

Standard Configuration Menu of Fruit Crates Special Machine

Clamping Unit

- >>Patented five-point clamping mechanism by outwards toggle opening way, can have much bigger opening stroke
- >>Widen platen design, suitable for bigger molds
- >>High-precision and low-pressure mould protection function
- >>Hydraulic motor drives automatic gear for mould adjustment
- >>Adjustable support structure for moving platen, reduces deformation of tie bars
- >>Mechanical, electrical, hydraulic twice/triple safety protection device
- >>Mold opening and closing, ejection movement controlled by high-precision electronic Linear Transducers
- >>Various ejection models are optional, pressure and speed are set separately
- >>Five-stage adjustable speed and pressure for mould opening and closing
- >>Centralized lubrication system with automatic detection

Electrical Control Unit

- >>Process parameter pre-setting function
- >>With settings reference and online operational auxiliary description function
- >>Standard robot interface
- >>Parameters protection lock
- >>PID temperature automatic control, realize self-calibration of barrel temperature
- >>USB interface, convenient for panel program update and mold parameters backup
- >>With the memorize function of machine stopping, can save 200 groups molds data.
- >>100 sets alarms and 100 sets of modification records storage
- >>Muti-level password protection, can change settings according to different authorization levels, to prevent the wrong modification of molding parameters
- >>In-put, Out-put detection and VO online emulation function, fast detect machine running condition
- >>Multiple standby sockets (5-pin 32AXI + 5-pin 16AXI + 3-pin multi-function XI)
- >>Emergency stop protection for front door and back door
- >>Alarm light with sounds

Hydraulic Unit

- >>Servo energy saving system
- >>Oil temperature detection, and oil temperature deviation automatic alarm
- >>Motor overload protection function
- >>Standard with self-sealing oil absorption filter for machines above 530EKH
- >>Core pulling: 1 set as Standard, 1 set Reserved (on movable platen)
- >>Quick plug for water manifold (Φ 10)
- 400-450EKH: Standard with 1 set, 6 in&out water manifold.
- 530EKH: Standard with 1 set, 9 in/out water manifold.

Injection Unit

- >>High-efficiency plasticizing screw and barrel, with high-quality nitrided steel
- >>Screw anti-cold starting delay setting, timing heating, auto heating preservation function
- >>High-quality and large-torque hydraulic motor
- >>Leakage-proof function when the screw is backwarding
- >>Double carriage cylinders design
- >>High rigidity base support structure for injection unit
- >>Fine adjustment function of nozzle centralization
- >>High-precision Linear transducer to control the injection stroke
- >>Adjustable Six-stage injection, five-stage holding pressure, five-stage material charging pressure/speed
- >>Screw speed detection
- >>Automatic material cleaning function
- >>Proportional back pressure for plasticizing
- >>Additional extended nozzle (50mm extended)

Others

- >>BOLE standard color
- >>Adjustable Anti-vibration level pad
- >>Tool box
- >>Common tools
- >>Spare parts

Fruit Crates dedicated solution

High efficiency

Energy saving

Stability



The Passionate Pursuit of Perfection
en.bole-machinery.com

BOLE MACHINERY

ADD: No.99 Weisan Road, Xiaogang, Ningbo, China

P.C: 315821

TEL: +86-574-86188007

FAX: +86-574-86188008

E-mail: bole-sales@bole-machinery.com



BOLE Customer Service Center

THIS CATALOGUE ARE PROTECT BY LAW OF COPY RIGHT.
ANY USE WITHOUT THE EXPRESS PERMISSION OF THE LAW OF COPY RIGHT,
MUST GET APPROVAL OF BOLE IN ADVANCE.

THIS VERSION WAS PRINTED IN MARCH 2024,
ANY DIFFERENCE SPECIFICATION FROM OLD VERSION SHOULD
BE SUBJECT TO THIS VERSION.



