

**BHARAT HEAVY ELECTRICALS LIMITED**  
**UNIT: JHANSI**  
**(WORK. ENGG. & SERVICES DEPTT.)**

**EQUIPMENT : SPECIAL PURPOSE DRILLING MACHINE**  
**ITEM NO : MT-3/3/1446**  
**LOCATION : LOCOMOTIVE**  
**QUANTITY : 1 NO.**  
**SPECIFICATION : 6201**

**SPECIAL PURPOSE DRILLING MACHINE**

Special purpose drilling and tapping machine mounted on bogie bed to drill & tap holes upto 65 mm dia in steel. The column to be mounted on bed which slides on the bogie bed and can be traverse by hand wheel & powered motor. It should be possible to rigidly lock in position on bed. The column should be of robust design so that no tendency of vibration occurs during high speeds and loads. The radial arm is to be suitably designed so that it can be traversed across the column by means of a hand wheel & powered motor, elevated by hand and power and should be moved radially through a complete circle. The arm can be tilted in a vertical plane through 30°. Secure locking provision is to be provided for all the movements. Drilling head to be adjustable in vertical and horizontal planes to any angle and locked securely in any position. Spindle of the drilling head to be of good wear resistant and case hardened and ground. Power traverse fine, coarse, hand adjustment and reversing motion to be provided to spindle.

All gears to bevels to the spindle drive should be case hardened and ground on the tooth flanks. All shaft in the drive system to run roller bearing.

All scales to be calibrated in metric units.

**SPECIFICATION FOR SPECIAL PURPOSE DRILLING MACHINE WITH STANDARD ACCESSORIES.**

- (1) M/c should be suitable for drilling & reaming of Brake Hanger bracket of Bogie frame
- (2) BED length - 7000 mm approx.
- (3) Cross slide length- 1500 mm approx.
- (4) M/c spindle- MT 5 with upto 180° tilting facility
- (5) Feed- 0.13 mm to 1.0 mm in eight segments.
- (6) Machine should be suitable for Power supply-415 Volts, 50 Hz, 3-phase AC
- (7) M/c should be suitable for drilling & reaming of dia 10 to 65 mm.
- (8) M/c should have to work at 100 mm to 500 mm with up & down facility from bed level.



**NOTE:-** All standard accessories should be supplied with the machine as a part of machine at no extra cost


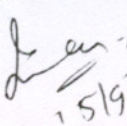
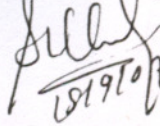
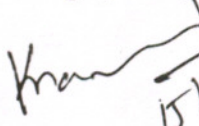
**Following to be submitted with the offer:**

1. Dimensioned outline general arrangement drawing
2. Details of safety devices / guards provided.
3. Electrical schematic diagram.
4. Total electrical load.
5. Quotation with item wise prices of spares for **2 years** normal working.
6. Details of standard & optional accessories offered.
7. Catalogues / leaflets of machine offered

**QUALIFYING CONDITIONS**

Only those vender, who have supplied and commissioned **3 Nos.** such machines in the past ten years and such machine is presently working satisfactorily for more than one year (more than six month if supplied to BHEL) after commissioning should quote. The following information is to be submitted by the vender about the companies where similar machines have been supplied. This is required from all venders for qualifications of their offers.

1. Name of the customer/ company where similar machine/ crane is installed
2. Complete postal address of the customer
3. Year of commissioning
4. Name and designation of the contact person of the customer
5. Phone , Fax No. and e-mail address of the contact person of the customer
6. Performance certificate from the customer regarding satisfactory performance of the machine/ crane supplied to them

Date	Prepared By	Checked By	Approved By	
	Dy. Mgr (WEX)	Mgr.(WEX)	DGM.(WEX)	Sr. Mgr (LMM)
15/9/07		 15/9/07	 15/9/07	 15/9



