

	MACHINE CONTAINER SCOPE OF WORK	Turbo Gen Services
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Supply and delivery of Machine Container equipment

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Eskom Rotek Industries SOC Ltd

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Compiled by	Functional Responsibility	Functional Responsibility
		
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Date: 20/11/2024	Date: 20/11/2024	Date: 20/11/2024

1. PURPOSE

The purpose of this document is to define the specifications of equipment to be supplied and delivered to Bearing Services and site services section of Eskom Rotek Industries.

2. CONTEXT FOR MACHINES AND EQUIPMENT MAINTENANCE AND REPAIRS

Eskom Rotek Industries Bearing Services needs a supply and delivery service of equipment as detailed on the below scope of work.

3. SCOPE OF WORK**TYPE OF EQUIPMENT**

- Milling machine.
- Pedestal Drilling Machine
- Surface Grinder
- Lathe Machine

The machine must be capable of machining all the turbine generators couplings rotors. The machine must be capable of machining to specified tolerances on all XYZ axis.

SPECIFICATIONS OF EQUIPMENT MILLING MACHINE

Machine build	Heavy duty
Head type	Mechanically/electrically variable
Spindle taper	ISO40
Table size	1370x330 mm
Motor	5HP
Table travel X	1014mm
Table travel Y	420mm
Table travel Z	360mm
Quill travel/diameter	120/105 mm
Spindle speeds	90-2000 rpm
Spindle to table	150-550 mm

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SPECIFICATIONS OF EQUIPMENT PEDESTAL DRILLING MACHINE

Type	Pedestal
Drill capacity	35mm
Spindle taper	Mt/4
Spindle speed	104-1450 rpm
Spindle column	350mm
Spindle to table	770mm
Spindle to base	1320mm
Quill travel	180mm
Table size	560x385 mm
Feeds	0.1,0.2 mm/rev
motor	1.5 kw
Dimensions (LxWxH)	730x560x2220 mm

SPECIFICATIONS OF EQUIPMENT SURFACE GRINDER

Machine design	Saddle type
Surface of table/magnet	300x600 mm
Cross X long travels	340x660 mm
Spindle to table	580
Hydraulic table speed	5-25 m/min
Auto cross feed (step)	0.5-12mm per/step
Cross feed continuous	790mm/min feed
Wheel dimensions (O.DxWxI.D)	355x40x127 mm
Spindle motor	4KW
Spindle speed	1450 rpm

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SPECIFICATIONS OF EQUIPMENT LATHE MACHINE

Swing over bed	510mm
Swing over saddle	300mm
Swing in gap	738mm
Length of gap	200mm
Distance between centres	1500mm
Width of bed	350mm
Spindle bore/fitting	80/D1-8
Spindles speeds	25-1600 RPM
Top/cross slide travel	130/326
Metric threads	47kinds 0.2-14mm
Inch threads	60kinds 2-112T.P. I
Diametrical pitches	50kinds 4-112D.P
Module pitches	39kinds 0.1-7M. P
Tailstock travel	180mm
Tailstock taper	MT/5
Main motor	7.5KW

DOCUMENTATION

- Maintenance and operational manuals, BOM's and maintenance schedules to be included.
- EC declaration of conformity
- Test Certificate
- User friendliness of machine must be explained by the supplier on the quotation.
- Supplier to provide life cycle / design life curve with asset management instruction.
- Spare parts list.
- Specify and supply special tools.
- Outline drawings including the mass and Centre of Gravity of the machine itself.
- Specify Motor schedules.
- Supply lubrication and coolant schedules.
- Supply design information as required by Rotek, such as absorbed power, installed power and safety factors.
- Supplier to provide details of successful completion of work within tolerances using the recommended boring machine.
- Machine design to accommodate future upgrades easily.

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MACHINE TOLERANCES

Supplier to quote highlighting deviations from required tolerances.

TECHNICAL SUPPORT AND TRAINING

- Technical Assistance on site in South Africa
- Including: Installation, commissioning, operator training.
- 2-year warranty on hardware and software.
- 5-year service and maintenance plan inclusive of spares

PROOF OF COMPLIANCE WITH THE LAW**The contractor shall ensure that:**

1. All employees are registered with the Workmen's Compensation Commissioner in a manner which is acceptable to the Department of Labour, and which satisfies the requirement of the compensation for occupational injuries and diseases act.
2. All employees are registered for unemployment.
3. All unskilled/casual staff must be paid in accordance with the Labour Act. The contractor will be responsible for their training.
4. All personnel shall wear the necessary protective clothing in accordance with Occupational Health and Safety Act No.85 / 1993 and the Construction Regulations of 2003.

HEALTH AND SAFETY

The Contractor shall always comply with the requirements of the Occupational Health & Safety Act (1993), Construction Regulations (2003) and the Employer's Pre-construction Health and Safety Specification. In pursuit of the, the Contractor shall allow for:

- Carrying out and documenting risk assessments of all work to be carried out under the contract.
- Preparation of safe work procedures for all work to be carried out under the contract.
- Preparation of an H&S plan, discussing it with the Employer, and then amending it as agreed.
- Preparation for and conducting "toolbox talks" with relevant employees.
- Induction and training as and where required.

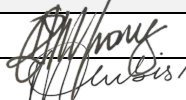
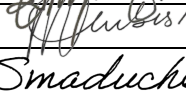
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- Preparation of a Project H&S File.
- Regular updating of all the foregoing.
- Provision of PPE and protective clothing for employees
- Complying with all H&S requirements for the duration of the contract
- Storage of cleaning material / equipment

DOCUMENT SUPPORTED BY:

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