Injection Moulding Machine

Plastic moulding applications for fruit crates

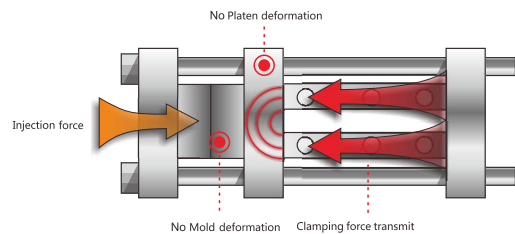
China's fruit consumption ranks first all over the world, with a total industry scale of more than 2.5 trillion RMB, and plastic fruit crates have advantages such as anti-freezing, moisture-proof, bending resistance, high bearing strength, and conveniently transportation, which are increasingly recognized by the fruit market. In order to better meet the market demands, BOLE has developed and launched a special injection molding machine for fruit crates.

BOLE--Crate special injection moulding machine follows BOLE patented unique clamping structure, Central Clamping Toggle Structure—CCTS. Meanwhile, BOLE adopts a special high-efficiency plasticizing system for fruits and vegetables, with a strong power system, ensure the perfect combination of High efficiency and Energy-saving, and Long-term stable operation.



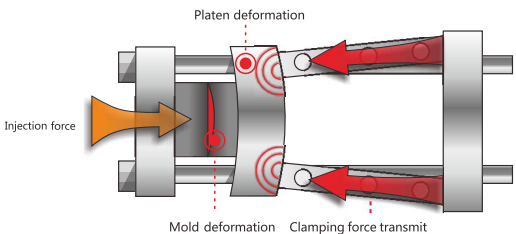
Center Clamping Toggle Structure —CCTS / Advantages

Adopting Central Clamping Toggle Structure —CCTS, the same tonnage machine will have bigger opening stroke, bigger tie bar distance, and bigger mold height.



BOLE centre clamping structure

- **100%** Clamping force efficiency
- **2-5%** Material saving
- Reduces mold wear, platen deflection
- Less possibility of flash, save flash trim work



Tradition Toggle system

- **80-85%** Clamping force efficiency
- Moving platen with obvious deformation, cause flashes, waste of material and labor of trim the flashes.



Special plasticizing system for fruit crates

- Adopt special designed Bi-metallic screw for crates, with higher plasticizing ability, stable plasticizing quality, fast cycle time, high product qualification rate, more suitable for recycled materials production.
- Adopt Special plasticizing system for fruit crates, plasticizing ability will be 20% higher than other domestic brands.



High-precision, Fast-response, Ultra-stable control system

- Adopt special control system with strong function, can achieve accurate control for position, pressure, speed, temperature, etc..
- Easily operation and friendly using.



High-performance servo system

- Adopt High-performance servo system, can reach faster response and better energy-saving ability.
- Special fruit crates machine is tested according to GB/T30200-2013 standardization.
- Energy consumption $\leq 0.4\text{kw.h/kg}$, level as 1.

Technical Data

DESCRIPTION	UNIT	BL400EKH	BL450EKH	BL530EKH
International specification		C2400	C3100	C4000
Screw specifications		Special	Special	Special
Screw diameter	mm	85	95	100
Screw ratio		21.0	21.0	21.0
Theoretical injection capacity	cm ³	2042	2692	3454
Shot weight(PS)	g	2185	2881	3696
	oz	77.2	101.8	130.6
Max. injection rate into air	cm ³ /s	784	1013	1240
Max. injection rate into air	g/s	839	1084	1327
Injection pressure	Mpa	120	118	121
Injection stroke	mm	360	380	440
Max. injection speed	mm/s	138	143	158
Max. screw speed	r/min	164	168	175
Sys. pressure	Mpa	18.0	18.0	18
Pump motor(min~max)	kW	47.2~50.7	60.5~65	75.1~81.8
Heater power	kW	26.85	29.2	32
Number of temp. control zones		4+1	4+1	5+1
Clamping force	kN/t	4000	4500	5300
Opening stroke	mm	660	750	850
Space between tie bar	mm x mm	710×660	760×710	860×800
Min. mould height	mm	250	330	330
Max. mould height	mm	710	780	850
Max. Daylight	mm	1370	1530	1700
Ejector stroke	mm	190	210	210
Ejector force forward	kN/t	123	123	123
Ejector force back	kN	82	82	82
Number of ejector bar	PC	13	13	13
Hopper capacity	kg	50	50	100
Oil tank capacity	L	375	430	600
Machine dimensions(L×W×H)	m x m x m	7.3x1.8x2.5	8.2x1.9x2.6	8.7x2.1x2.9

1: According to GB/T30200-2013 standard, PP material

2: Its a theoretical calculation value