**BHARAT HEAVY ELECTRICALS LIMITED**  
**UNIT: JHANSI**  
**(WORK. ENGG. & SERVICES DEPTT.)**

**EQUIPMENT : PORTABLE DRILLING MACHINE**  
**ITEM NO : MT-3/3/1447**  
**LOCATION : LOCOMOTIVE**  
**QUANTITY : 1 NO.**  
**SPECIFICATION : 6022**

**PORTABLE DRILLING MACHINE**

Portable universal radial drilling and tapping machine mounted on bogie bed should be capable of drilling & reaming of holes upto 75 mm dia (max) in steel. The column to be mounted on bed which slides on the bogie bed and can be traverse by hand wheel & powered motor. It should be possible to rigidly lock in position on bed. The column should be of robust design so that no tendency of vibration occurs during high speeds and loads. The radial are is to be suitably designed so that it can be traversed across the column by means of a hand wheel & powered motor, elevated by hand and power and should be moved radially through a complete circle. The arm can be tilted in a vertical plane through 30°. Secure locking provision is to be provided for all the movements. Drilling head to be adjustable in vertical and horizontal planes to any angle and locked securely in any position. Spindle of the drilling head to be of good wear resistant and case hardened and ground. Power traverse fine, coarse, hand adjustment and reversing motion to be provided to spindle.

All gears to bevels to the spindle drive should be case hardened and ground on the tooth flanks. All shaft in the drive system to run roller bearing.

All scales to be calibrated in metric units.

**SPECIFICATION FOR PORTABLE DRILLING MACHINE WITH STANDARD ACCESSORIES.**

- |                                                                              |                                               |
|------------------------------------------------------------------------------|-----------------------------------------------|
| (1) Swing Radius of drilling spindle (max)                                   | = 1753 mm                                     |
| (2) Swing radius of drilling spindle (min)                                   | = 813 mm                                      |
| (3) Distance of Spindle end from floor<br>when horizontal drilling(max)      | = 1829mm                                      |
| (4) Distance of Spindle end from floor<br>when horizontal drilling(min)      | = 610 mm                                      |
| (5) Spindle feed traverse                                                    | = 457 mm.                                     |
| (6) Speed                                                                    | = 41 to 300 rpm                               |
| (7) Feed                                                                     | = 0.13 to 1.0 mm in six<br>graduated segments |
| (8) Spindle Bore                                                             | = MT-5 (Morse Taper)                          |
| (9) Traverse of column in bogie                                              | = 1524 mm                                     |
| (10) Size of bed                                                             | = 813 x 2438 mm                               |
| (11) Machine should be suitable for Power supply-415 Volts, 50 Hz,3-phase AC |                                               |
| (12) M/c should be suitable for drilling & reaming of dia upto 75 mm.(max)   |                                               |
- Note:-** All standard accessories should be supplied with the machine as a part of machine at no extra cost






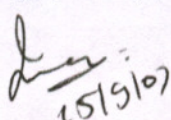
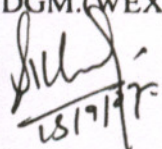

**Following to be submitted with the offer:**

1. Dimensioned outline general arrangement drawing
2. Details of safety devices / guards provided.
3. Electrical schematic diagram.
4. Total electrical load.
5. Quotation with item wise prices of spares for **2 years** normal working.
6. Details of standard & optional accessories offered.
7. Catalogues / leaflets of machine offered

**QUALIFYING CONDITIONS**

Only those vender, who have supplied and commissioned **10 Nos.** such machines in the past ten years and such machine is presently working satisfactorily for more than one year (more than six month if supplied to BHEL) after commissioning should quote. The following information is to be submitted by the vender about the companies where similar machines have been supplied. This is required from all venders for qualifications of their offers.

1. Name of the customer/ company where similar machine/ crane is installed
2. Complete postal address of the customer
3. Year of commissioning
4. Name and designation of the contact person of the customer
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