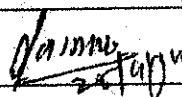

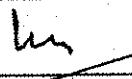


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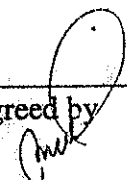
Specification	Schedule of requirements for A0 size Engineering Plan Scanner (capable of coloured scanning)	MDTS-39268 REV-00
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Name	Designation	Signature	Date	Level
Saminder Singh	SSE/Logistic		25/9/14	Prepared
Lalit Kishore	Dy CME/Design-3		25.9.14	Agreed/ Reviewed
Parmanand Singh	CDE		25/9/14	Approved

Rev. No.	Details of Changes	Date
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1. General:

- 1.1. This specification covers supply of A0 size Engineering Plan Scanner with capable of scanning drawings from originals, which may be paper, transparencies and polyester film.
- 1.2. The tenderers are advised to give clause wise comments in their offers and shall quote separately for basic machine with suitable voltage stabilizer and AMC/FASMA charges. In case clause-wise comments are not given, the quotation may be summarily rejected.
- 1.3. **Deviation statement:** The tenderer shall submit a deviation statement in specification with Justification and implications for each deviation. RCF reserves the right to accept a deviation in case sufficient technical reasons are provided.

2. Scope: The specification covers the following:

- 2.1. Supply of machine.
- 2.2. Installation, commissioning and acceptance criteria.
- 2.3. Training of personnel.

3. General features of the machine:

3.1. Hardware:

- 3.1.1. **Originals:** The scanner should be capable of clear scanning in from paper, tracing paper, polyester film and ammonia prints up to A0 size. The accuracy of scanning should be $\pm 0.1\%$ or better.
- 3.1.2. **Resolution:** The base (optical) scanning resolution i.e. physical, not interpolated resolution shall be 600x600 dpi or more.
- 3.1.3. **Speed:** The speed of scanner while scanning an A0 drawing shall not be less than 6 inches per second at 200 dpi in color mode.
- 3.1.4. **Paper weight:** The scanner should be able to scan a minimum thickness of 0.165 mm for laminated ammonia prints, 75 gsm for paper, 90 gsm for tracing paper and 100 micron for polyester film.
- 3.1.5. **Interface & driver:** The scanner should have a standard USB/Ethernet interface for using it with a PC running under windows 2000 operating system or higher. All interface cards, drivers, software and cables required for installing the scanner with PC and for scanning and storing of drawings on PC shall also be supplied with the scanner.

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3.1.6. **Scanning process:** The scanner shall have atleast two CCD cameras. Brief details of the scanning process shall be explained in the offer.

→ 3.1.7. **Illumination:** The Scanner shall have LED lights for illumination. Brief details of LED lights used shall be explained in the offer. ✓

→ 3.1.8. **Original feed:** Face up and face down. Brief details shall be explained. ✓

3.1.9. **Safe Operation:** The scanner controls should be grouped together and positioned for maximum convenience of the operator. It should have a touch screen monitor with GUI functions. It should also be capable of displaying scanned images on the monitor for verification. All safety features shall be provided to prevent faulty operation. The equipment shall have self-diagnostic facilities to indicate fault conditions.

3.1.10. **Machine construction & duty cycle:** All material used in the construction of the equipment shall conform to the best industry standards to ensure long and trouble free service. All painted surfaces shall be finished to a high degree. Overall dimensions of equipment shall be indicated. The tenderer shall confirm that the equipment will be able to work continuously for 8 hours a day.

3.1.11. **Auto maintenance system:** The scanner shall have auto-stitching basic calibration and auto monitoring/correction features.

3.2. Scanning software:

3.2.1. The software should have following features:

- 3.2.1.1. It should run on Windows XP, windows 98 and window 2000 operating system. — ?
- 3.2.1.2. Brightness and contrast setting.
- 3.2.1.3. 2D Sharpening and Softening, 2D- Blur filter.
- 3.2.1.4. Selectable resolution
- 3.2.1.5. Auto batch file naming
- 3.2.1.6. Deskewing and Despeckling
- 3.2.1.7. 2D Adaptive Thresholding
- 3.2.1.8. Adaptive Thresholding
- 3.2.1.9. Zoom in/Zoom out and Pan
- 3.2.1.10. Direct scan to copy

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3.3. Editing/Image manipulation software:

3.3.1. Latest version of Spicer Imagination/Rasterex Spotlight Edit software shall also be supplied, the cost of which shall be included in the cost of equipment.

