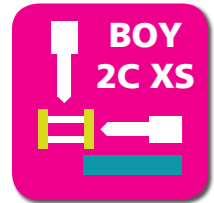
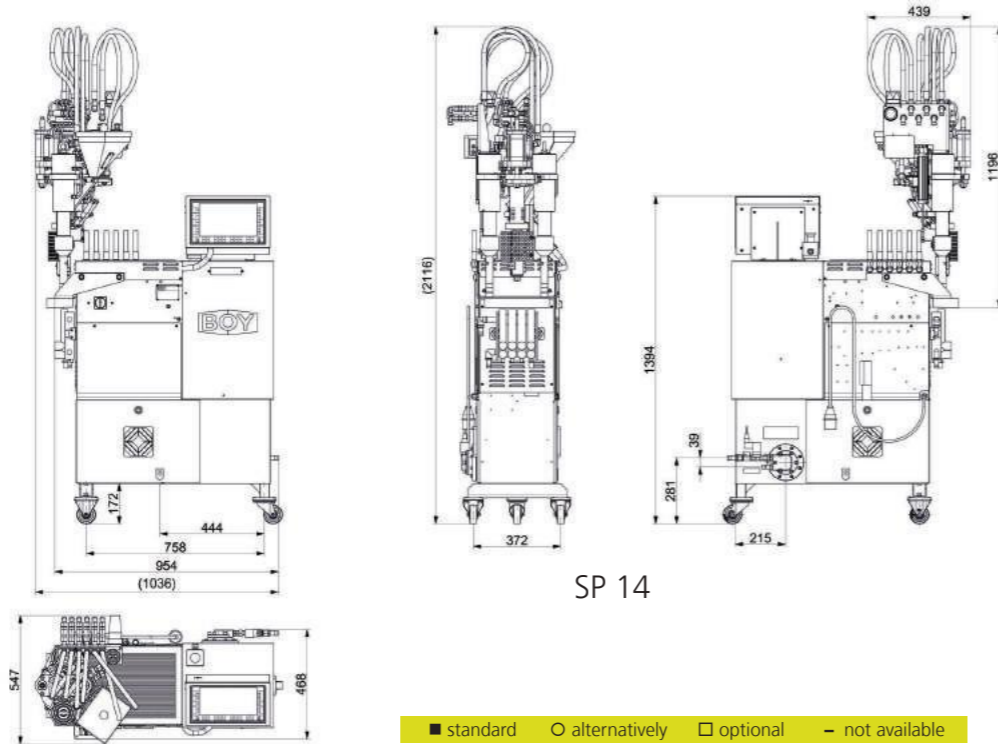




Procan ALPHA® 2



Multi Component



SP 14

■ standard ○ alternatively □ optional – not available

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
Thermocouple controlled nozzle zone	□
Hydraulically actuated needle shut-off nozzle (pneumatic for XS-LSR)	○
Slide-away for quick material change (25 VV / 35 VV / 55 VV 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	○

General	
Cooling water distributor with electric shut-off valve for injection mould and feet throat	○
6- / 8-zone water distributor	○
Tool kit	□
Spare parts package	□
Oil filling	□
Anti-vibration mounts	–

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 / interval signal	■
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 / 12)	□
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	–

Modification in design and equipment reserved

Innovative into the Future – BOY-Injectioneering



SP 14



SP 11 – SP 96

You would like to learn more about this BOY injection unit?

