



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

ENQUIRY

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| Enquiry Number: | Enquiry Date: | Due date for submission of quotation: |
|-----------------|---------------|---------------------------------------|
| 2620800096 | 14.10.2008 | 17.11.2008 |

You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order

| Item | Description | Quantity | Delivery (Item required at BHEL on) |
|------|---|----------|-------------------------------------|
| 10 | Bracket / Column Mount Type Man Coolers as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in) | 145 Nos. | 28.02.2009 |
| 20 | Pedestal Type Man Coolers as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in) | 120 Nos. | 28.02.2009 |
| 10 | Tubular Type Man Cooler as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in) | 175 Nos. | 28.02.2009 |

BHEL commercial terms & conditions with Price Bid and Bank Guarantee formats can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference “2620800096”.

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

Sr.Manager / MM / Capital Equipment

Specification of Bracket / Tubular / Pedestal - Man Coolers

BRACKET TYPE (Column mounted) 3 PHASE MANCOOLER

Bracket type Man cooler, shall be made of mild steel tubular stanchion mount, suitable for installation on walls and columns. The die cast aluminum impeller shall be aerodynamically balanced and it will have a swing of 180 degree and vertical angle of 15 degree and to be providing with wire guard. Foot mounted totally enclosed squirrel cage induction motor with class B insulation (Reputed makes only acceptable and also indicated make details of the motor) Sweep 610 mm, 3 Phase 415 volts, approximately RPM 1450, input 550 watts, air delivery 28000 (m³/h). Makes: EPC, ALMONARD, CALCUTTA FAN, KHAITAN AND CROMPTON GREAVES.

PEDESTAL TYPE 3 PHASE MANCOOLER

Pedestal type Man cooler, shall be made of mild steel column fitted with a strong and stable cast iron base and with castor wheels, being portable. The die cast aluminum impeller shall be aerodynamically balanced and it will have a swing of 180 degrees and vertical tilting angle of 15 degrees and to be providing with strong wire guard for safety. Foot mounted totally enclosed squirrel cage induction motor with class B insulation. Sweep 610 mm, 3 Phase - 415 volt, approximately RPM 1450, input 550 watts, air delivery 28000 (m³/h). Makes: EPC, ALMONARD, CALCUTTA FAN, KHAITAN AND CROMPTON GREAVES.

TUBLER TYPE 3 PHASE MANCOOLER

Tubular type Man cooler shall be mounted on a cradle with casing. The die cast aluminum impeller shall be aerodynamically balanced and it will have a swing of 180 degree and vertical angle of 15 degree and to be provide with wire guard both ends of the tubular. . Foot mounted totally enclosed squirrel cage induction motor with class B insulation (Reputed makes only acceptable and also indicated make details of the motor) Sweep 610 mm, 3 Phase 415 volts, approximately RPM 1450, input 550 watts, air delivery 28000 (m³/h).Makes: EPC, ALMONARD, CALCUTTA FAN, KHAITAN AND CROMPTON GREAVES.

Specification for Bracket / Tubular / Pedestal Type Mancooler

| Sl.No. | Description for BHEL Requirement | Specified / To be confirmed by | Offered | Deviations if any |
|---------------|---|--|----------------|--------------------------|
| | General purpose Bracket type (Column mount) / Tubular Type/ Pedestal Type 610 mm sweep mancooler meant for industrial application and suitable for operation on 3phase, 415V, 50Hz a.c.supply | | | |
| 1.0 | Mancooler Construction | | | |
| 1.1 | Tubular Type Mancooler Construction | Fan mounted on a tubular, mild steel support cradle. Casing to be of mild steel, with inlet and outlet coned to improve airflow. Motor mounted on a platform inside the casing. Swivel in the vertical plane with locking arrangement. Whole unit to be robustly built to stand firmly and withstand rough handling. | | |
| 1.2 | Bracket (Column Mount) Type Mancooler Construction | Fan with a tubular mount and mounting plate suitable for installation on column. Motor mounted on a platform. Swivel facility with locking arrangement. | | |

| Sl.No. | Description for BHEL Requirement | Specified / To be confirmed by | Offered | Deviations if any |
|--------|--------------------------------------|---|---------|-------------------|
| 1.3 | Pedestal Type Mancooler Construction | Fan with a tubular pedestal mount with adjustable height. The base shall be robust to ensure stability. The height shall be approx. 1.75 m. Motor mounted on a platform. | | |
| 2.0 | Impeller | 610 mm sweep aerofoil axial impeller of die cast aluminum alloy for high efficiency and long throw. Blades to be dynamically and statically balanced. Impeller to be directly coupled to the motor. | | |
| 2.1 | Number of blades in the impeller | Vendor to specify | | |
| 2.2 | Safety Guard | Air inlet and outlet to be provided with safety guards. | | |
| 3.0 | Motor Specification | Foot mounted, squirrel cage, 4 Pole, induction motor suitable for 415, 3-phase, 50Hz a.c. supply. | | |
| 3.1 | Motor Power | Not less than 0.75 H.P. Vendor to specify actual power. | | |
| 3.2 | Make and Frame size of motor | Reputed make. Vendor to specify make and frame size. | | |
| 4.0 | Make of the Mancooler | Reputed make. Vendor to specify the make. | | |
| 5.0 | Air Flow | Vendor to specify | | |

| Sl.No. | Description for BHEL Requirement | Specified / To be confirmed by | Offered | Deviations if any |
|--------|--|--|---------|-------------------|
| 5.1 | Air velocity at outlet | Vendor to specify | | |
| 5.2 | Noise level at 1m distance in dbA | Vendor to specify | | |
| 6.0 | Dimensions | Technical and Dimensional details with catalogue to be enclosed. | | |
| 6.1 | Conformance to IS standard | Vendor to specify | | |
| 7.0 | Scope of supply | Quantity | | |
| 7.1 | Bracket (Column mount) Type Man cooler with motor as specified above | 145 nos. | | |
| 7.2 | Pedestal Type Man cooler with motor as specified above | 120nos. | | |
| 7.3 | Tubular Type Man cooler with motor as specified above | 175 nos. | | |