

Onkar Engine & Generator (P) Limited E-14 Sector: 63, Noida (UP)
Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Page 7 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
			(i) Insulation winding of fan Motor Class -E, insulation, Temperature rise , max 90K	43.2K	
			(ii) Wooden Support, wall, ceiling and floor of test corner Max- 65K	0.9K	
			(iii) Terminal for external conductor Max- 60K	3.1K	
			(iv) Rubber or PVC Insulation of Internal & External Wiring, including supply cord.	8.5K	
			a) Without Temperature rating 50K		
			b) With Temperature rating T-25K	Not Applicable	
			iv) Ambient of switches, thermostats & temperature limiters.	Not Applicable	
			a) without T marking 30K		
			b) with T marking, T 25K	Not Applicable	
			v) Room Temperature	27°C	
		IS 302-2-80:2017	Cl. 11.8 The temperature rise limits for appliances for tropical climates are reduced by 15K. 1 The temperature rise limits for fans marked with an ambient operating temperature are reduced by the difference between the marked value & 25°C	Not Applicable	
16	Leakage current & electric strength at operating temperature (Cl.13 of IS 302-2-80:2017)	IS 302-1-2008	Cl.13.1 Motor Operated appliances & combined appliances are supplied at 1.06 times the rated Voltage.	Satisfactory	
			Cl.13.2 Leakage current :- The leakage current shall not exceed 0.21 (Max)	0.019mA	
			Cl. 13.3 ii) Electric strength Appliance shall withstand at 1000 volt for one minute.	withstood the test	
			No Breakdown shall occur during test	Satisfactory	
17	Transient over voltages (Cl.14 of IS 302-2-80 : 2017)	IS 302-1-2008	Appliances shall the transient over Voltage. withstand The impulse test voltage is applied three times for each polarity with intervals of at least 1s. Tho Impulse test voltage is specified in Table 6 of IS :302 -1- 2008	Not Applicable	
18	Moisture Resistance Cl.15 of IS 302-2-80 : 2017)	IS 302-1-2008	Cl. 15.1 The enclosure of appliances shall provide the degree of protection against moisture in accordance with the classification of appliances	Ordinary (IPXO)	

Authorized By:-

Onkar Engine & Generator (P) Limited E-14 Sector: 63, Noida (UP)
Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Page 8 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
			Cl. 15.3 Appliances shall be proof against humid conditions that may occur in normal use. The test is carried out for 48hrs in humidity cabinet with relative humidity not less than 90% & temperature shall between 15°C to 35°C ii) Electric strength Appliance shall withstand at 1250 volt for one minute.	Satisfactory	Withstood
19	Leakage current & Electric Strength (Cl.16 of 302-2-80 :2017)	IS 302-1.2008	Cl. 16.2 Appliances are supplied at 1.06 times rated voltage	Satisfactory	
			ii)leakage current 0.21 (Max)	0.028mA	
			iii) Electric strength Appliance shall withstand at 1250 volt for one minute.	withstood the test	
			iv) No breakdown shall occur during test	Satisfactory	
20	Overload Protection of Transformers & associated circuits (Cl.17 of IS 302-2-80:2007)	IS 302-1.2008	Cl. 17Appliance incorporating circuits supplied from a transformer shall be constructed so that in the event of short circuits which are likely to occur in normal use excessive temperature do not occur in the transformer in the circuit associated with the transformer. Compliance is checked by applying the most unfavorable short circuit or overload which is likely to occur in normal use, the appliance being supplied with 1.06 times or 0.94 times rated voltage, whichever is the more unfavorable.	Not Applicable	
21	Abnormal Operations (Cl 19 of IS 302-2-80:2017)	IS 302-1.2008	CL 1.9.1 Appliances shall be constructed so that as a result of abnormal or careless operation, the risk of fire, mechanical damage impairing safety or protection against electric shock is obviated as far as practicable.	Satisfactory	
22	Stability & Mechanical Hazards (CL.20 of IS 302-2-80:2017)	IS 302-1.2008	Cl. 20.1 Appliances, other than fixed appliances and hand held appliances, intended to be used on a surface such as the floor or a table shall have adequate stability	No Such Appliances	