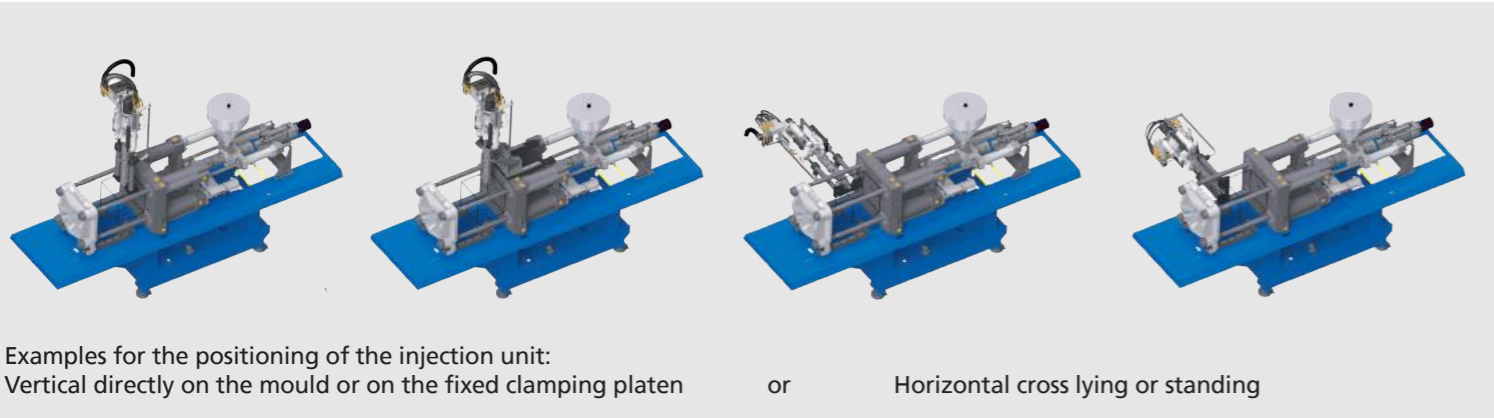


Data and Equipment (complete overview)



Competence brochure





Examples for the positioning of the injection unit:
Vertical directly on the mould or on the fixed clamping platen

or Horizontal cross lying or standing

The injection unit for the 2nd component is based of the ultra compact BOY XS. It is equipped with its own hydraulic drive and control. Depending on the execution this unit offers a plasticizing volume of up to 280.5 cm³.

The drive unit, which includes the control, is positioned next to the basic machine. Fixed wheels make the unit easy to move to other BOY injection moulding machines or machines from other suppliers that are processing a 2nd component. The controls of both machines communicate with each other via I/O-interface 6623 (optional) or special adapter cable. This assures a seamless process during the entire injection moulding cycle.

Depending on the application, the 2nd injection unit can be arranged in various positions. This is done space-saving in vertical position on horizontal machines; also a lateral mounting

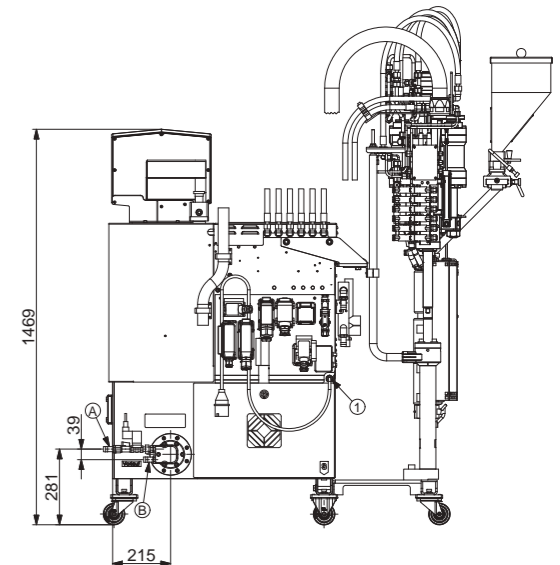
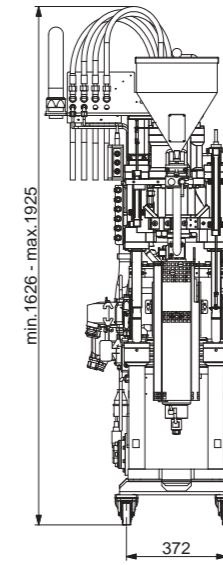
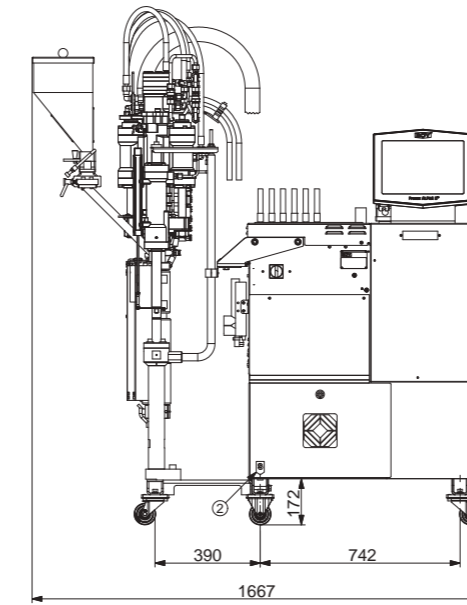
of the injection unit is possible (see graphic representation above).

