

Specifications of the Radial Arm drilling Machine.

Spec No.....

Item No

Issued by ..EM_TTDM

Deptt: IMM Section : Machine Shop

1. **Introduction** : A radial arm drilling machine is required for drilling and tapping on Stator frames of electric motors and other components. The components shall be ferrous as well as non- ferrous.

2. The specifications/ Rating

Parameter	Value	Vendor to / specify confirm values below
- drilling capacity	50 mm in steel of 50 Kg/mm ²	
- drilling capacity in C.I.	– 60 mm in C.I with 180 BHN	
- Tapping in steel –	M56 x 2.5 mm pitch	
- Tapping in Steel –	1 ¾ inches BSW	
- Column sleeve Diameter-	400 mm	
- Width of arm guideways-	250 mm approx	
- Drilling radius	- max 2350	
- Drilling radius	- min 500 mm	
- Quill traverse	– 325 mm	
- Base Plate to spindle	– max 1645 mm / min. 380 mm	
- Drilling head traverse	- 1800 mm	
- Arm traverse	– 900 mm approx	
- Power main motor	– 3.6/4.5 kw	
- Power arm motor	– 3 kw	
- Hyd pump motor	- 0.37 kw	
- Approx dimensions	– 3600 x 1400 x 3300	
- Spindle speeds	- 12 to be specified by vendor	
- Auto feeds	– 6 to be specified by vendor	
- Manual feed	- coarse and smooth	
- Automatic spindle feed with auto stop		
- Spindle reversal clutch for tap withdrawal		
- Electro-hydraulic clamping thru' push		

button		
- Hardened and precision ground gears in the main drive		
- Hardened and precision ground spindle sleeve		
- Special feature of low speed to be given		
- Special feature of low feed to be given		

3. Scope of supply

- radial arm drilling machine with column, arm, drilling head etc one number
- machine lamp.....one number
- box table 1000 x 750 x 500 one number
- coolant eqpt with pump and motor One number
- set of spares one set
- manuals Four sets
- pre-dispatch inspection with cutting trial..... three days
- installation & commissioning at BHEL works

4. **Accuracy:** As per ISO standard for radial arm drilling machine (no & values are to be specified by vendor)

5. Pre dispatch inspection

This shall be done at suppliers' works before dispatch

6. **Electrical supply :** A 3 wire connection WITHOUT NEUTRAL shall be given at one point . Machine to tolerate 415 +/- 10 % volts , 50 +/- 3 % Hz. Proper wiring to be done.
7. **Accessories :** Accessories like coolant pump, machine lamp should be included. Hyd power pack or compressors to be included, if required.
8. **Tools :** Tools for machine adjustment should be given

9. Documents to be supplied with the offer:

Complete technical details, leaflets, Geometrical test charts, dimensional outline sketch / dwg

10. Experience clause :

Offers from only those suppliers shall be accepted who have earlier supplied such machine and their machine is working in the field for a period of one year after commissioning.

11. Safety : All safety provisions are to be incorporated for safety of machine elements and for safety of the operator

12. Transport : Supplier to arrange the transport and supply the machine on door delivery basis.

13. Incoming inspection at BHEL Bhopal : Supplier to depute their engineer for inspection of the machine when being received at BHEL Bhopal.

14. Erection/ installation : Supplier to do installation and commissioning at BHEL Bhopal works. No manpower whatsoever , shall be provided. Supplier to arrange their own manpower. Machine to be proved for geometrical accuracies and capacities mentioned in the offer.

15. Civil foundation : Civil foundation design shall be given by Supplier. BHEL shall do the civil foundation. BHEL shall place the machine on elevated concrete platform to get the max room under the machine.

16. Hyd/ pneumatics/ compressed air : If the machine requires any hyd or pneumatic system, provision for supply of the fluid (hyd power pack or compressor or both) to be kept in the machine.

17. Guarantee : Supplier to specify guarantee of 24 months from the date of commissioning .