

TECHNICAL SPECIFICATIONS
MOTORISED ROTATOR (CAPACITY 50 TON)

(1) PURPOSE : Roller supports are required for rotating the Turbine rotor during Blade assembly, Seal strip assembly, repair and other miscellaneous work.

(2) TECHNICAL SPECIFICATIONS / REQUIREMENTS :

- 2.1. Rotator Capacity : 50 Ton
- 2.2. Centre Height of each end support : Min. 600 – Max. 700 MM
- 2.3. Supporting Diameter range : Min. 300 MM – Max. 700 MM (Infinitely Variable)
- 2.4. Width/ Dia. of 1 Roller : Min. 180 – Max. 220 MM / Min. 400 – Max. 440
(Centre Distance between rollers shall be fixed)
- 2.5. Rotation Speed (constant) : 1.5 RPM
- 2.6. Rotor Turner direction of Rotation : Clockwise as well as Anti-clockwise
- 2.7. A.C. Motor Power of the Drive unit & Make : To be indicated by the Party
(Drive unit to be sufficient to rotate the 50 ton rotor. Total two nos. motors required for complete set of rotator consisting of two end supports i.e. one motor at each end support)
- 2.8. Material of the Rollers : Steel
(To be hard & resistant enough to bear load of 50 ton rotor for continuous operation)
- 2.9. Switch Box and Foot-operated Switches : For clockwise and anti-clockwise rotation
(Total two nos. foot-operated switches required for rotator. Simultaneous rotation of the rollers of both the ends to be ensured. Sufficient electrical wiring to be provided to cover at least 10 m length of the rotor)
- 2.10. Width of one end support along the longitudinal axis of the rotor : 400 MM (max.)
(including Worm gear drive & motor 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 / Rotor to accommodate Rotors of different designs / dimensions between the end supports.
- 2.12. Breadth of one end support along the transverse axis of rotator : 1500 MM (max.)
(including Worm gear drive & motor arrangement)
- 2.13. The Rotator set shall have drive units on both the end supports of the set. The Motors of both the end supports shall be interconnected for simultaneous start/stop on both ends. Only one motor is required for one end support of the rotator. Total two nos. motors required only for the complete set of rotator consisting of two end supports. The motor at one end support shall provide drive to one roller only. The other roller is free on axle.

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

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

Note : A schematic diagram of one end support of rotator is enclosed for reference.

(3) POWER SUPPLY : AC 3-Phase, 415V + 10%/-15%, 50 Hz +/-3%.

(4) COLOUR : Colour of the Rotator shall be apple green.

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

(6) PRE-DESPATCH INSPECTION : Pre-despatch inspection may be done by BHEL at supplier's work to ensure specifications compliance and functioning of the rotators. This will be at the discretion of BHEL.

(7) 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. It shall be the responsibility of the supplier to arrange and provide all required electrical items along with the rotator. BHEL will provide power mains only. Any shortcoming in the functioning of the Rotator due to any reason shall be rectified by the supplier free of cost.

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

(9) QUALIFYING CONDITION : The supplier shall be Original Equipment Manufacturer and must have supplied at least two rotators of 50 T or more capacity with full contact details of the customers.

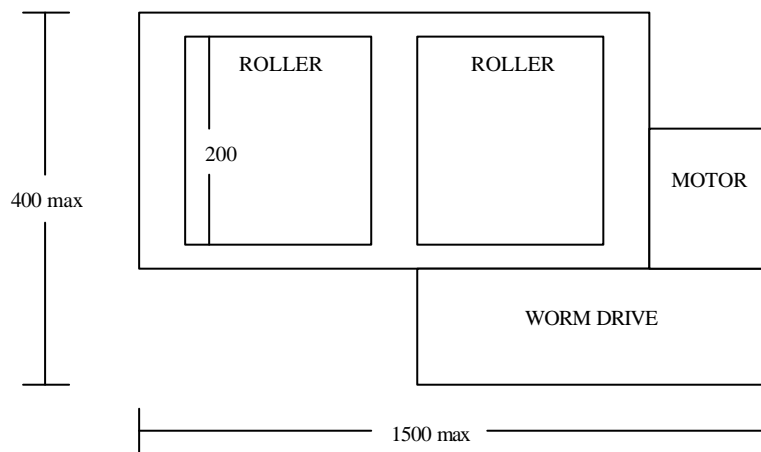
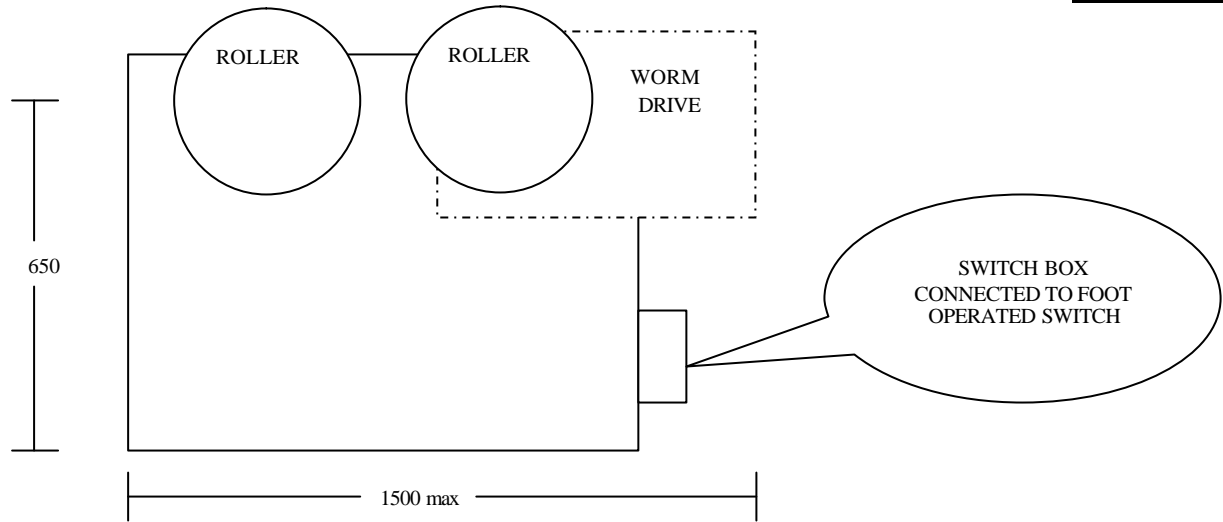
(10) SPARES : The following are required to be supplied along with the rotator:

NOTE : COST OF THE SPARES TO BE QUOTED SEPARATELY.

- 10.1 Motor
- 10.2 Seals
- 10.3 All the Worm Gears
- 10.4 All the Worm Shafts
- 10.5 All the Couplings
- 10.6 Belt

(11) MANUAL : The following are required to be supplied along with the rotator:

- 11.1 Operation and Maintenance (O&M) Manual
- 11.2 Manufacturing drawing of each component
- 11.3 Assembly drawings with part numbers.



PROPOSED SCHEMATIC DIAGRAM OF END SUPPORT OF 50 T ROTATOR

(FOR REFERENCE ONLY)

(NOT TO SCALE)