The open nozzle plasticizing unit is connected to the injection unit for the 2nd component through a corresponding adjustable high-pressure hose line.

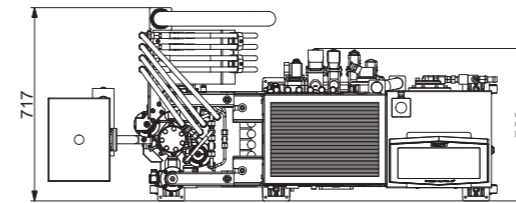
The TFT display of the 2nd injection unit is equipped with a longer cable. Therefore, the placement of the monitor can be arranged at the user-side of the basic machine - directly next to the basic machine's Procan ALPHA[®] monitor.



- 1 The machine design features the best ergonomics and efficient operation.
- 2 Alternatively, the injection unit can also be equipped with sturdy rollers and castor wheels.
- 3 Flexible positioning of the injection unit on the basic machine.
- 4 Optimum control technology with intuitive operation concept.
- 5 Robust machine design with integrated oil tank.



SP 11 – SP 96



Technical Data – standard version¹⁾

Injection unit for processing thermoplastics		SP 14	SP 14	SP 14	SP 81
Screw diameter	mm	12	14	16	22
Screw- L/D-ratio		19.7	16.9	14.6	17.5
Max. stroke volume (theoretical)	cm ³	4.5	6.1	8.0	30.4
Max. shot weight in PS (theoretical)	g	4.1	5.6	7.3	27.7
Injection force	kN	35.4	35.4	35.4	101
Injection flow (theoretical)	g/s	20.5	28.0	36.5	31.5
Max. spec. injection pressure	bar	3128	2298	1760	2656
Max. screw stroke	mm	40	40	40	80
Nozzle force / contact pressure	kN	20	20	20	24
Nozzle retraction stroke	mm	100	100	100	205
Screw torque	Nm	50 (75 bar)	75 (115 bar)	100 (150 bar)	180 (130 bar)
Screw speed (infinitely variable)	U / min. standard U / min. alternatively	max. 340 (50 cm ³)			max. 300 (80 cm ³) max. 250 (100 cm ³)
Screw pulback force	kN	5	5	5	44
Heating power (nozzle + cylinder)	W	1350	1350	1350	3550
Hopper capacity	litre	3	3	3	13

Clamping unit

Clamping force	kN	–	–	–	–
Distance between tie bars	mm (h x v)	–	–	–	–
Max. daylight between platen	mm	–	–	–	–
Max. opening stroke (adjustable)	mm	–	–	–	–
Min. mould height	mm	–	–	–	–
Max. mould weight on moveable clamping side	kg	–	–	–	–
Mould opening force	kN	–	–	–	–
Mould closing force	kN	–	–	–	–
Ejector stroke (max.)	mm	–	–	–	–
Ejector force pushing / pulling	kN	–	–	–	–

General

Installed driving power / total power	kW	3.0 / 8.8 (400 V)	3.0 / 8.8 (400 V)	3.0 / 8.8 (400 V)	3.0 / 6.55 (400 V)
Duration of the dry cycle (EUROMAP 6)	s – mm	–	–	–	–
Hydraulic system pressure	bar	250	250	250	210
Oil tank capacity	litre	28	28	28	28

Dimensiones and weights

Dimensions (LxWxH) / Footprint	mm / m ²	SP 14 = 1036 x 547 x 2116 ² / 0.57	SP 81 = 1667 x 717 x 1925 ² / 1.20
Total weight net (without oil)	kg	SP 14 = 320	SP 81 = 422
Total weight gross (pallet & foil / wooden case)	kg	SP 14 = 370 / 460	SP 81 = 472 / 562
Case dimensions (LxWxH) approx.	mm	SP 14 = 2000 x 1000 x 1800	SP 81 = 2000 x 1000 x 1800

1) more injection units see Technical Data and Equipment 2) in Stand-by-Position