

Procan ALPHA®2 Multi Component Made in Germany

Innovative into the Future – BOY-Injectioneering

Equipment

Injection unit		Electronics	
Pivoting injection unit	-	USB interface for access and data exchange	■
Preset screw speed values with ramping transition	■	Interface kit: Serial/Temperature device, USB/Printer and Ethernet	□
Cold start protection	■	OPC interface	□
Number of set points of injection speed	8	4 freely programmable inputs/outputs	□
Number of set points of injection pressure	2	Piece counter / interval signal	■
Start of holding pressure dependent on hydraulic pressure, stroke and time	■	Preselect cycle counter with auto shut-off	■
Start of holding pressure, cavity pressure-dependent	□	Grounded socket outlet 230 V ~ / 10 A (alternatively can be switched off)	■(-)
Number of set points of holding pressure	8	CEE socket outlet 400 V ~ / 16 A (alternatively can be switched off)	- (-)
Production monitoring at start of holding pressure	■	Socket distributor 3 x 400 V ~ / 3 x 230 V ~ switched (separate feed line required)	-
Closed loop control for the complete injection profile and back pressure	■	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	-
Control for intrusion-injection	■	Switch cabinet ventilation	■
PID microprocessor-controlled heating zones for cylinder + nozzle set and temp. display	5	Standardized interface for handling units (EUROMAP 67)	□
Hydraulically actuated needle shut-off nozzle (pneumatic for XS-LSR)	○	Separate feeder (heating and motor current)	-
Slide-away for quick material change (25 VV / 35 VV / 55 VV without hopper)	-	7-day timer	■
Automatic material loader / feeder	□	Additional temperature control	□
Adjustable nozzle force	■	Brush control	-
Delayed nozzle retraction	■	Connector for safety switch to inhibit mould closing	-
Servo-electric screw drive (separate feed line required)	-	Integrated hot runner control, 8/16-fold (separate feed line required)	□
High wear-resistant plasticizing units	-	Air conditioning unit for control cabinet	-
High wear-resistant EconPlast unit	-	Alarm signal with sound	□
Speed injection	○		

General		Hydraulics	
Cooling water distributor with electric shut-off valve for injection mould	○	Electronically controlled variable pump	■
Temperature control for feed throat	○	Servo-motor pump drive (Servo-drive)	-
6- / 8-zone water distributor	○	Oil preheating circuit automatic	■
Tool kit	□	Oil temperatur gauge / Controlled oil cooling / Oil level indicator	■
Spare parts package	□	Oil level and temperature monitoring	■
Oil filling	□	Optical oil filter contamination indicator	-
Anti-vibration mounts	-	Proportional action valve for the clamping unit	-
		Proportional valve with stroke feedback and positioning action for clamp unit	-

A 000761
E 12/15
Modification in design and equipment reserved



■ standard ○ alternatively □ optional - not available

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



Data and Equipment (complete overview)



