

## INDIA SECURITY PRESS

(A Unit of Security Printing and Minting Corporation of India Limited)

Wholly owned by Government of India

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Date of Issue: 05.02.2024

1. Name of the organization: India Security Press  
(a unit of Security Printing and Minting Corporation of India Limited)
2. Type of the organization: Wholly owned by Government of India
3. EOI Reference No: 50/2024 dated 05.02.2024
4. EOI Title: Expression of Interest for

"Procurement of complete variable data printing solution having following components:

- a) Slitting & rewinding machine with web handling, turret rewinder and auto splicing at rewinder.
- b) Bulk inking DOD inkjet system.
- c) Online Inspection & verification system.
- d) Security coding & validation system.

5. Category: Non-Security
6. Sub-category: Capital Item
7. Date of Announcement: 06.02.2024

8. Pre-bid conference: The pre-bid conference will be held on 27.02.2024 at 11.00 Hrs IST. The prospective bidders interested to Submit Expression of Interest are requested to attend the pre-bid conference for clarifications on Technical issues, at India Security Press, Nashik Road. The queries of pre-bid conference, if any, shall reach to CGM, ISP Nashik on or before 24.02.2024.

9. Last date for submission : 1430 Hrs (IST) on 15.03.2024.

10. The Chief General Manager, India Security Press, Nashik invites Expression of Interest from experienced and reputed manufacturers for

"Procurement of complete variable data printing solution having following components:

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The Concise Scope of Work for the Brief requirement of ISP for procurement of one complete line of variable data printing machine with integrated web handling, slitting,

turret rewinding, DOD piezo electric printing, online inspection & verification system & secured coding system are as under:

A) Slitting and rewinding unit with web handling, transport and turret rewinder with auto splicer :

1. The unit shall be capable to handle web width upto 550 mm and reels of upto 250 Kg in weight and outer diameter of upto 90 cms.
2. The length of the machine shall be enough to accommodate upto 2 nos DOD piezo electric bulk inkjet printing module with UV dryers, 1 nos inspection system, 2 nos bar type stroboscopes
- 3 There should automatic tension control for all zones: unwind, printing(inline), rewind with respect to machine speed, unwind reel and rewind spool diameters and other variables. However, provision for manually controlling the tension shall also be provided in operator's HMI.
- 4 The machine shall be equipped with automatic ultrasonic web aligner to compensate for variation in web movement .
5. It should have turret rewinder with minimum 4 spindles along with auto splicer to ensure machine runs without stoppage for each jumbo reel loaded at the unwind unit. The action of auto splicing should be on the basis of pre-programmed instruction through inspection system/sensor.
6. The machine shall be capable to operate at speed of minimum 150 m/min with U.V. printing, slitting and necessary operation.
7. Machine should be having pre installed anti static device.

B) DOD Piezo electric UV ink bulk Inkjet system :

1. The printing setup should be accompanied with necessary hardware and software and shall be integrated and synchronised at any machine speed with the slitting & rewinding unit& web transport system.
2. The software for preparation of design layout should have user friendly GUI and shall be easy to use. The process of preparing the layout design along with data mapping to the same should be easy to use on a user friendly Graphical user interface.
3. The inkjet system shall be based on DOD piezo electric technology and shall support bulk ink supply. The ink supported should be UV curable in nature4. The inkjet system should be capable of printing at speed of 150 m/min or more at DPI of 600x600 or more. The width of printing supported shall be 510 mm or more.
- 4.The inkjet system should be compatible for printing on any type of cellulose and non-cellulose based substrates at the specified speed and resolution. The printed of 2D code and other matters at any speed up to 150 m/min should be easily readable by means of any normal handheld scanner.



5. The system shall support multiple resolution settings starting from 300(H)x300(V) to 3000(H)x 600(V). Multiple drop volume options and drops per dots (dpd) options should be available for each resolution settings. Calculation of consumption of inks should be given on GUI on the basis of resolution, drop volume per dots. It should have a precise information system to indicate ink level.
6. The inkjet system should have the ability to print at perfect positions in a registered way irrespective of the speed of the machine or any variation in speed.
7. The system shall have auto cleaning mechanism for the printing nozzles. The system shall also come with capping station to protect the nozzles when not in use.
8. All controls for adjusting print head/module position, alignment etc shall be automated electronically with the help of buttons given on HMI through graphical user interface.
10. DOD Piezo electric UV ink bulk Inkjet system should be able to print any kind of barcode available (1d/2d/pdf code/litho code/ gs1 code/sscc/qr code) and also alphanumeric characters along with other special character.
11. System should support multiple data format (i.e. xls,.txt,.pdf,.png,.csv) for Input data base file in software responsible for printing variable data.
12. To one given file software should have feasibility to link different data format to one layout design (.csv and .pdf and .png).
13. Possibility of linking of 3 or more database file to 1 single layout (1 message) should also be possible.
14. PDF printing of image, data, and barcode should also be possible.
15. Text interlinking of date, counter and given data in database file should also be possible.
16. System should be able to generate encrypted code at the time of printing and print at respective position along with accurate data generation in csv or excel format.
17. System should be having suitable U.V. curing system to avoid any problem due to non curing of ink at the desired speed and resolution of printing.

