

**TECHNICAL SPECIFICATIONS**  
**JOB ROTATOR (CAPACITY 100 TON)**

**STT- 0050**

**(1) PURPOSE :** Rotators are required for manual rotation of the Turbine rotors during machining. Each set of the Rotators should consist of two end supports. Only one end support shall have worm / worm gear arrangement for manual rotation.

**(2) TECHNICAL SPECIFICATIONS / REQUIREMENTS :**

**Note:** Schematic drawing of the rotator is enclosed for reference only.(Annexure-I)

- 2.01. Rotator Capacity of 1 set (consisting of 2 end supports) : 100 Ton
- 2.02. Centre Height of each end support : 1700 mm
- 2.03. Supporting Diameter range : Min 450mm to 850mm
- 2.04. Width of 1 Roller : Min. 200 – Max. 240 mm
- 2.05 Dia. of 1 Roller : Min. 420 – Max. 460
- 2.06 Centre Distance between rollers : Shall be fixed (Not variable or adjustable)
- 2.07 Direction of Rotation : Clockwise as well as Anti-clockwise
- 2.08 Type of drive : Manual
- 2.09 Material of the Rollers : Steel  
(To be hard & resistant enough to bear load of 100 ton turbine rotor for continuous operation)
- 2.10 Width of one end support along the longitudinal axis of the rotor : 650 mm  
(including Worm gear arrangement)
- 2.11 The two end supports of the Rotator should not have any obstruction e.g. Gear Box, Worm wheel etc. along the longitudinal axis of the Rotator. Rotator to accommodate Rotors of different designs / dimensions between the end supports.
- 2.12 Gear arrangement is preferred to be located in the transverse direction only to avoid any fouling with the turbine rotors of different diameters. Gears should be suitably hardened.
- 2.13 Breadth of one end support along the transverse axis of rotators : 1800 MM (max.)  
(including Worm gear )

2.14 Suitable lifting arrangement to be provided on the end supports for transportation. There should be provision to lift each support individually.

**2.15 DETAILED DIMENSIONAL DRAWING (INCLUDING ARRANGEMENT OF THE GEAR) OF ROTATOR IS TO BE SUBMITTED BY THE PARTY AT THE TIME OF SUBMISSION OF OFFER. DRAWING SHOULD ALSO SHOW THE PLACEMENT OF TURBINE ROTOR ON BOTH THE END SUPPORTS OF THE ROTATOR.**

**(3) COLOUR :** Colour of the Rotator body shall be apple green.

**(4) WARRANTY :** Supplier shall provide full and complete Warranty & Guarantee for two yrs. trouble free operation after successful commissioning of the Equipment.

**(5) PRE-DESPATCH INSPECTION :** Pre-despatch inspection will be done by BHEL at supplier's work to ensure specifications compliance and functioning of the rotators. The supplier to give prior notice sufficiently in advance for carrying out the pre-despatch inspection.

**(6) MACHINE ACCEPTANCE :** Final acceptance shall be made by BHEL at its plant following successful commissioning which shall include prove-out of the complete equipment for load testing. Any shortcoming in the functioning of the Rotator due to any reason shall be rectified by the supplier free of cost.

**(7) MACHINE PACKING :** The Rotator set shall be packed rigidly to avoid any transit damage.

**(8) QUALIFYING CONDITION :** The supplier shall be Original Equipment Manufacturer and must have supplied at least one set of rotator of 100 T or more capacity. Full contact details of the customer to be provided.

**(9) ESSENTIAL SPARES :** Essential spares are required to be supplied alongwith the rotator.

9.1 Seals- 1 set

9.2 All type of Worm Gears- 1set

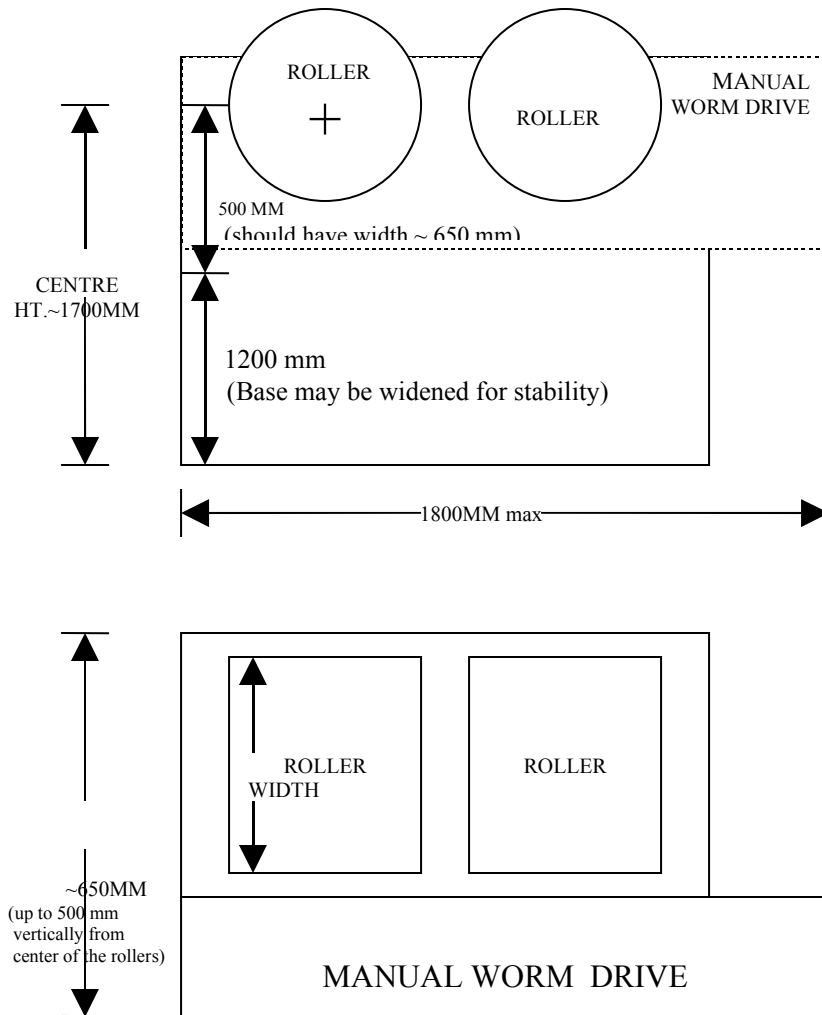
9.3 All type of Worm Shaft- 1set

9.4 All type of Bearings- 1 set

**(10) MANUAL :** Operation and Maintenance manual (3 sets) to be supplied with the rotator.

**(FOR REFERENCE ONLY)**

Annexure –I



**PROPOSED SCHEMATIC DIAGRAM OF EACH END SUPPORT OF 100 T ROTATOR**  
**(EACH SET CONSISTS OF ONE END SUPPORTS WITH WORM DRIVE AND THE OTHER WITHOUT WORM DRIVE)**

(NOT TO SCALE)