Authorized By:-



Onkar Engine & Generator (P) Limited E-14 Sector: 63, Noida (UP)
Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Page 9 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
		IS 302-2-80:2017	<p>Cl. 20.1 Portable pedestable fans having a height exceeding 1.7m & a mass exceeding 10 Kg are placed on a horizontal surface. A force 40N is applied to the appliances at a height of 1.5 mtr in the most unfavourable horizontal direction. The appliance shall not overturn. In fans provide with oscillatory mechanism, means shall be provided to assume that when properly installed the fan is not stalled or overtuned.</p> <p>Cl. 20.1 01 Fan blades, other than those of fans for mounting at high level, shall be guarded unless their leading edge and tips are rounded.</p> <p>a) They have hardness less than D 60 shore.</p> <p>b) They have a peripheral speed less than 15m/s when it is supplied at rated voltage.</p> <p>c) The fan has a power output not exceeding 2w when supplied at rated voltage.</p> <p>Cl.20.102.1. A blade brackets used on ceiling suspended fan shall be subjected to the static load described in 20.102.2</p>	No Such Appliances	
				Satisfactory	
				Passes the Test	
23	MECHANICAL STRENGTH (Cl.21 of IS 302 .2. 80 : 2017)	IS 302-1- 2008	Cl.21.1 Appliances shall have adequate mechanical strength & be constructed to withstand such rough handling that may expected in normal use. Appliance is subjected to three blows of spring hammer having impact energy of 0.5 Joule	No Damage Observed	
		IS 302-1- 2008	Cl.21.1 Accessible parts of solid insulation shall have sufficient strength to provide penetration by Sharp implements	Satisfactory	
		IS 302-2-80 : 2017	Cl.21.101 Fan guards are subjected to push force and a pull force of 20 N applied along the axis of the fan motor , After the test it should not be possible to touch dangerous moving part with the test probe that is similar to test probe B IS 1401, but having a circular stop face having a diameter of 50mm instead of non circular face. The test probe is applied with a force not exceeding 5 N	No Fans Guard in Ceiling Fan	
		IS 302-2-80 : 2017	Cl.21.102 Ceiling fan shall have adequate strength Ceiling fan are mounted in accordance with the installation instruction. A load of 10000N is suspended from the body of the fan for 1 min.	With stood the test	

Authorized By:-



Onkar Engine & Generator (P) Limited
E-14 Sector: 63, Noida (UP)

Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Page 10 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
		IS:302-2-80:2017	A torque of 50Nm is then applied to the fixed body of fan for 1 min the test is repeated with the torque applied in reverse direction.	Withstood the test	
		IS:302-2-80:2017	Metal parts used in the suspension system shall have a minimum wall thickness of 1.5 mm .No parts of any hole or slot shall be closer than 5 mm from the edge .A safety cord shall be provided as a back up to the main suspension system and shall be strong enough to taken 20 times the weight of complete fan.	Withstood the test	
24	CONSTRUCTION (Cl.22 of IS:302-2-80:2017	IS:302-1:2008	Cl.22.1 If the appliance is marked with the first numeral of the IP system the relevant requirements of IS/IEC 60529 :2001shall be fulfilled.	Ordinary (IPX0)	
			Cl.22.2 For stationary appliances, means shall be provided to ensure all pole disconnection from supply mains .Such means shall be one of the following: a) a supply cord fitted with a plug b) a switch c) a statement in the instructions that a disconnection incorporated in the fixed wiring is to	Not applicable Not applicable Instructions provided Not applicable	
			Cl.22.9 Appliance shall be so constructed so that parts such as insulation , internal wiring , winding, commutators and slip ring are not exposed oil grease or similar substances, unless the substance has adequate insulating properties so that	Satisfactory	
		IS:302-1:2008	Cl.22.11 The 50N force is applied to clip used to fasten fan guard. Instead, a force of 15N is applied in any direction to the clip.	Not applicable	
		IS:302-2-80:2017	Cl.22.12 Handles, knobs, grips, livers and similar parts shall be fixed in a reliable manner so that they will not work losse in normal use.	Satisfactory	
			Cl.22.14 Appliance shall have no ragged or sharp edges.	Satisfactory	
			Cl.22.18 Current carrng parts and other metal parts the corrosion of which could result in a hazard, shall be resistant to corrosion in a hazard, shall be resistant to corrosion under normal condition of use ; the relevant parts show no sign of corrosion.	Satisfactory	

Authorized By:-



Onkar Engine & Generator (P) Limited E-14 Sector: 63, Noida (UP)
Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Page 11 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
		IS:302:1.2008	CI.22 .21 Wood Cotton silk ordinary paper and similar fibrous or hygroscopic material shall not be used as insulation unless impregnated.	Satisfactory	
			CI.22 .22 Appliance shall not contain asbestos.	No Asbestos	
			CI.22 .23 Its containing polychlorinated biphenyl shall not be used in appliances.	No Oils containing polychlorinated biphenyl	
			CI.22.30 Parts of Class 2 construction which serve as supplementary or reinforced insulation and which could be omitted after reassembly.	Satisfactory	
			CI.22.31 Clearance and creepage distances over supplementary insulation & reinforced insulation shall not be reduced below the value specified in 29 as a result of wear, if a part such as a wire screw not or spring becomes loose or falls out of position, clearances and creepage distances between live parts and accessible parts shall not be reduced below the value specified for supplementary insulation. Compliance is checked by inspection by measurement and by manual test.	Satisfactory	
			CI.22.34 Shafts of opening knobs handles, levers and similar parts shall not be live unless the shaft is in accessible when the part is removed.	Satisfactory	
			CI.22.37 For Class 2 appliances, capacitors shall not be connected to accessible metal parts unless they comply with the requirements.	Satisfactory	
			CI.22.38 Capacitors shall not be connected between the contacts of a thermal cut-out.	No thermal cut-out used	

