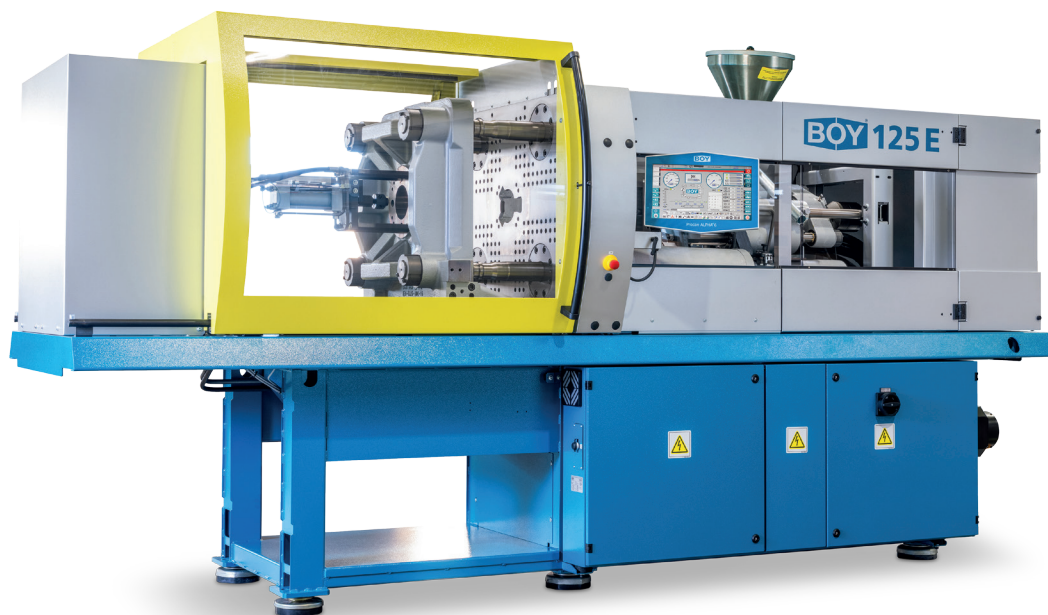
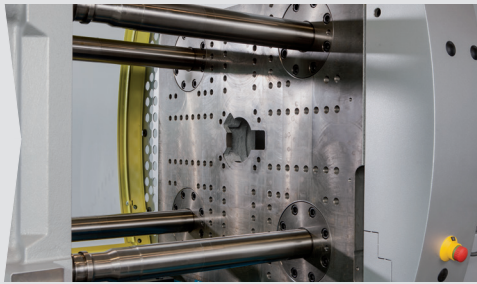


## Innovative into the Future – BOY-Injectioneering

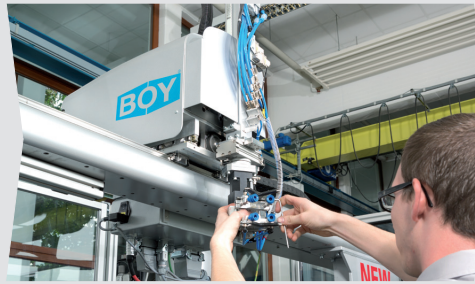


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Injection molding machine BOY 125 E



Tie bar distances enlarged to 470 mm x 430 mm



Simplest possibilities to integrate a four-axis industrial robot



Electrically driven material hopper / feeder for an easier refilling / assembly

- Fully controlled
- Four-tie bar, two-platen clamping unit with a max. platen distance of 825 mm
- 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

Significantly stronger, larger and more powerful, were the requirements for the development of BOY 125 E. In addition to the larger tie bar distance of 470 mm and a maximum platen distance of 825 mm, the new BOY top model offers a clamping force increase of 25%. **1,250 kN clamping force** characterizes now the new machine upper limit at BOY.

Given the easy handling of the machine, the users of the BOY 125 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 mold, which entails short set-up times and a rapid start of production.

