1. General Technical Specification and other project implementation requirements for Collating and Bonding Device for the production of ID1 cards

1.1 Technical parameters

The Client requires purchase of a semi-automatic equipment used for collating and spot welding of plastic sandwiches. The equipment must be suitable for collating and welding sheets of plastic foil into the so-called sandwich, which will be then prepared for lamination process.

Manual loading of individual sheets for collating is required.

Positions of individual sheets collated in the sandwich must be able to be monitored by cameras. The device must be able to shine through the white sheet so that the top camera can detect the printing mark printed at the bottom of the sheet.

The equipment has to include punching system for fixing sandwiches in lamination process (pin holes for fixing on relief lamination plates), see the drawing in the attachment. The punching system will be used just for formats ID1 (295 x 330 mm).

The equipment must be also fitted with a device for thickness measurement (for individual layers and addend layers measurement).

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| **Equipment specification** | **Operational requirements** |
| Registration, Inspection of obverse and reverse face fitting | At least 3 **static** top cameras and 1 monitor, focused on design elements and printing marks  (cameras with the possibility of shifting, e.g. for future expansion to 3x8 format)  During ordinary production the cameras must be static (without moving even when changing from a 3x5 to 3x7 job and back), therefore we require at least 3 cameras.  Printing marks: various colors, including silver on transparent chip pre-laminates  Registration: edge registration, camera registration by registration marks (e.g. printed layers, layers with DOVIDs)  **Camera registration available for all collated layers** |
| Measuring of the thickness of each layer | YES, automatically during welding |
| Welding | Ultrasonic welding preferred  Moveable jaws allowing shift after each completed welded joint |
| Welding process activation option | Leg switch |
| Punching with suction | YES for relief lamination plates |
| Reinforced work desk | The work desk cannot bend on touch or during product handling as it could negatively affect the thickness measurement |
| Shelves to store individual layers (at least 5) | To remove foils |
| Sheet format | 295 x 330 mm or 295 x 435 mm |
| Number of cards on a sheet | 3 x 5 or 3 x 7 |
| Material | PC, PVC, PET G, ABS  White or transparent |
| Temperature of welding | Adjustable |
| Number of layers, sandwich thickness | Up to 10 (1 000 um)  Up to 1 000 μm |
| Material thickness | 50 – 500 um |
| Annual production – 3 shift operation | Min 384 sandwiches per shift  At least 3 000 000 cards / year |
| Control SW and labels around the machine | In Czech language or using international pictograms |
| Saving of programs | YES, at least 50 programs |

1.2 Other project implementation requirements

The project implementation process must also include transportation and delivery of the equipment to the place of fulfilment, installation and start-up of the equipment including setting up programs for processing all our ID-1 jobs (max. 10 programs), training of employees selected by the project announcer and delivery of all documents necessary for the acceptance and use of the equipment, in particular, the user’s manual, maintenance and adjustment guidelines (in Czech language), drawing documentation, electrical diagrams, spare part catalogue and declaration of conformity.