Competence brochure



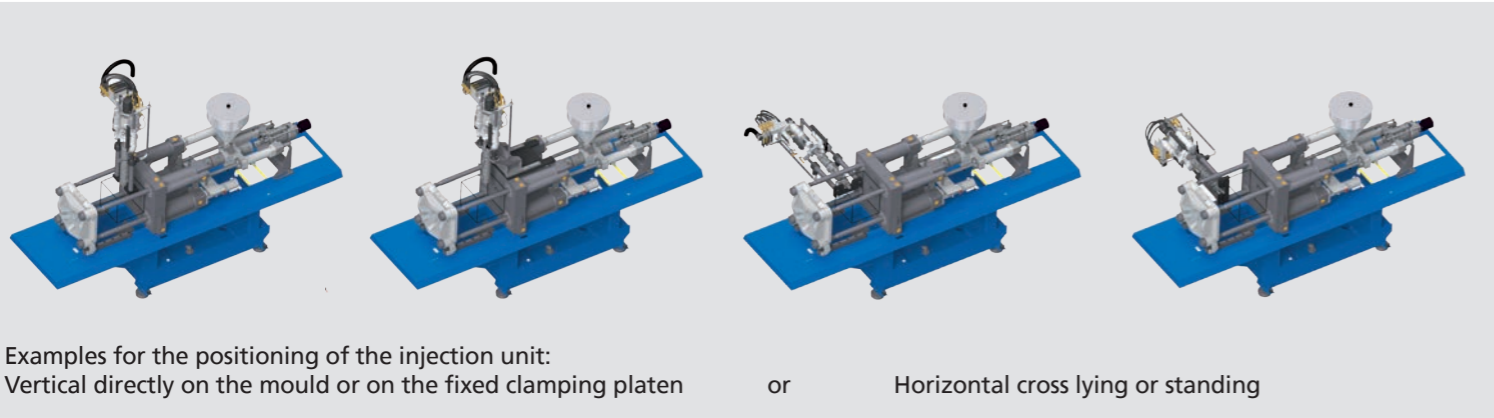
Dr. Boy GmbH & Co. KG
 Industriegebiet Neustadt / Wied
 Neschener Str. 6
 53577 Neustadt-Ferenthal
 Germany
 Phone: +49 (0)2683 307-0
 Fax: +49 (0)2683 32771
 E-Mail: info@dr-boy.de
 Internet: www.dr-boy.de



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



Injection units **BOY 2C M**
BOY 2C L



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 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

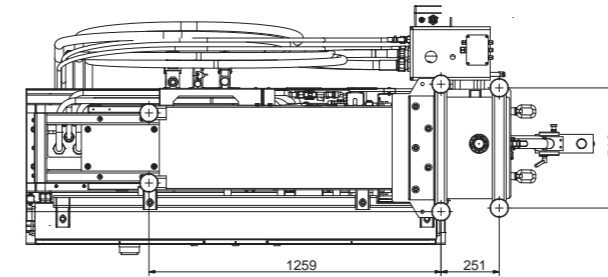
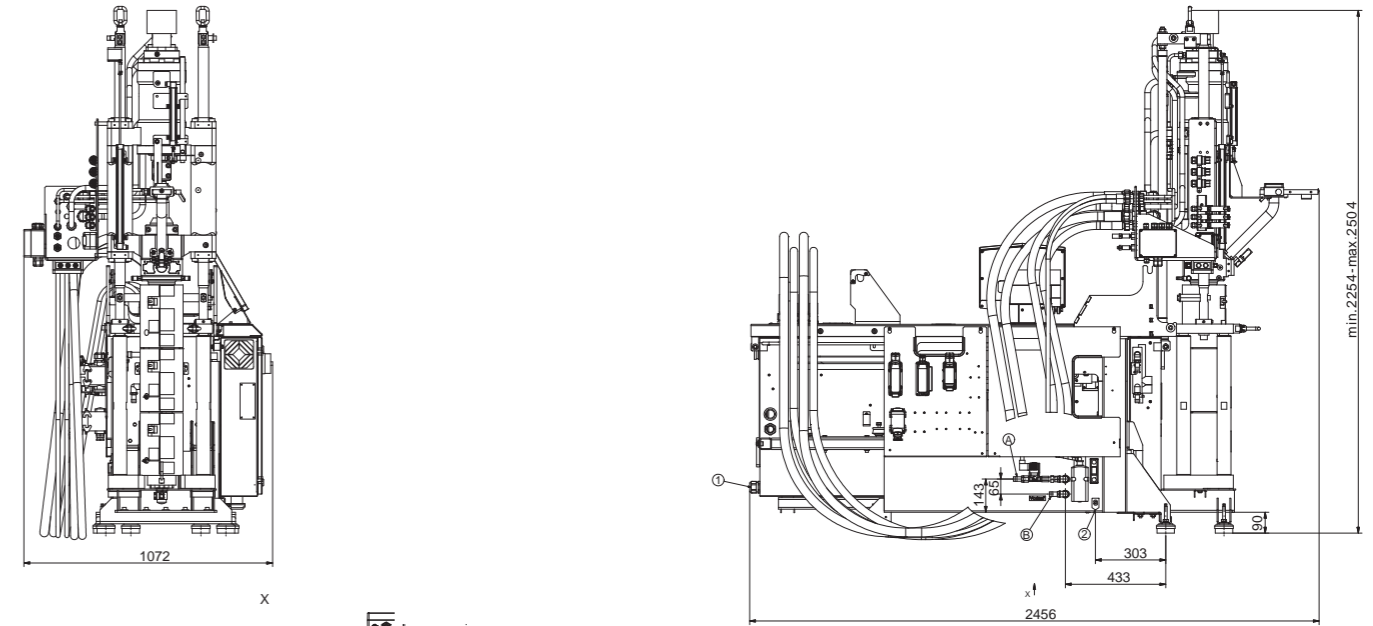
of the injection unit is possible (see graphic representation above).

