



# SELECT²

175 ▶ 400 T.

ALL-ELECTRIC INJECTION  
MOLDING MACHINE







## SELECT<sup>2</sup> HIGH EFFICIENCY FOR EVERY CHALLENGE

*BILLION introduces SELECT<sup>2</sup>,  
a new generation of electric injection molding machines.*

The range responds to all market requirements. Configured for fast cycle production, perfectly matching the performance needs of packaging, cosmetics and medical applications, SELECT<sup>2</sup> is also designed for technical components, such as those in automotive, electronics or homeware sectors.

SELECT<sup>2</sup> is available in both single and twin-shot versions, and is well suited to overmolding and sandwich technologies.



ROBUSTNESS



ENERGY SAVINGS



MODULARITY

### KEY FEATURES

- › Extra-large Space between tie bars
- › Fast cycling capability as standard
- › Strong mechanical construction
- › Cross ejection plate (vertical and horizontal) to suit a wide variety of molds
- › Energy chains on clamp and injection units for support of moving cable loops
- › Generous space inside clamp unit guarding: Optimized layout for mold service connections.
- › General design making maintenance operations easier
- › Easyturn compatible
- › High productivity assured by the DIXIT control system



PERFORMANCE



RELIABILITY



CLEANLINESS

## SELECT<sup>2</sup> THE PERFECT MACHINE CHOICE

Select<sup>2</sup> new clamping unit design with optimized mechanical specifications provides the heavy load capacity for large and bulky molds.

Dependent on clamping force, the range implements all-electric or hybrid technologies. The optimal drive sizing and combined technology provide optimum performance and economy.

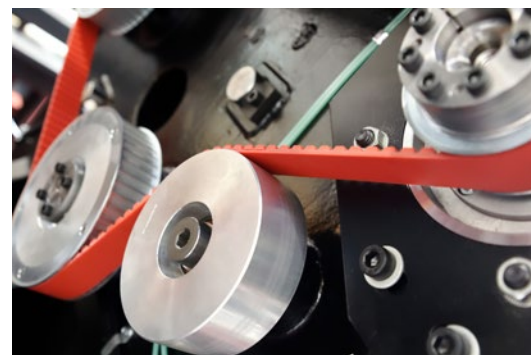
SELECT<sup>2</sup> is equipped with the latest generation DIXIT control system, as intuitive and reliable as ever.



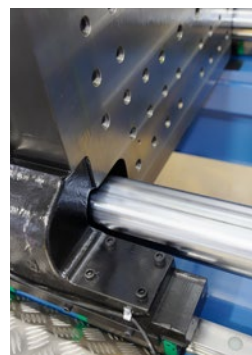


## HUGE CAPACITY ROBUSTNESS...

Extra large platens for the most demanding molds with extreme specifications. Robust chassis for mold protection and durability. Reduced mold maintenance for linear wear.



⌚ REINFORCED EJECTOR BELT GUIDANCE FOR HIGH LOAD RESISTANCE.



⌚ LINEAR GUIDANCE OF MOVING PLATEN



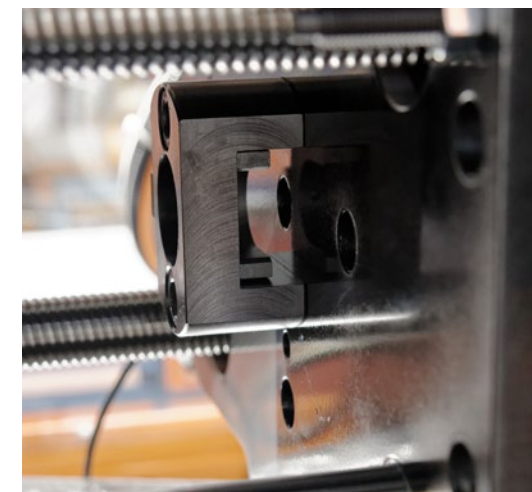
⌚ VERSATILE CROSS PLATE EJECTION SYSTEM

Robust well-balanced ejection guidance for precise and repeatable ejection functions. **Process stability:** High accuracy for robot demoulding, perfectly suited to multi-cavity applications (e.g. Closures).

## HUGE CAPACITY ... AND RELIABILITY

### ⌚ AUTO-ADJUSTMENT OF CLAMPING FORCE

Continuous measurement and self-adjustment of clamping force = Consistent clamping force cycle after cycle and reliable mold safety.



