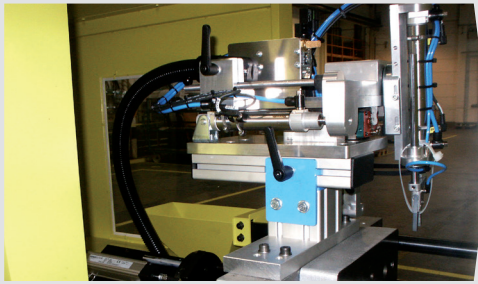


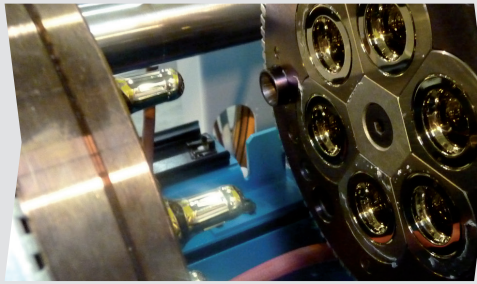
Innovative into the Future – BOY - Injectionneering



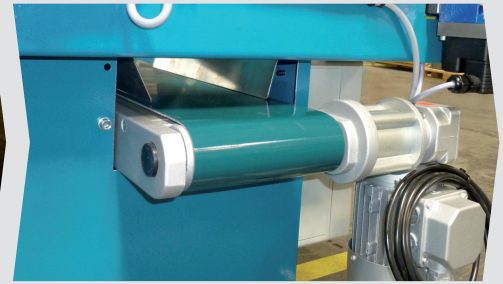
Injection moulding machine BOY 22 A PRO



Sprue and removal pickers integrated under the safety housing



Production of silicone pacifiers with two-component silicone (LSR)



Optional sorting conveyor – integrated in the trip chute

- Attractive price/performance ratio
- Robust, well thought-out design
- High efficiency through low machine hour rates
- Generous mould mounting dimensions with additional mounting possibilities (Pitch circle diameter of 170 mm; hole Ø 12.5 mm)

The BOY 22 A **PRO** is a ruggedly designed injection moulding machine constructed for industrial continuous operation and longevity.

The very compact injection moulding machine (merely 2.1 m²) features a cantilevered clamping unit which offers optimal accessibility and parts removal.

Equipped with 220 kN clamping force and an energy-saving, electronically controlled variable displacement pump as well as the multipatented Procan ALPHA screen control, the BOY 22 A **PRO** delivers efficient production in a compact space.

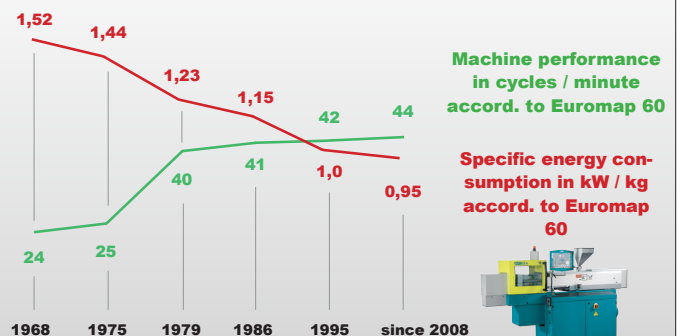
Even in comparison to older machine generations, the BOY 22 A **PRO** is impressive in its low energy consumption and faster cycle times.

In addition to the injection units 11 and 15, the injection unit SP 52 with a total of seven screw diameters offers a wide range of possible applications.

Additionally, there is a large range of options that complete the BOY 22 A **PRO** package.

In particular, an optional integrated handling interface and picker are available that can be positioned under the safety gate. The optional EUROMAP 12 handling interface is also available.

Technology development of BOY 22 A PRO



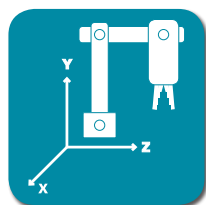
- 1 The machine design features the best ergonomics and efficient operation.
- 2 The ejector chute, open on three sides, guarantees optimum removal of the moulded parts.
- 3 Easy handling and flexibility with regard to additional equipment due to the cantilevered clamping system.
- 4 Optimum control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

Injection unit for processing thermoplastics		SP 11	SP 15	SP 52				
Screw diameter	mm	12	14	18	22	24	28	32
Screw- L/D-ratio		18	18	20	17.5	22	18.6	16.3
Max. stroke volume (theoretical)	cm³	4.5	6.1	20.4	30.4	36.2	49.3	64.3
Max. shot weight in PS (theoretical)	g	4.1	5.6	18.6	27.7	32.8	44.6	58.2
Injection force	kN	27.7	37.1	65.8	65.8	65.8	65.8	65.8
Injection flow (theoretical)	g/s	14.6	19.9	33.0	49.2	58.2	79.2	103.3
Max. spec. injection pressure	bar	2450	2413	2587	1732	1455	1069	818
Max. screw stroke	mm	40	40	80	80	80	80	80
Nozzle force / contact pressure	kN	48	48	48 / 36 [HV]	48 / 36 [HV]	48 / 36 [HV]	48 / 36 [HV]	48 / 36 [HV]
Nozzle retraction stroke	mm	180	180	180	180	180	180	180
Screw torque	Nm	50 (75 bar)	75 (68 bar)	130 (120 bar)	180² / 290³	180² / 290³	180² / 290³	180² / 290³
Screw speed (infinitely variable)	U / min.	500	500	500	400² / 250³	400² / 250³	400² / 250³	400² / 250³
Screw pulback force	kN	22.2	30.6	30.6	30.6	30.6	30.6	30.6
Heating power (nozzle + cylinder)	W	2200	2560	3250	3550	5800	5800	5800
Hopper capacity	litre	7.5	7.5	13	13	13	13	13

[illegible]

Installed driving power / total power	kW	5.5 / 7.7	5.5 / 8.1	5.5 / 8.8	5.5 / 9.1	5.5 / 11.3	5.5 / 11.3	5.5 / 11.3
Duration of the dry cycle (EUROMAP 6)	s – mm	1.6 – 178	1.6 – 178	1.6 – 178	1.6 – 178	1.6 – 178	1.6 – 178	1.6 – 178
Hydraulic system pressure	bar	160	160	160	160	160	160	160
Oil tank capacity	litre	115	115	115	115	115	115	115

Dimensions (LxWxH) / Footprint	mm / m²	2412 x 769 x 1689 / 1.85
Total weight net (without oil)	kg	770
Total weight gross (pallet & foil / wooden case)	kg	830 / 990
Transport dimensions / case (LxWxH) approx.	m	2.3 x 1.06 x 2.2 / 2.3 x 0.96 x 1.6



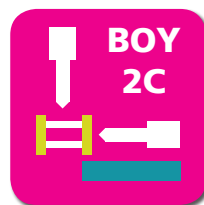
Automation



Made in Germany



Procan ALPHA 2®



Multi Component

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 / 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	–

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	■
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 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 mm²	–
Switch cabinet ventilation	■
Standardized interface for handling units (EUROMAP 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	–

General

4- / 6-zone 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

BOY
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