



## National Award– Second

### Six-Axis Rotating Head Golden Embossing Machine

Ravindra Ganpat Chopade  
Mumbai, Maharashtra  
Scout: Direct

Coming from a humble background, Ravindra Chopade (48) has toiled hard since dropping out of school to reach a stage where he operates two printing shops and leads a team of a dozen. He has been providing photocopying, binding, printing and embossing services at his small shop near IIT Mumbai.

The process of embossing is quite slow using the conventional letter punch process. To automatize and accelerate the embossing process, he devised a mechanism to use existing printers and desktops to achieve the intended result. Further working on the idea, he developed three kinds of machines viz. Golden Embossing Machine using high-quality dot matrix printer, digital hot foil stamping embossing machine and digital hot foil printing machine. This innovation won him the Maharashtra State award in NIF's 7th National Grassroots Innovation Awards 2013.

The Six-axis rotating head golden embossing machine is a stamping machine with a head movable on six axes. The first axis, 'Z', at the top of the machine, is for punching, the second one is the rotary axis for indexing letters, the third one is for changing the angle and elevation of letters, the fourth one, 'X' axis and the fifth one 'Y' axis are for moving bed in the position of X-Y laterally and the sixth one is for foiling, i.e. golden roll winding. The machine facilitates golden embossed printing on a diary, paper, or file of any material - leather, canvas, plastic, or sheet. The whole system is software operated. Once the required text is entered into the software and the print command is given, the system starts printing. The device can emboss 350 characters in a minute.

