

Ideal for Prototype Developments & Quality Controls



Mini rotor **BSE - 400**

FASTER

than 3-D printing in production runs and has lower investment costs than injection/blow molding

PERFECT

for start-ups & SME to produce mass prototypes for market testing or for limited-edition products.



PRD Research
Rotational Molding Machine

20/1 Pattanachonnabot 3 Rd., Klong Song Ton Noon, Lad Krabang,
Bangkok 10520 Thailand Tel : +662-138-9745 Fax : +662-138-9744,
www.prd-research.com, Email : sales@prd-research.com

Advantages of Rotational Molding:

- Low investment costs for machines and molds
- Relatively short lead time from designs to finished products
- Design flexibility allowing complex geometry & surface texture
- Ideal for small to large hollow parts



The mini-shuttle rotational molding machine BSE-400 has been designed to make prototypes or for resins quality control purposes. Small-size products with specific wall thickness or products with small production runs are ideal with this machine. BSE-400 is engineered specifically as a tool to invent products.

Working similar to a full-size oven, BSE-400 can either be manually or automatically controlled by PLC. Our PLC is integrated with 3.5" color Human Machine Interface (HMI) touch screen and is run by custom-made software for complete oven management of process parameters.

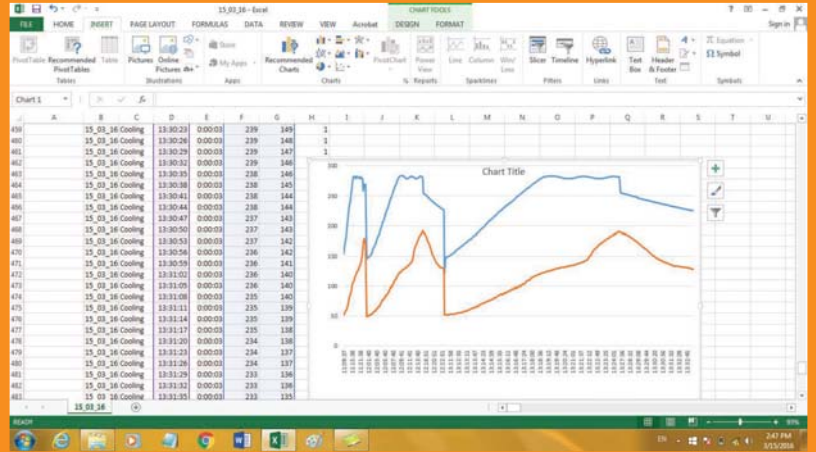
For space-saving and safety reasons, BSE-400 utilizes electrical heaters with PID controller that can heat the oven up from 30 to 280 °C within 7 minutes and keep the oven temperature constant throughout the entire molding cycle.

HMI is also equipped with real time display of oven temperature and internal air temperature. The output is in graphical format to ensure product quality and optimum cycle time.

The machine runs automatically by moving the mold cart into the oven when oven temperature reaches a preheat set point and returns to its home station when internal mold temperature reaches a set point for controlled PIAT (Peak Internal Air Temperature).

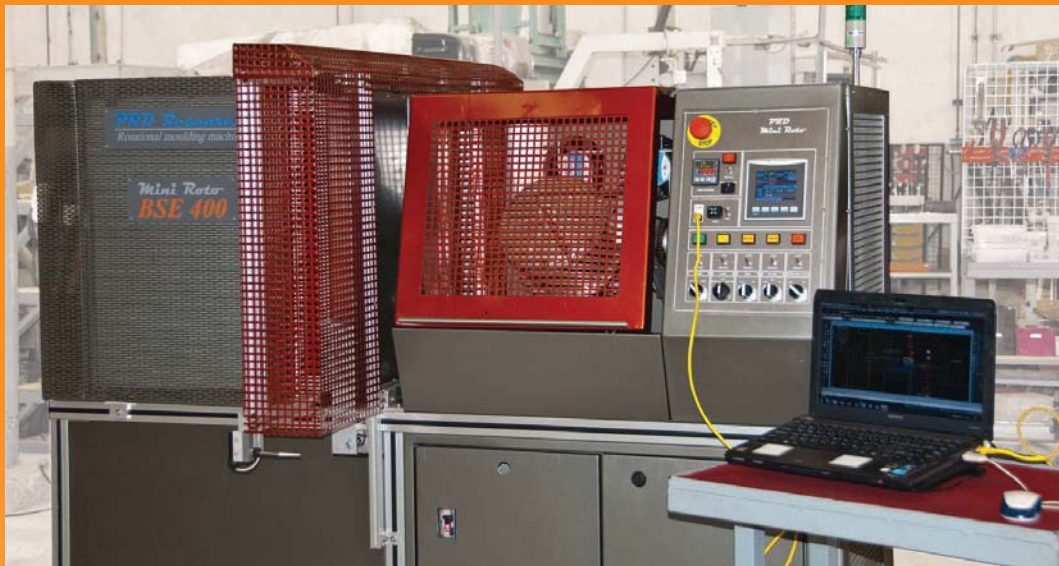
Cooling, demolding and loading is ready for the next molding process.