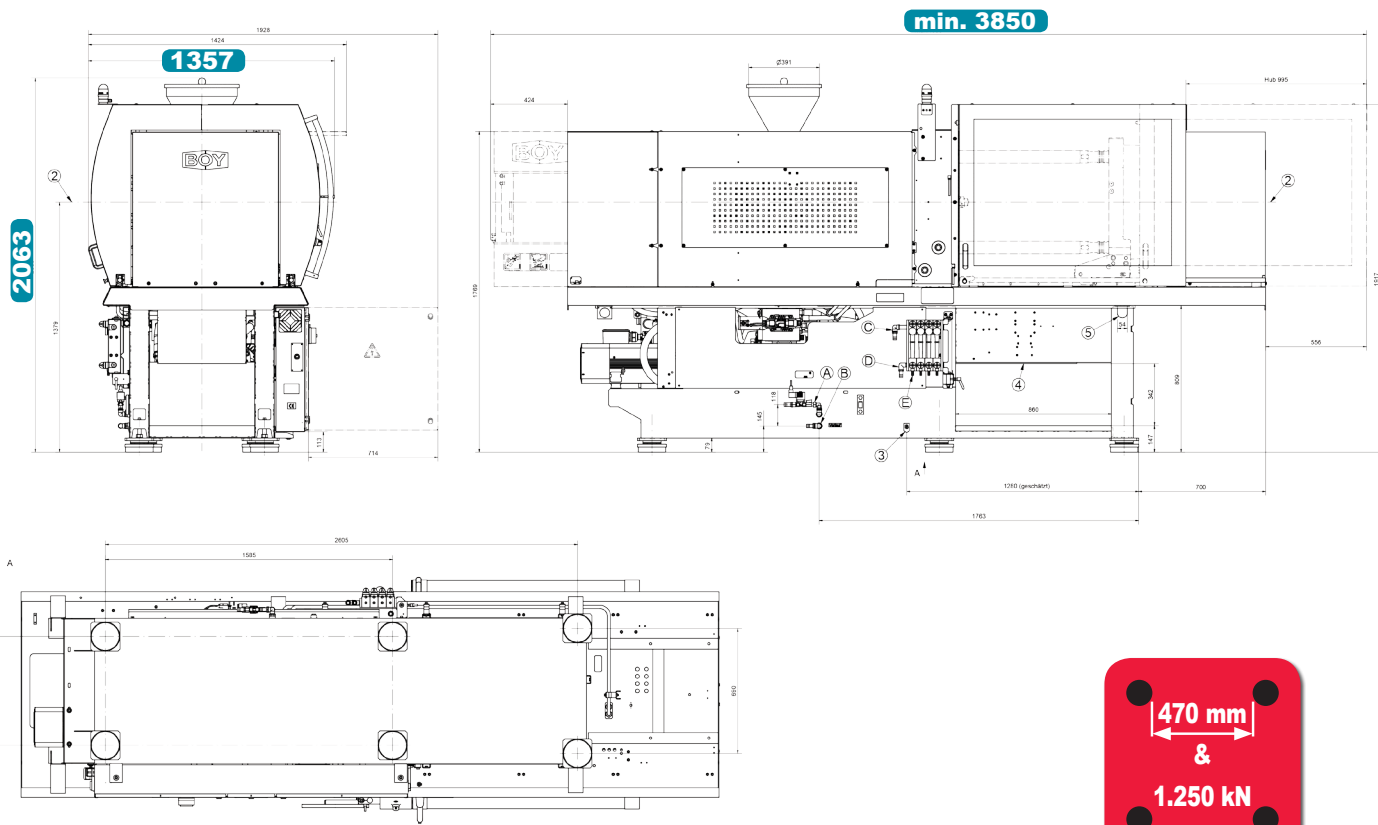
Powerful software applications of the **Procan** series can be chosen for the control of the injection molding machine. Clearly designed menu structures offer **maximum ease of operation** with optimum results. A multitude of **thermo-plastics, elastomers, silicones** and **thermosets** as well as **metals**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

Despite the many intelligent, balanced components and a multitude of optional equipment, the injection molding machine from BOY makes do with **little floor space** (just under 5.22 square metres).

It also stands for **efficiency** and an unparalleled price/performance ratio. Compared to the competitors, the **material throughput** of the BOY 125 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 For an easier refilling the material hopper / -conveying device are electrically driven.
- 3 Precise support for large / heavy moulds up to 680 kg on the moving locking side.
- 4 Optimum control technology with intuitive operation concept.
- 5 Stable machine design with integrated oil tank.



**BOY 125 E**

**Technical Data – standard version<sup>1)</sup>**

Injection unit for processing thermoplastics		SP 420 (Standard)			
Screw diameter	mm / in	36 / 1.42	42 / 1.65	48 / 1.89	52 / 2.05
Screw- L/D-ratio		23	20	17	16
Max. stroke volume (theoretical)	in <sup>3</sup>	9.94	13.53	17.67	20.74
Max. shot weight in PS (theoretical)	oz	5.23	7.12	9.29	10.91
Injection force	US Tons	29.6			
Injection volume flow	in <sup>3</sup> / sec	13	17.8	23.2	27.2
Max. spec. injection pressure	psi	37478	27543	21088	17970
Max. screw stroke	mm / in	160 / 6.3			
Nozzle force / contact pressure	US Tons	7.31			
Nozzle retraction stroke	mm / in	243 / 9.57			
Screw torque	ft / lbf	368.78 (18.3 in <sup>3</sup> / 1885 psi) / 390.91 (21.2 in <sup>3</sup> / 1885 psi)			
Screw speed (infinitely variable)	rpm	280 (18.3 in <sup>3</sup> ) / 250 (21.2 in <sup>3</sup> )			
Screw pulback force	US Tons	5.96			
Heating power (nozzle + cylinder)	W	11250			
Hopper capacity	Us gal.	5.28			
Injection speed	in / sec	8.27			

