

TECHNICAL SPECIFICATION OF PORTABLE HOT AIR BLOWER
SPECIFICATION NO. EMT- 6640 REV. 01

S. N.	DESCRIPTION OF BHEL REQUIREMENT	REQUIRED	OFFERED	REMARKS / DEVIATION
1.0	PURPOSE : Portable Hot Air Blower will be used to dry up the winding, curing of insulated joint for overhang portion of electrical machines.			
2.0	SCOPE : The scope of supply includes Design, Manufacturing, Supply, Erection, Commissioning and Job Proving of Portable Hot Air Blower as per this Technical Specification, at BHEL Haridwar works.	Qty.: 4 nos.		
3.0	TECHNICAL SPECIFICATION OF PORTABLE HOT AIR BLOWER :			
3.1	Hot Air Temperature required at the outlet of pipe (sl. no. 3.5) : Variable from 80 to 160 Degree Centigrade as per the requirement of the job			
3.2	Heater Bank Capacity : 6.0 KW / more at input supply 415 + / - 10.% Volts, 50 + / - 3 % Hz, 3 phase. Make and Design feature of heater bank shall be furnished by the vendor in the offer. Heater bank should be suitable for duty cycle as per sl. no. 3.4			
3.3	Hot Air Blower : Capacity : 50 cubic meter / hour or more at 900 mm water gauge. Make and Technical Specification of blower shall be furnished by the vendor in the offer. Hot air blower shall be suitable for duty cycle as per sl. no. 3.4.			
3.3.1	Motor Capacity : Matching motor shall be supplied for the hot air blower. Make and Technical Specification of motor shall be furnished by the vendor in the offer Motor shall be suitable for duty cycle as per sl. no. 3.4.			
3.4	Duty Cycle for complete Portable Hot Air Blower :			

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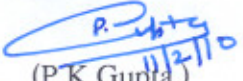
	Continuous working for minimum 12 hour hours at minimum hot air temperature 160 Degree Centigrade at the delivery end of Hot Air Outlet Pipe (sl. no. 3.5)			
3.5	Hot Air Outlet Pipe			
3.5.1	Inner diameter 40.0 mm.			
3.5.2	Length of pipe : Minimum 3000 mm			
3.5.3	Material of pipe : Heat resistant stainless steel flexible pipe with good quality and long lasting thermal insulation on outer body of pipe to prevent heat loss. Details of thermal insulation shall be furnished by the vendor in the offer			
3.5.4	Quick coupling arrangement shall be provided to fix the hot air outlet pipe with the heater bank			
3.6	Control Panel :			
3.6.1	Control Panel should have MCCB, temperature indicating cum controller, interlocking between heater bank (sl. no. 3.2) circuit and motor (3.3.1) circuit of blower, overload protection, contactor, voltmeter, ammeter, indicating lamps and DOL starter etc.			
3.6.2	All electrical items shall be reputed make such as Siemens / L& T			
3.7	Trolley :			
3.7.1	Complete heater bank, blower, motor and control panel will be mounted on a trolley complete 4 nos. good quality nylon wheel and a suitable handle.			
3.7.2	Make and details of wheel shall be furnished by the vendor in the offer			
3.7.3	Handle shall be provided for maneuvering the trolley at shop floor as and when required			
3.7.4	4 nos. lifting hook shall be provided at suitable location on the top base of trolley so that complete installation can be shifted with the help of overhead crane as and when required			
3.8	Overall size and weight of the complete hot air blower, shall be furnished by the vendor in the offer in the General Arrangement Drawing (sl. no. 3.11.1)			
3.9	5 mtr long electric cable complete with top connection shall be supplied			
3.10	Accessories :			
3.10.	Quick fixing type flat nozzle (wide 150 mm X			


