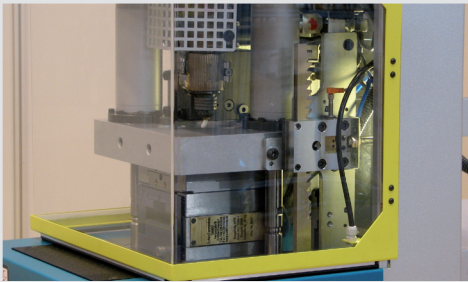


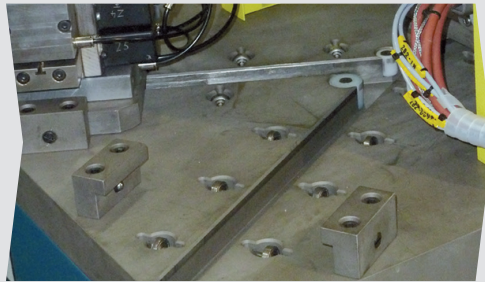
Innovative into the Future – BOY-Injectioneering



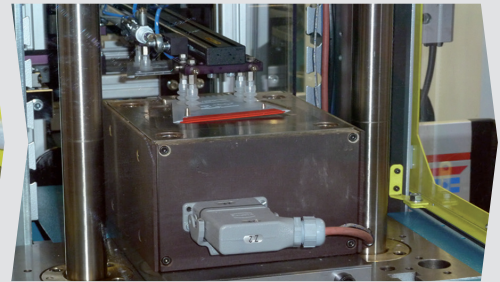
Insert molding machine BOY XS V



Diagonally arranged tie bars facilitate the installation also of larger molds



Manual sliding table (on request) (e.g. with linear or Y-axis)

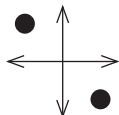


Automated insertion/removal of overmolded parts from the rear machine table

- Maximum performance in smallest space
- Ultra-compact insert molding machine with diagonally arranged tie bars.
- The fixed lower platen inhibits a shifting of the insert parts during mold closing
- Best possibilities for inserting and evacuating the parts
- Extremely low space requirement (0.64 m²)

The basic concept of the BOY XS V is identical to the BOY XS E, except the injection and clamping units are **arranged vertically**.

The clamping unit features two **diagonally** arranged tie bars, which ensures easy access to the mold area.



Highly precise applications, smallest dimensions as well as much **free space** for peripheral devices are the decisive advantages of the BOY XS V.

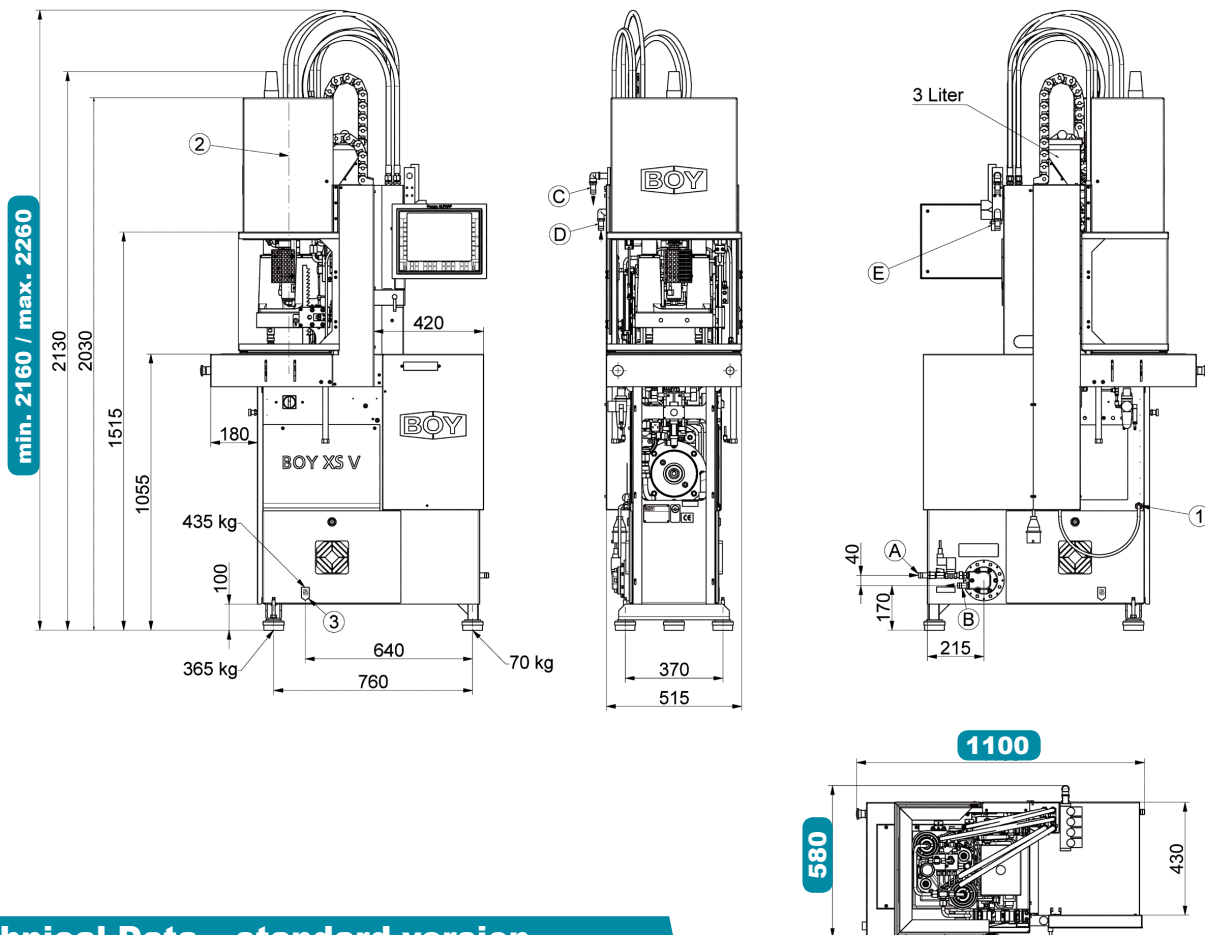
The free machine table behind the injection unit can be used for the positioning of **automation equipment**. Different feeding and removal automations can be integrated space saving and without additional space requirement (see following picture).



