section 2: Recessed luminaires		Classification of luminaires/Marking
	Provision for earthing		0.01 Ω to 0.5 Ω	



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FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Electrical ^F	Part 2: Particular requirements Section 2: Recessed luminaires	Insulation resistance and electric strength	IEC 60598-2-2:2011; EN 60598-2-2:2012; CEI EN 60598-2-2: 2012	0.5 M Ω to 50 M Ω 1 V to 5 000 V 0 mA to 10 mA
	Part 2: Particular requirements Section 3: Luminaires for road and street lighting	Classification of luminaires/Marking	IEC 60598-2-3:2002 + AMD1:2011; EN 60598-2-3-2003 + EC:2005 + A1:2011; CEI EN 60598-2-3: 2003 + EC 2005 + A1:2012	Visual Evaluation
		Construction		0.2 Nm to 20 Nm 0.2 J to 1 J 1 N to 1 200 N
		Creepage distances and clearances		0.1 mm to 150 mm
		Provision for earthing		0.01 Ω to 0.5 Ω
		Terminals		1 Nm to 100 Nm
		External and internal wiring		30 N to 120 N 0.08 Nm to 0.35 Nm
		Protection against electric shock		Test gauges D.L. = 100 Nm
		Endurance tests and thermal tests		Climatic chamber: 5 °C to 60 °C Data Recorder: -10 °C to 400 °C
		Resistance to dust and moisture		1 Nm to 3 Nm 0.07 l/m to 100 l/m
		Insulation resistance and electric strength		0.5 M Ω to 50 M Ω 1 V to 5 000 V 0 mA to 10 mA
	Resistance to heat, fire and tracking	25 °C to 280 °C 550 °C to 960 °C		
	Part 2: Particular requirements Section 5: Floodlights	Classification of luminaires / Marking	IEC 60598-2-5:2015; EN 60598-2-5:2015; CEI EN 60598-2-5: 2016	Visual Evaluation
		Insulation resistance and electric strength		0.1 mm to 150 mm