#### C. Online inspection & verification system

- 1) The vision system with online verification system along with missing label detection system should be integrated to web handling system.
- 2) Camera in vision system should have adequate resolution so as to be able to capture the image up to speed of 150 mt/min.
- 3) The Online inspection & verification system unit shall be capable to inspect data printed on web having width upto 550 mm.

4) The inspection system has to read information printed on web as well as data encoded inside barcode (this will contain public information as well as encrypted information). Then the same should be able to make the database of inspected barcode and number in exact format as that of the parent database and verify each captured information with the parent database. The system shall generate error report wherever it encounters mismatch.

5) The online inspection and verification system should detect the missing label and able to record the details in a separate column in same above database.

6) The system should have error recognition and marking feature. The faulty labels shall be marked 'Invalid' by the system.

#### **D. Secured coding system**

1) Generation of 2D secured code that is non copy able. The 2D code should have public information well as private information. There should be 1 public information, 1 private encrypted information for customer, 1 private encrypted information for ISP. ISP will have database of all these 3 information's

2) There should not be any restriction on the number of code that can be generated as well as pricing should be provided for lifetime use / license. (Expected lifetime: - 15 years)

3) Additional Industry leading advance counter feiting features are preferable.

4) Secure code should be in such a way that it can be accommodate in given size of barcode (minimum 7X7) i.e. there should not be any need of increasing the size of barcode or QR code or similar in any case.

5) In case of Serialize number software should able to encrypt the given data and generate a separate file in suitable format.

6) Firm should also provide support for scaling up the delivered system for implementation of track and trace if it is required in future.

7) It should be verifiable through any 2d scanner/ mobile scanner on any web browser.

#### **General condition:-**

- The inkjet system should work with all sort of compatible ink that are readily available in market.
- There should be multiple suppliers for the inks recommended to be used along with the inkjet system.
- The firm should provide support for spare parts for at least 10 years from date of commissioning of the machine.



11. Pre-Qualification Criteria:

Procurement of complete variable data printing solution having following components:

- a) Slitting & rewinding machine with web handling, turret rewinder and auto splicing at rewinder.
- b) Bulk inking DOD inkjet system.
- c) Online Inspection & verification system.
- d) Security coding & validation system.

(b) The bidders should give a declaration that they have not been blacklisted or debarred for dealing by Government of India or any Government / PSU/ Reputed organisation in the past.

(c) The documents in support of Expression of Interest need to be submitted duly signed by authorized representative of the company.

(d) The interested bidders should also submit along with Expression of Interest a list of parties to whom they have supplied and installed similar types of "Procurement of complete variable data printing solution having components of a) Slitting & rewinding machine with web handling, turret rewinder and auto splicing at rewinder, b) Bulk inking DOD inkjet system, c) Online Inspection & verification system & d) Security coding & validation system" with details and performance report from their clients.

(e) The interested bidders shall also submit copies of Audited financial statement for the last Five (05) years i.e. 2018-2019, 2019-2020, 2020-2021, 2021-2022 and 2022-2023.

12. The bidder should also confirm specifically that:

(a) Applicant is competent and legally authorized to submit and/ or to enter into legally binding contract.

(b) The details Supply and Installation of similar type of "Procurement of complete variable data printing solution having components of a) Slitting & rewinding machine with web handling, turret rewinder and auto splicing at rewinder, b) Bulk inking DOD inkjet system, c) Online Inspection & verification system & d) Security coding & validation system" by them during last five years i.e. 01<sup>st</sup> January 2019 to 31<sup>st</sup> December 2023.

(c) The firm should confirm their annual installed capacity for supply and installation of similar type of "Procurement of complete variable data printing solution having components of a) Slitting & rewinding machine with web handling, turret rewinder and auto splicing at rewinder, b) Bulk inking DOD inkjet system, c) Online Inspection & verification system & d) Security coding & validation system".

(d) Applicant will absolve the purchaser against any infringement of patent rights and other contract provisions.

13. The duly filled details along with supporting documents and budgetary offer(s) with respect to supply of complete variable data printing solution having components of a) Slitting & rewinding machine with web handling, turret rewinder and auto

splicing at rewinder, b) Bulk inking DOD inkjet system, c) Online Inspection & verification system & d) Security coding & validation system.

The same may be submitted in person or through courier/ registered post/ speed post so as to reach the following address on or before the prescribed date and time as under:

The Chief General Manager,  
India Security Press,  
Nashik-422 101  
Phone No 0253 2402219, 0253 2402435  
Fax No 0253 2462718  
Email: [purchase.isp@spmcl.com](mailto:purchase.isp@spmcl.com)

Last date and time for receipt of Expression of Interest: 15.03.2024  
at 1430 Hrs. (IST)

Date and time of opening of Expression of Interest at 1500 Hrs. (IST)  
on 15.03.2024

Place of opening of Expression of Interest

India Security Press,  
Nashik Road 422 101  
Maharashtra, India

14. Delay due to postal/Courier etc, will not be entertained. Expression of Interest received after the due date and time will be rejected.

  
Jt. General Manager (M)  
for Chief General Manager  
India Security Press,  
Nashik Road-422101