

TECHNICAL SPECIFICATIONS OF UNIVERSAL TOOL AND CUTTER GRINDER MACHINE**1. PURPOSE: -****STT-0091**

For grinding of radius single point/multipoint tools, spiral fluted tools, fir- tree cutters straight flute, cylindrical grinding, end mills, reamer shell end mills, ball nose cutters, taps etc.

2. BROAD SPECIFICATION OF MACHINE:-**CAPACITY**

Centre height	120 mm (minimum)
Swing	240 mm (minimum)
Swing with rising block	360 mm (minimum)
Swing with cutter head	250 mm (minimum)
Admit between tail stock centers	730 mm (minimum)
Admit between work head and Tailstock center	575 mm (minimum)
Max. job weight for cylindrical grinding	15kg

TABLE

Longitudinal travel	500 mm (minimum)
Clamping area	980X140 mm (minimum)
Cross traverse	230 mm (minimum)
Swivel with center locking	± 40 deg.
Fine/ Swivel with end locking	± 5 deg. or more

TILTING WHEEL HEAD

Eccentricity with centerline of column	30 mm (minimum)
Vertical adjustment	
Manual	240 mm (minimum)
Power	210 mm (minimum)
Spindle axis	
Above the axis of centers	210 mm (minimum)
Below the axis of centers	70 mm (minimum)
Swivel	
Vertical plane	± 20 deg. or more
Horizontal plane	360 deg.
Wheel speed range in either sense of rotation	Minimum range (3000 -4000 rpm) Maximum range (5000-6000 rpm)
Grinding Wheel max Dia. x Bore and Thickness	Dish 150X32,thickness range 10mm to 15 mm Cup 100X32,thickness range 45mm to 60 mm
Motor power	Supplier to indicate

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Asli

Ravindra
10/3/16

Nabeel

WORK HEAD

Spindle bore taper
 Speed range
 Power

MT-5
 2 nos min. supplier to inform the values
 Supplier to indicate

GENERAL

Machine floor area

Vendor to indicate

3. Esstial accessories

(Cost to be included in the basic machine)

- Tail Stock LH 1no.
- Spring Loaded center 1no.
- Dead center with MT-2 taper 1no.
- Hardened full center MT-2 1no
- Height Indicator 1no.

- Fixed tooth ,universal tooth support & supporting stand (Flute rest) 1 set
- Attachment for grinding inserted tooth cutter & face mills for grinding cutters up to 400mm & rising block if reqd. (finger & bracket) 1no.
- Wheel Guard 1no.
- Full cover wheel guard 1no.
- Cup wheel 1no.
- Dish wheel 1no.
- Wheel flange adapter 75 mm adapter 1no.
- Wheel flange adapter 50 mm adapter 1no.
- Conversion(cut)sleeve MT 5/MT-2 1no
- Conversion(cut)sleeve MT 5/MT-3 1no.
- Conversion(cut)sleeve MT 5/MT-4 1no.
- Tool kit for handling the machine 1set (Spanners & Allen key)
- Work head USW 1no.
- Adapter ISO-50/ISO-40 1no.
- Clamping arbor for tools with a taper is (Draw bolt adapter) 1no.
- Vibration Damp Pads./Taper wedge 1no.
- Diamond dresser holder 1 no.
- Diamond 1 no.

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4. SPARES

Supplier to offer essential spares of the machine indicating item wise price & quantity to be quoted separately for at least two years trouble free working after the guarantee period. Spares package should contain following items in additional to their recommended spares for trouble free operation for two years.

- a) Bellow guard 1 set (wheel head, long travel & cross travel)
- b) RH nut 2 nos
- c) LH nut 2 nos
- d) Jubilee Clips 5 1/2x11 2 nos
- e) LH 15 mm bearing 2 nos
- f) Starter unit with relay & contactor 2 nos
- g) Push button on & of 1 set
- h) Line control switch 2 nos
- i) Main drive belt 2 nos

5. Documents:-

3 Sets of documents of operational and maintenance of the whole m/c along with the accessories operations & maintenance documents should contain following things:

- a) - Assembly drawing of each sub-assemblies with marking of each components.
- b) - Bill of material of each sub-assemblies having specification and part number of each components.
- c) - Description of different settings done/require in m/c with reference of their drawing in their sub-assemblies.
- d) -Instruction of cleaning & lubrication by operator.

In addition to above, document must contain electrical circuit diagram clearly mentioning the components.

6. Erection and Commissioning:-

After placement of Purchase order, the supplier has to send the foundation drawing & foundation bolts/nuts etc. before one month of the dispatch of the machine. Commissioning of the supplied m/c and its proving to be done by the supplier at our works. After successful proving, the final acceptance will be given. First oil filling of the m/c & other item required like tools for erection and commissioning are to be included as a part of commissioning. Only civil works will be done by BHEL.







7. Delivery Period:-

Delivery period is to be informed by the supplier.

8. Guarantee Period:-

Guarantee for two years from the date of successful proving and final acceptance to be offered by the supplier.

9. GENERAL:-

- Offer should be complete in all respect with item wise prices.
- Safety features should be incorporated for the safety of the operator and the machine.
- Offered machine must be complete in ready to operate condition.
- Supplier of offer point wise reply as per our specification.
- Supplier to furnish complete details of similar machine earlier supplied to customers.

Deepak Kumar
03/03/16

Deepak Kumar
Engineer/TTX

Ravinder Singh
03-16

Ravinder Singh
Sr. Engineer/TTX

Ashish Kumar Shera
03/03/2016.

Ashish Kumar Shera
Engineer/WEX

Rahul Mishra
03/03/16.

Rahul Mishra
Sr. Manager/NTS

Mukesh
(MKTG)
AGM, TTX

INDENT NO . 20155931

PRE QUALIFYING CONDITIONS

UNIVERSAL TOOL AND CUTTER GRINDING MACHINE

MAT CODE : HW7799911913

- A) Offers of only those OEM (ORIGINAL EQUIPMENT MANUFACTURER) will be considered who have manufactured and supplied at least one no. of **UNIVERSAL TOOL AND CUTTER GRINDING MACHINE** with following broad specifications in last 10 years ~~from~~ ^{Prior to} date of opening of Tender as per NIT.
 - 1) Centre height 120 mm or more
 - 2) Swing 240 mm or more
 - 3) Clamping area 980 mm x 140 mm or more
 - 4) Work head Spindle bore taper MT -5
- B) Vendor should inform year of supply , name ,address and contact number of customers with copy of purchase order and commissioning certificate.
- C) Vendor to submit performance certificate issued by customer to confirm present status of satisfactory performance of machine supplied vide purchase order mentioned against above point of PQR.
- D) BHEL reserves the right to verify information provided by vendor. In case information provided by the vendor is found to be false /incorrect their offer shall be rejected.
- E) In case OEM insist for participation through their authorized agent , they should submit valid , duly signed authorization certificate on company's letter head .

*By
Ravindra Singh
E2/TJ.X*

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TIPLE A-K
E3/TTX*

*makey
(makey)
E3/TTX*