Clamping unit		
Clamping force	US Tons	140.51
Distance between tie bars	in (h x v)	18.5 x 16.93
Max. daylight between platen	mm / in	825 / 32.48
Max. opening stroke (adjustable)	mm / in	525 / 20.67
Min. mold height	mm / in	300 / 11.81
Max. mold weight on moveable clamping side	lb (max)	1499.14
Mold opening force	US Tons	5.45
Mold closing force	US Tons	5.53
Ejector stroke (max.)	mm / in	130 / 5.12 (150 / 5.91)
Ejector force pushing / pulling	US Tons	2.29 / 1.52 (4.8 / 3.37)

General		
Installed driving power / total power	kW	22.5 / 33.75 (400 V)
Duration of the dry cycle (EUROMAP 6)	s (mm)	2.5 (329)
Hydraulic system pressure	psi	2785
Oil tank capacity	US gal.	58.12

Dimensiones and weights		BOY 125 E
Dimensions (LxWxH) / Footprint	in / square in	151.57 x 53.43 x 81.22 / 8098
Total weight net (without oil)	lb	10362
Total weight gross (pallet & foil / wooden case)	lb	13448 / 14440
Transport dimensions / case (LxWxH) approx.	in	154.7 x 63.0 x 85.4 / 157.5 x 63.0 x 85.4

1) more injection units see Technical Data and Equipment



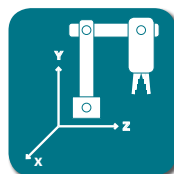
Servo-Drive



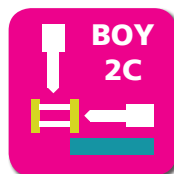
Control



EconPlast



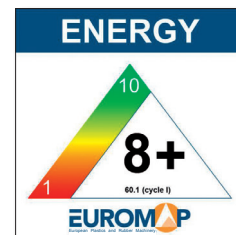
Automation



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	9
Number of set points of injection pressure	9
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	9
Production monitoring at start of holding pressure	■
Closed loop control for the complete injection profile and back pressure	■
Control for intrusion-injection (not for BOY 2C XS)	■
PID microprocessor-controlled heating zones for cylinder + nozzle set and temp. display	■
Hydraulically actuated needle shut-off nozzle (pneumatic for XS-LSR)	●
Slide-away for quick material change (25 + 35 + 60 VV / 35 HV / 2C M 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 (not for BOY 2C XS)	-
Clamping force build-up can be activated parallel to injection	-
Electromechanical injection movement	-

### Clamping unit

Reduced mold height by 50 mm	□
Moving platen support to improve the precision when using large molds	■
Number of set points of mold closing / opening speed	9
Number of reopening attempts after mold closing	■
Hydr. ejector with adjustable pressure, speed, position + no. of strokes, intermediate stop position	■
Hydraulic ejector with adjustable stroke 80 mm (for XS E = 50 mm)	-
Hydraulic ejector with adjustable stroke 130 mm	■
Hydraulic ejector with adjustable stroke 150 mm and 42.7 kN force	●
Electromechanical ejector 150 mm	●
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 programs	□
Injection compression (coining) and breathing with mold 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	□
Mold lifting crane	-
Simultaneous ejector movement (with double pump/Electric)	□
Integrated sprue picker	□
Mold holder 75 x 75 mm	-

### Electronics

USB interface for access and data exchange	■
Interface kit: Serial/Temperature device, USB 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 switched)	■(□)
CEE socket outlet 400 V ~ / 16 A (alternatively switched)	- (-)
Socket distributor 400 V ~ switched + 230 V ~ (Standard supply 32 A)	-
Socket distributor 400 V ~ / 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 mm <sup>2</sup>	□
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 mold 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 temperatur gauge / Controlled oil cooling / Oil level indicator	■
Oil level and temperature monitoring	■
Proportional valve with stroke feedback and positioning action for clamp unit	■

### General

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

■ standard    ● alternatively    □ optional    - not available



Technical Data and Equipment (complete overview)



Competence brochure

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



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BOY-APP  
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http://app.dr-boy.de