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 Flexible positioning of the injection unit on the basic machine.
- 3 Optimum control technology with intuitive operation concept and flexible placement.
- 4 Robust machine design with integrated oil tank.



Additional injection units / screw diameter available:							
Model	2C S	2C XS	2C S	2C S	2C S	2C S	2C S
Injection unit	SP 11	SP 14	SP 16	SP 45	SP 56	SP 81	SP 96
Screw diameter in mm	12	12	14	18	18	22	24
		14		22			28
		16					32

Technical Data – standard version¹⁾

Injection unit for processing thermoplastics	SP 205			SP 370			
	Screw diameter	mm	28	32	38	36	42
Screw- L/D-ratio		22.7	20	16.7	23	20	17
Max. stroke volume (theoretical)	cm ³	73.9	96.5	136.1	157.8	214.7	280.5
Max. shot weight in PS (theoretical)	g	67.2	87.8	123.9	143.6	195.5	255.3
Injection force	kN	171	171	171	239	239	239
Injection flow (theoretical)	g/s	126.0	164.6	232.3	152.9	208.1	271.8
Max. spec. injection pressure	bar	2778	2127	1508	2347	1724	1320
Max. screw stroke	mm	120	120	120	155	155	155
Nozzle force / contact pressure	kN	33	33	33	33	33	33
Nozzle retraction stroke	mm	210	210	210	250	250	250
Screw torque	Nm	280 (162 cm ³ 130 bar) / 350 (204 cm ³ 130 bar)		500 (300 cm ³ 130 bar) / 530 (348 cm ³ 130 bar)			
Screw speed (infinitely variable)	U / min.	410 (162 cm ³) / 325 (204 cm ³)			280 (300 cm ³) / 250 (348 cm ³)		
Screw pulback force	kN	29.7	29.7	29.7	53	53	53
Heating power (nozzle + cylinder)	W	2400 + 2 x 2100 + 900 + 200 = 7700			4050 + 2 x 3100 + 750 + 250 = 11250		
Hopper capacity	litre	-	-	-	-	-	-

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	15 / 22.7	15 / 22.7	15 / 22.7	15 / 26.3	15 / 26.3	15 / 26.3
Duration of the dry cycle (EUROMAP 6)	s – mm	-	-	-	-	-	-
Hydraulic system pressure	bar	180	180	180	180	180	180
Oil tank capacity	litre	70	70	70	70	70	70

Dimensiones and weights	SP 205			SP 370			
	Dimensions (LxWxH) / Footprint	mm / m ²	2453 x 1050 x 1862 ² / 2.58			2456 x 1072 x 2254 ² / 2.63	
Total weight net (without oil)	kg	1125			1248		
Total weight gross (pallet & foil / wooden case)	kg	1255 / 1485			1378 / 1608		
Case dimensions (LxWxH) approx.	mm	2300 x 1200 x 2250			2300 x 1200 x 2250		

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