It is powerful in **industrial continuous operation** and optimally suitable for fully automatic insert molding of insert parts and integraton into production lines.



- 1 The machine design features the best ergonomics and efficient operation.
- 2 The fixed lower platen is characteristic for all BOY insert molding machines. This prohibits shifting of inserted parts during closing and opening of the mold.
- 3 Diagonally arranged tie bars facilitate the installation also of larger molds.
- 4 Optimum control technology with intuitive operation concept.
- 5 Robust machine design with integrated oil tank.



Technical Data – standard version

Injection unit for processing thermoplastics		SP 3 ¹		SP 14	
Screw diameter	mm / in	8 / 0.31	12 / 0.47	14 / 0.55	16 / 0.63
Screw- L/D-ratio		22	19.7	16.9	14.7
Max. stroke volume (theoretical)	in ³	0.06	0.28	0.38	0.49
Max. shot weight in PS (theoretical)	oz	0.03	0.15	0.2	0.26
Injection force	US Tons	1.43		3.95	
Injection volume flow	in ³ / sec	0.5	1.4	1.9	2.5
Max. spec. injection pressure	psi	36753	45368	33330	25527
Max. screw stroke	mm / in	20 / 0.79		40 / 1.57	
Nozzle force / contact pressure	US Tons	1.12		2.25	
Nozzle retraction stroke	mm / in		120 / 4.72		
Screw torque	ft / lbf	9.22 (363 psi)	36.88 (1088 psi)	55.32 (1668 psi)	73.76 (2176 psi)
Screw speed (infinitely variable)	rpm		340 (3.05 in ³)		
Screw pullback force	US Tons		0.56 (435 psi)		
Heating power (Nozzle. socket + cylinder)	W	1325		1825	
Hopper capacity	Us gal.		0.79		
Injection speed	in / sec	5.91		7.87	

Clamping unit		
Clamping force	US Tons	11.24
Distance between tie bars	in (h x v)	6.3 / 8.07 (diagonal)
Max. daylight between platen	mm / in	250 / 9.84
Max. opening stroke (adjustable)	mm / in	150 / 5.91
Min. mold height	mm / in	100 / 3.94
Mold weight on moveable side	lb (max)	48.5
Mold opening force	US Tons	1.69
Mold closing force	US Tons	1.12
Ejector stroke (max.)	mm / in	50 / 1.97
Ejector force pushing / pulling	US Tons	0.94 / 0.94

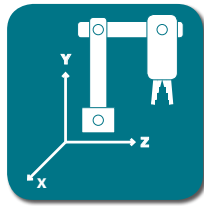
General		
Driving power / Total power	kW	3 / 4.33 (400 V)
Duration of the dry cycle acc. to EUROMAP 6 (stroke)	s (mm)	1.5 (112)
Hydraulic system pressure	psi	4351
Oil tank capacity	US gal.	7.4

Dimensiones and weights		
Dimensions (LxWxH) / Footprint	in / square in	44.1 x 24.4 x 94.5 / 1076
Total weight net (without oil)	lb	1008
Total weight gross (pallet & foil / wooden crate)	lb	1250 / 1559
Transport dimensions / case (LxWxH)	in	- / 66.9 x 27.6 x 88.6

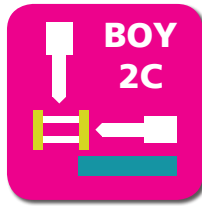
1) not suitable for all materials; applicability on request



Steuerung



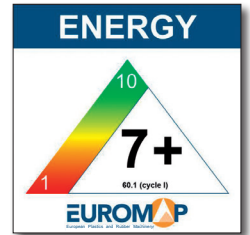
Automation



Multi Component



Made in Germany



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	2+1 □
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 ²	-
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 temperature 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

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



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