1	opening 12 mm) to fix at the outlet of the pipe (sl. no. 3.5)	04 no.		
3.10.2	Cylindrical perforated nozzle (diameter 60 mm X length 100 mm) to fix at the outlet of the pipe (sl. no. 3.5)	04 no.		
4.0	General Arrangement Drawing :			
4.1	General Arrangement drawing for the portable hot air blower, must be submitted by the vendor in the offer.			
4.2	Following items shall be indicated in general arrangement drawing : Location of heater bank Location of blower Location of control panel			
4.3	Vendor shall submit the General Arrangement Drawing, Circuit Diagram etc. for BHEL approval with 4 weeks after placement of Purchase Order.			
5.0	POWER SUPPLY :			
	BHEL will provide Electrical supply as detailed out below : : Three phase, 3 wire, 415 + / - 15% volt, 50 + / - 3% Hz to the machine. There will be no neutral wire and earthing will be provided through shop structure column.			
6.0	ENVIRONMENT CONDITION :			
	Portable Hot Air Blower should be suitable for tropical condition with ambient temperature from 0 to 45 Degree Centigrade and relative humidity maximum 95 %			
7.0	OPERATION AND MAINTENANCE MANUAL OF PORTABLE HOT AIR BLOWER :			
7.1	4 sets of Operation and Maintenance Manual in English language, shall be supplied. Operation & Maintenance Manual should contain following aspects along with other features.	Vendor shall furnish confirmation in their offer		
7.1.1	Operation and Maintenance Instruction			
7.1.2	Do's and Don'ts			
7.1.3	Mechanical assembly diagram			
7.1.4	Electrical Wiring Diagram with proper wire nos			
7.1.5	Operation & Maintenance manual of blower, details of heater bank etc.			
8.0	PRE-ACCEPTANCE OF PORTABLE HOT			

	AIR BLOWER AT VENDOR'S WORKS :			
8.1	Pre-acceptance of the portable hot air blower will be done by BHEL engineer at vendor's works. Following points will be verified by BHEL engineer at vendor's works.	Vendor shall furnish concurrence in their offer		
8.2	Verification of all the items as per total list of Bill of Materials			
8.3	Trial run and verification of all technical features of portable hot air blower as laid down in this Technical Specification			
8.4	Completeness of Operation and Maintenance Manual (sl. no. 7.0)			
8.5	Verification of spares item			
9.0	SPARES: Following items are to be included in the list of spares along with the recommended items of spares : Price for individual spare items shall be furnished in Commercial Bid.			
9.1	Heater	4 nos.		
9.2	Hot Air Outlet Pipe	1 nos.		
9.3	Bearing of blower	1 set.		
10.0	PAINTING :			
10.1	Vendor shall indicate the colour of the Portable Hot Air Blower, in the offer			
10.2	Vendor shall repair the paint with original paint in case the same is damaged in transit and before commissioning the Portable Hot Air Blower at BHEL Haridwar works.	Vendor to note.		
11.0	COMMISSIONING OF THE PORTABLE HOT AIR BLOWER AT BHEL HARIDWAR WORKS :			
11.1	Vendor shall take full responsibility for carrying out the commissioning OF Portable Hot Air Blower at BHEL Haridwar works.	Vendor shall furnish their confirmation in their offer.		
12.0	FINAL ACCEPTANCE OF THE PORTABLE HOT AIR BLOWER :			
12.1	Demonstration of all features specified in this Technical Specification to the satisfaction of BHEL, at BHEL Haridwar works.	Vendor shall furnish their concurrence in their offer		
13.0	GUARANTEE :			
13.1	Guarantee for complete Portable Hot Air Blower for 24 months from the date of final acceptance (refer sl. no. 12.0) at BHEL works.	Vendor shall confirm in their offer		

13.2	Any spares required during guarantee period shall have to be arranged by the vendor free of cost (up to BHEL Haridwar stores) and duty levied have to be borne by the vendor.	Vendor shall confirm in their offer		
14.0	NOISE LEVEL :			
14.1	Maximum noise level of the potable hot air blower must be below 85 dB(A), one meter away from the blower with correction factor for background noise.			
15.0	PACKING :			
15.1	Rigid wooden packing box shall be provided for all the items of Portable Hot Air Blower to avoid any damage / loss in transit. All small and loose items like spares, etc. should also be suitably packed in separate wooden boxes.	Vendor shall confirm in their offer		
16.0	GENERAL INFORMATION :			
	All the information and drawing attached with the tender document are exclusive property of BHEL Haridwar. Under any circumstance, these information as stated above, must not be passed on to any third party without prior permission of BHEL and must not be used directly or indirectly detrimental to the interest of BHEL.			
17.0	QUALIFYING CONDITION :			
17.1	Offers of only those vendors will be considered who have supplied & commissioned at least one number portable hot air blower of this capacity or higher, in last 10 years and same is working satisfactorily for one year after the commissioning. Supporting documents such as Purchase Order, Year of Manufacturing & Commissioning, Name of their customers, Performance Certificate from their customer to whom such or higher capacity of Portable Hot Air Blower (s) has (have) been supplied in last 10 years, must be submitted along with the offer.	Vendor shall furnish the details as sought, in their offer		


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