Authorized By:-

Onkar Engine & Generator (P) Limited E-14 Sector: 63, Noida (UP)
Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Page 12 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
		IS:302.1.2008	Cl.22.39 Lamp holders shall be used only for connection lamps	No such appliance	
			Cl.22.40 Motor operated appliances and combined appliances which are intended to be moved while in operation or which have accessible moving parts, shall be fitted with a switch to control the motor. The actuating member of this switch shall be easily visible and accessible.	Satisfactory	
			Cl.22.41 Appliance shall not incorporate components other than lamp, containing mercury.	Satisfactory	
			Cl.22.43 Appliance which can be adjusted for different voltages shall be constructed so that accidental changing of setting is unlikely to occur.	Satisfactory	
			Cl.22.44 Appliances shall not have an enclosure that is shaped and decorated so that the appliance is likely to be treated as a toy of children.	Satisfactory	
		IS:302.2.80:2017	Cl.22.101 Appliances having provision for attaching luminaries shall incorporate appropriate terminals and internal wiring.	No luminaries provide in fan	
			Cl.22.102 Thermal cutout, if any incorporated in duct fans in order to comply with it shall be non self resetting.	No thermal cut-out	
			Cl.22.103 Electrical insulation for which clearances and creepage distances are specified shall not be located in air duct unless adequate precautions are taken to reduce the effects of contamination.	Satisfactory	
		IS:302.1.2008	Cl.23.1 a) Wireways shall be smooth & free from sharp edges.	Satisfactory	
			b) Wire shall be protected from coming in contact with burrs, cooling fins or similar edges.	Satisfactory	
			c) Holes in metal through which insulated wires pass shall have smooth well-rounded surface or be provided with bushings.	Satisfactory	
			d) Wiring shall be effectively prevented from coming into contact with moving parts.	Satisfactory	
			e) Internal wiring and electrical connections between different parts shall be adequately protected or enclosed.	Satisfactory	
		IS:302.1.2008	Cl.23.2 Beads & Similar ceramic insulators on live wires shall be fixed or located so that they cannot change their position or rest on sharp edges.	No such insulators used	

Authorized By:-



Onkar Engine & Generator (P) Limited E-14 Sector: 63, Noida (UP)
Factory Test Report As per IS 374:2019 & IS 302-2-80:2017

Pg 13 of 19

S.NO.	Test and Clauses	Method	Requirement of IS Specification	Test Result	
				A	B
		IS:302-2-80:2017	Cl.23.4 Instead of moving the movable parts backwards and forwards, fans with an oscillating mechanism are tested as follows: Fans are with supplied at rated voltage and operated under normal operation, the angle of oscillation being the maximum allowed by the construction. The test is carried out for 10000 cycles of oscillation.	Satisfactory	
		IS:302-1:2008	Cl.23.4 Bare internal Wiring shall be rigid & fixed so that, in normal use clearance or creepage distance can not be reduced.	Not Applicable	
			Cl.23.5 The insulation of internal wiring shall withstand the electrical stress likely occur in normal use.	Satisfactory	
			A Voltage of 2000V is applied for 15min, There shall be no breakdown.	withstood the test	
			Cl.23.6 When sleeving is used as supplementary insulation on internal wiring, It shall be retained in position by positive means.	Satisfactory	
			Cl.23.7 Conductors identified by the colour combination green/yellow shall only be used for	Class-2	
			Cl. 23.8 Aluminum wires shall not be used for internal wiring.	No Aluminum wire used	
			Cl. 23.9 Stranded conductor shall not be consolidated by lead-tin soldering.	No soldering	
			Cl. 23.10 The insulation and sheath of internal wiring incorporated in external hose for the connection of an appliance to the water mains, shall be at least equivalent to that of PVC sheathed flexible cord.	Not Applicable	
26	COMPONENTS (Cl.24 of IS:302-2-80:2017)	IS:302-1:2008	Cl. 24. 1 Components shall comply with the safety requirements specified in relevant Indian standard standards where ever exist as far as they reasonably apply.	Satisfactory	
		IS:302-1:2008	Cl. 24.2 Appliances shall not be fitted with a) switches or automatic controls in flexible cords; b) devices that cause the protective device in the fixed wiring to operate in the event of a fault in the appliance. c) thermal cut-outs that can be reset by a soldering operation.	Not fitted	

Authorized By:-