3.3.2. **Indexing software:** The software should have following features:

- 3.3.2.1. Automatic indexing of the files scanned
- 3.3.2.2. User friendly having GUI based approach
- 3.3.2.3. Access via standard web browser
- 3.3.2.4. Support for Thumbnails for viewing files
- 3.3.2.5. ODBC compliant
- 3.3.2.6. Multi user access, search and update facility
- 3.3.2.7. User License

3.3.3. **Resolution:** The scanning resolution shall be 600x600 dpi or more without turbo mode.

3.3.4. **Interface requirements:** USB or Ethernet.

3.3.5. **Data formats:** PDF, Tiff, JPG, Tiff G4 and other industry standard formats.

4. Electrical requirement:

4.1. **Power supply:** The machine shall operate on standard single phase power source of voltage varying from 200-250 volts at 50 Hz. Power consumption will be advised in offer. The tenderer shall also include the cost of a suitable voltage stabilizer in the cost of the basic equipment.

5. Accessories:

5.1. All standard accessories supplied with the machine shall be separately listed in the offer. A stand for the machine, if required, shall be included in the standard accessories. The cost of standard accessories shall be included in the cost of the basic equipment.

5.2. Optional accessories, which will enhance the utility of the machine, shall be separately listed and quoted for. A brief description of the optional accessories shall be given to enable an assessment of the usefulness of the same being made while evaluating the tenders.

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6. Installation and commissioning & acceptance criteria:

- 6.1. The supplier will install & commission the machine at RCF/Kapurthala free of cost with his own labour within a month from the date of arrival at site. Further he will prove out the performance of the machine to the entire satisfaction of the consignee. In this case, the satisfaction of the consignee will be final regarding whether the machine has been fully proved out or not.
- 6.2. The machine shall be tested for the following before issuing commissioning certificate:
 - 6.2.1. Clear scanning from all types of originals mentioned in clause 3.1.1.1
 - 6.2.2. Conformance to features of the machine specified by the supplier in the quotation

7. Training and documentation:

- 7.1. The supplier shall provide on-site free of cost training to RCF personnel for two days after commissioning. The supplier shall also provide user and diagnostic manuals in English. The list of such manuals shall be supplied along with the quotation.

8. Warranties and AMC:

- 8.1. **Warranty:** The supplier shall give a warranty for a period of 24 months from the date of commissioning of the machine at RCF. During warranty period the firm shall attend the machine within 48 hours of reporting of break down and ensure minimum up-time of 95% failing which warranty shall be extended for the breakdown period beyond 5%.
- 8.2. **Annual maintenance contract (AMC/FASMA):** The charges for (AMC/FASMA) per unit length basis or otherwise should be quoted for separately in the tender for a period of three years from the date equipment warranty expires. The AMC/FASMA shall be comprehensive and will include all spares consumables, breakdown maintenance and monthly preventive maintenance. Detailed terms and conditions for AMC/FASMA shall be mentioned in the tender. Spares required for operation of the equipment should be available freely on a long-range basis. The AMC/FSMA must be mentioned in the offer. The vendor shall confirm that spares required for operation of the equipment should be available freely on a long-range basis. Minimum uptime of M/s shall be 95% (max. down time 5%), and response time shall be within 48 hours after complaint by phone/fax.
- 8.3. **Tenure of service support:** The tenderer shall also specify the minimum number of years, he shall be able to provide service for the machine. The life of critical items requiring replacement on time basis should also be indicated.

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9. Other features:

- 9.1. The tenderers may specify and explain additional/exclusive features available on their machines.
- 9.2. The offer shall contain full details of installations of the offered model in India. The duration for which equipment has been in use should also be indicated.

10. Deviations:

- 10.1. The detailed technical specification of the equipment has been drawn up taking into account the ultimate end use of the same for requirement of the RCF. It is expected that the offers shall by and large conform to the same. It must be emphasized for the information of the tenderers that wherever the equipment offered deviates from the specifications, such deviations shall be clearly brought out in the offers. In the absence of clear indication to the effect that any part of the offers deviates from the specifications in any manner, it will be assumed that the offer conforms exactly to these specifications and tenders finalized on that basis.

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