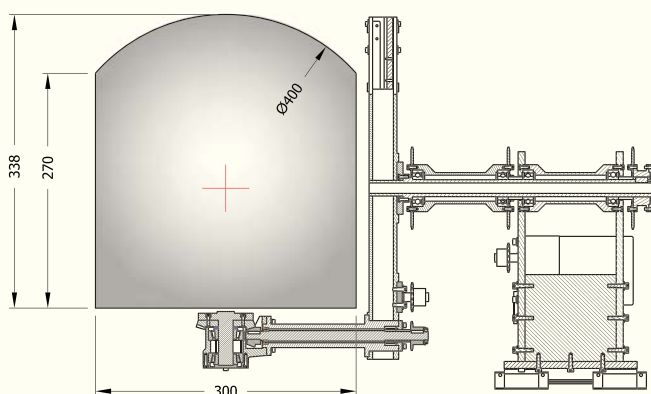
Quick release mold clamp

All data is continuously saved to micro SD cards 16 GB up to 200 hrs.
Raw data in table formats can be downloaded via LAN port and transferred to PC for further analysis or to plot graphs in excel .



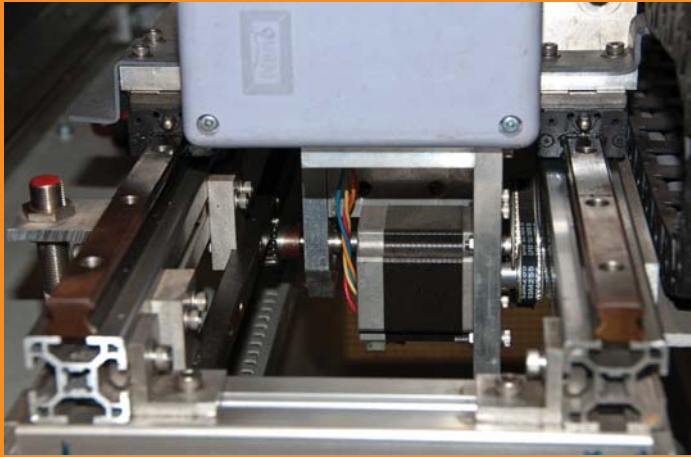
BSE 400 Communication: GPRS/GSM enabled Eternet
via TCP/IP Web server capability

Provided software allows connectivity between BSE-400 and a PC, which can be used as remote interface via internet TCP/IP with our technical service assistance team when needed.



Arm & Plate

No. of Arm	: 1-Offset
Max. load	: 10 kg
Max. swing diameter	: 400 mm
Max arm speed	: 8 rpm
Max. plate speed	: 8 rpm

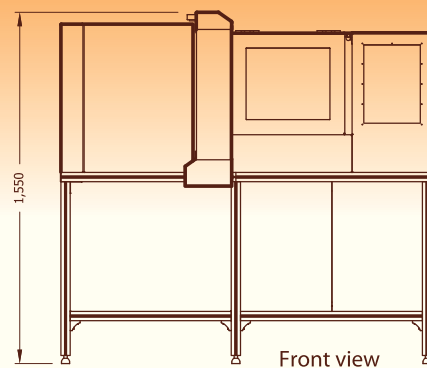
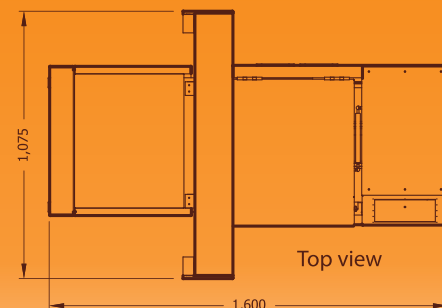


Cart

Material	: Aluminum alloy 5083
Drive	: Rack and pinion
Motor	: Stepping motor
Cart rail	: Linear guide rail

Oven

Inside dimension	: L 440 x W 440 x H 480 mm
Outside dimension	: L 540 x W 540 x H 580 mm
Wall material	: Stainless steel with 50 mm rock wool insulator
Heating type	: 3 elements, Total 4,400 watt, 1,000 +1,200 watt on top, 2,200 watt + convection fan on rear wall
Air circulating fan	: High temp. fan, 30 watt
Door movement	: Closed and opened by 2 pneumatic cylinders



All dimension in mm

Mold cooling

Type of cooling	: Air cool
Fan size	: Axial fan 6", 192 cfm, 40 watt
No. of fan	: 4 units (768 cfm)

Machine weight	: approx.190 Kg
Machine frame material	: Aluminum profile
Power supply	: 5 kW, 25 A, 220 V, 1 phase
Air supply	: 4 - 7 bar (60-100 psi) 10 L/min (0.35 cfm)