

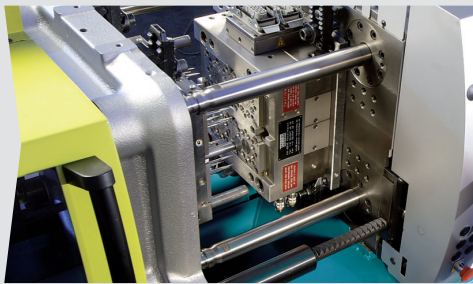


Spritzgiessautomaten

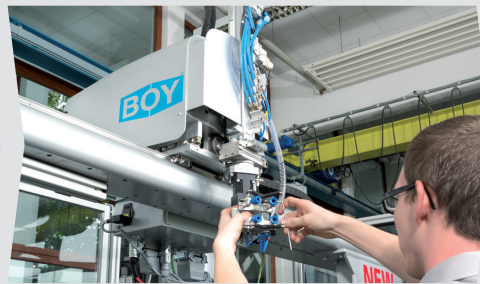
Innovative into the Future – BOY-Injectioneering



Injection moulding machine **BOY 100 E**



Great distances between tie bars and platens for mounting larger moulds



Simplest possibilities to integrate a four-axis industrial robot



Most efficient technology with servo-motor pump drive

- Fully controlled
- Four-tie bar, cantilevered **two-platen clamping system**
- Patented pressure intensifier with **integrated valve function**
- Most exact positioning of the moving platen via proportional valve and servo drive technology
- Divided safety gate for the clamping unit
- Easily accessible ejector
- Optimum L/D ratio of the screw
- **Different injection units** for thermoplastic, thermoset, LSR, and elastomer processing
- **Lateral swivel-out** injection unit
- Robust machine frame with integrated oil tank
- Optional with energy-efficient and high wear-resistant **EconPlast** unit

Some more of everything - that was the motto when the BOY 100 E was developed. A greater daylight between tie bars (430 x 360 mm) and larger platen distances of 725 mm, as well as a **clamping force of 1000 kN** characterize BOY's model.

And as befits a **leader**, the BOY 100 E disposes of the same

excellent characteristics of all BOY injection moulding machines feature.

Given the easy handling of the machine, the users of the BOY 100 E enjoy **maximum flexibility**. All components - from the injection unit to the four-tie bar clamping system - **are easily accessible**. The divided safety gate of the clamping unit is easy to open and offers **optimum accessibility** of the mould, which entails short set-up times and a rapid start of production.

Powerful software applications of the **Procan** series can be chosen for the control of the injection moulding machine. Clearly designed menu structures offer **maximum ease of operation** with optimum results. A multitude of **thermo-plastics, elastomers, silicones** and **thermosets** as well as **metals** and **ceramics** (PIM-Technologie) can be processed trouble-free.

Despite the many intelligent, balanced components and a multitude of optional equipment, the injection moulding machine from BOY makes do with **little floor space** just under 4.0 (!) square metres.

It also stands for **efficiency** and an unparalleled price/performance ratio. Compared to the competitors, the **material throughput** of the BOY 100 E is markedly higher than that of comparable machines. Available options include controls for handling devices, picker as well as brush units, unscrewing devices, core pulls, and integrated hot runner controls.



- 1 The machine design features the best ergonomics and efficient operation.
- 2 The ejector chute, open on three sides, guarantees optimum removal of the moulded parts.
- 3 Easy handling and flexibility with regard to additional equipment due to the cantilevered clamping system.
- 4 Optimum control technology with intuitive operation concept.
- 5 Stable machine design with integrated oil tank.



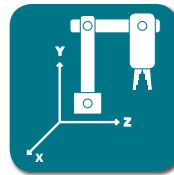
Servo-Drive



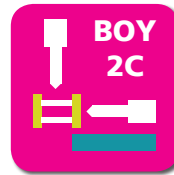
Procan ALPHA®



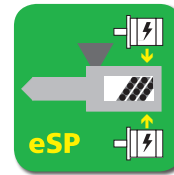
Technology



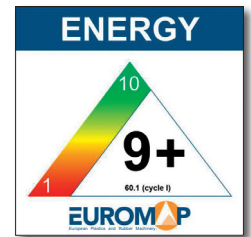
Automation



Multi Component



E-Drive



The specified efficiency classification is achievable depending on the respective machine equipment.

Equipment

Injection unit

| | |
|--|---|
| Pivoting injection unit | ■ |
| Preset screw speed values with ramping transition | ■ |
| Cold start protection | ■ |
| Number of set points of injection speed | 8 |
| Number of set points of injection pressure | 2 |
| Start of holding pressure dependent on hydraulic pressure, stroke and time | ■ |
| Start of holding pressure, cavity pressure-dependent | □ |
| Number of set points of holding pressure | 8 |
| Production monitoring at start of holding pressure | ■ |
| Closed loop control for the complete injection profile and back pressure | ■ |
| Control for intrusion-injection | ■ |
| PID microprocessor-controlled heating zones for cylinder + nozzle set and temp. display | 5 |
| Hydraulically actuated needle shut-off nozzle (pneumatic for XS-LSR) | ○ |
| Slide-away for quick material change (25 / 35 / 55 VV / 35 HV / 2C M / L without hopper) | ■ |
| Automatic material loader / feeder | □ |
| Adjustable nozzle force | ■ |
| Delayed nozzle retraction | ■ |
| Servo-electric screw drive (separate feed line required) | ○ |
| High wear-resistant plasticizing units | ○ |
| High wear-resistant EconPlast unit | ○ |
| Speed injection | □ |

Clamping unit

| | |
|---|-----|
| Reduced mould height by 50 mm | □ |
| Moving platen support to improve the precision when using large moulds | ■ |
| Number of set points of mould closing speed / opening speed | 8/8 |
| Number of reopening attempts after mould closing | ■ |
| Hydr. ejector with dig. adjustable pressure, speed, position + no. of strokes, intermediate stop position | ■ |
| Hydraulic ejector with adjustable stroke 80 mm (for XS = 50 mm) | - |
| Hydraulic ejector with adjustable stroke 130 mm | ■ |
| Hydraulic ejector with adjustable stroke 150 mm and 42,7 kN force | ○ |
| Hydraulic unscrewing device, one or two directions of rotation with intermediate stop | □ |
| Hydraulic unscrewing device, two directions, proportional valve and pulse generator | □ |
| Core pull control with 4/3 way directional control valve and freely selectable operational programmes | □ |
| Injection compression (coining) and breathing with mould degassing control | □ |
| Hydraulic guard safety device | ■ |
| Self adjusting mechanical drop bar safety system with electronic monitor | □ |
| Safety gate for handling devices | ■ |
| Electronically operated safety gate | ○ |
| Selection flap | ○ |
| Air ejection | □ |
| Mould lifting crane | □ |
| Simultaneous ejector movement (with double pump) | □ |
| Integrated sprue picker | □ |

Electronics

| | |
|--|-------|
| USB interface for access and data exchange | ■ |
| Interface kit: Serial/Temperature device, USB/Printer and Ethernet | □ |
| OPC interface | □ |
| 4 freely programmable inputs/outputs | □ |
| Piece counter | ■ |
| Preselect cycle counter with auto shut-off | ■ |
| Grounded socket outlet 230 V ~ / 10 A (alternatively can be switched off) | ■(□) |
| CEE socket outlet 400 V ~ / 16 A (alternatively can be switched off) | - (-) |
| Socket distributor 3 x 400 V ~ / 3 x 230 V ~ switched (separate feed line required) | □ |
| Energy distributor with four fixed connections, up to 5 x 400 V CEE + 3 x 230 V (sockets can be switched off optionally). Standard supply 125 A / 5 x 50 mm² | □ |
| Switch cabinet ventilation | ■ |
| Standardized interface for handling units (EUROMAP 67) | □ |
| Separate feeder (heating and motor current) | ○ |
| 7-day timer | ■ |
| Additional temperature control | □ |
| Brush control | □ |
| Connector for safety switch to inhibit mould closing | □ |
| Integrated hot runner control, 8/16-fold (separate feed line required) | □ |
| Air conditioning unit for control cabinet | □ |
| Alarm signal with sound | □ |

Hydraulics

| | |
|---|---|
| Electronically controlled variable pump | - |
| Servo-motor pump drive (Servo-drive) | ■ |
| Oil preheating circuit automatic | ■ |
| Oil temperature gauge / Controlled oil cooling / Oil level indicator | ■ |
| Oil level and temperature monitoring | ■ |
| Optical oil filter contamination indicator | - |
| Proportional action valve for the clamping unit | - |
| Proportional valve with stroke feedback and positioning action for clamp unit | ■ |

General

| | |
|--|---|
| Cooling water distributor with electric shut-off valve for injection mould | ○ |
| Temperature control for feed throat | □ |
| 6- / 8-zone water distributor | ○ |
| Tool kit | □ |
| Spare parts package | □ |
| Oil filling | □ |
| Anti-vibration mounts | ■ |

■ standard ○ alternatively □ optional - not available

You would like to learn more about this BOY injection moulding machine?



Data and Equipment (complete overview)



Competence brochure



Dr. Boy GmbH & Co. KG

Industriegebiet Neustadt / Wied
Neschener Str. 6
53577 Neustadt-Ferndal
Germany

Phone: +49 (0)2683 307-0
Fax: +49 (0)2683 307-4555
E-Mail: info@dr-boy.de
Internet: www.dr-boy.de



BOY-APP
free of charge at
http://app.dr-boy.de