⌚ RAPID MECHANICAL EJECTION COUPLING



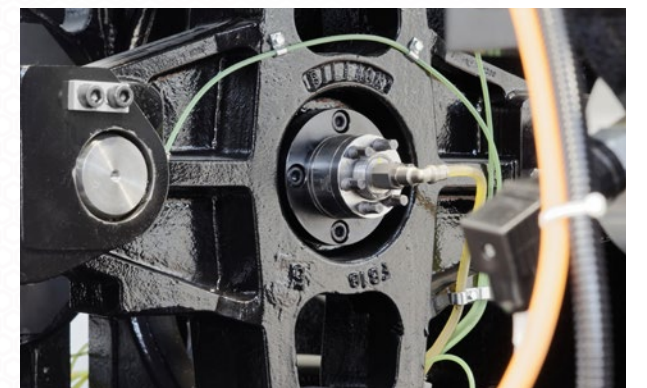
SELECT<sup>2</sup>

⊕ BALL SCREW  
FOR OPENING/CLOSING MOVEMENTS

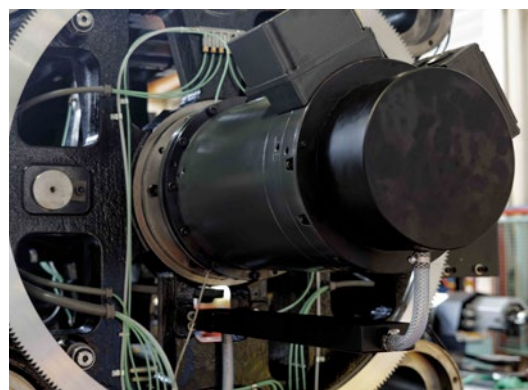
SELECT<sup>2</sup>

## INCREASED PERFORMANCE & PRECISION

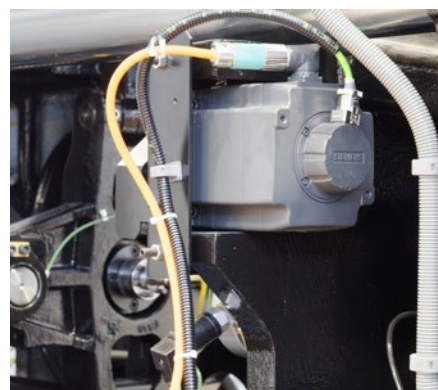
All-electric clamp unit : Fully equipped with high precision independent synchronous motors linked to dedicated inverter drives – Robust ball screw transmission for durability and high speed movements.



⊕ CONTINUOUS OIL LUBRICATION  
IN THE BALL SCREW



⊕ TOGGLE DRIVE ASSURED BY  
SYNCHRONOUS SERVO-MOTOR FOR  
ENERGY REGENERATION



⊕ SYNCHRONOUS SERVO-MOTOR  
PILOTING EJECTION MOVEMENT

SELECT<sup>2</sup>  
SPRINT<sup>2</sup>

### SPRINT OPTION:

SELECT<sup>2</sup> Sprint version featuring reinforced ball screw with continuous closed loop, cooled lubrication system for arduous packaging applications (fastest cycles) .





## MINIMUM CONSUMPTION MAXIMUM EFFICIENCY

On SELECT<sup>2</sup> machines, energy is used only when and where needed.

The injection function is the most demanding within the overall machine cycle in terms of instantaneous power requirement.

BILLION offers two alternative technologies for this function: either all-electric or hybrid.

### ALL-ELECTRIC INJECTION FUNCTIONS

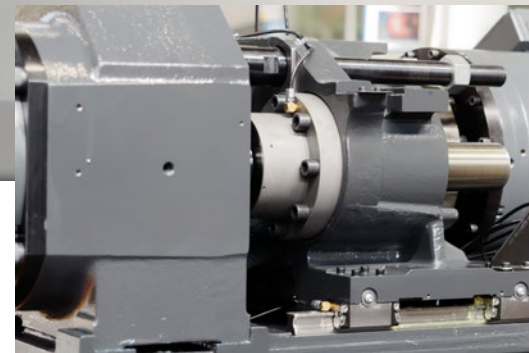
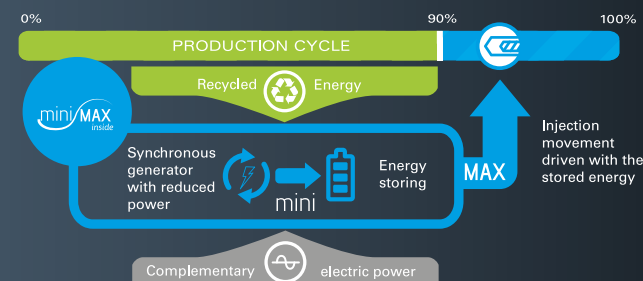
Billion utilises fully electric solutions with synchronous motors and planetary roller screws for injection functions.



### HYBRID INJECTION FUNCTIONS

For hybrid injection functions, Billion has developed the MiniMAX system as new solution on larger injection units. In this case, injection carriage and injection are hydraulically driven, whereas screw rotation remains electrically driven.

A mini synchronous generator recycles the kinetic energy produced by the machine, topped up with complementary power from the network. The energy produced is progressively stored throughout the cycle and then released at the start of injection to provide MAXimal instantaneous power. The energy source can also be used for core pulling movement, often required on this type of machine.



⌚ INJECTION ROLLER SCREW

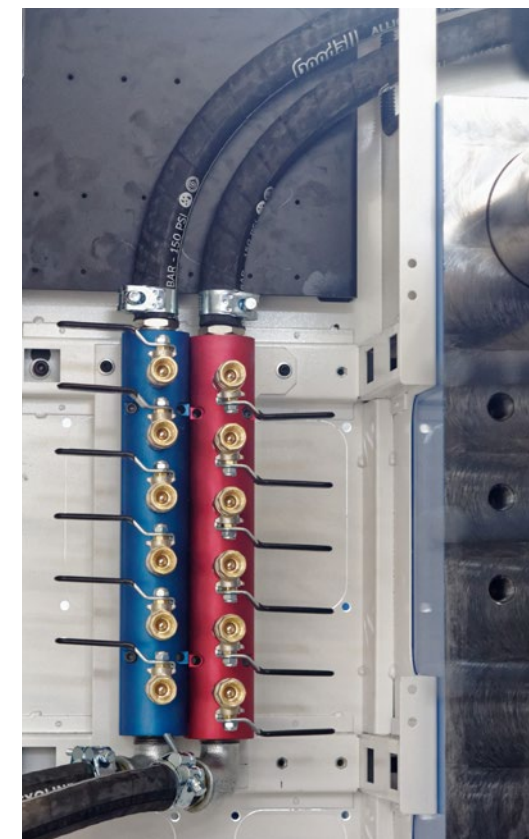
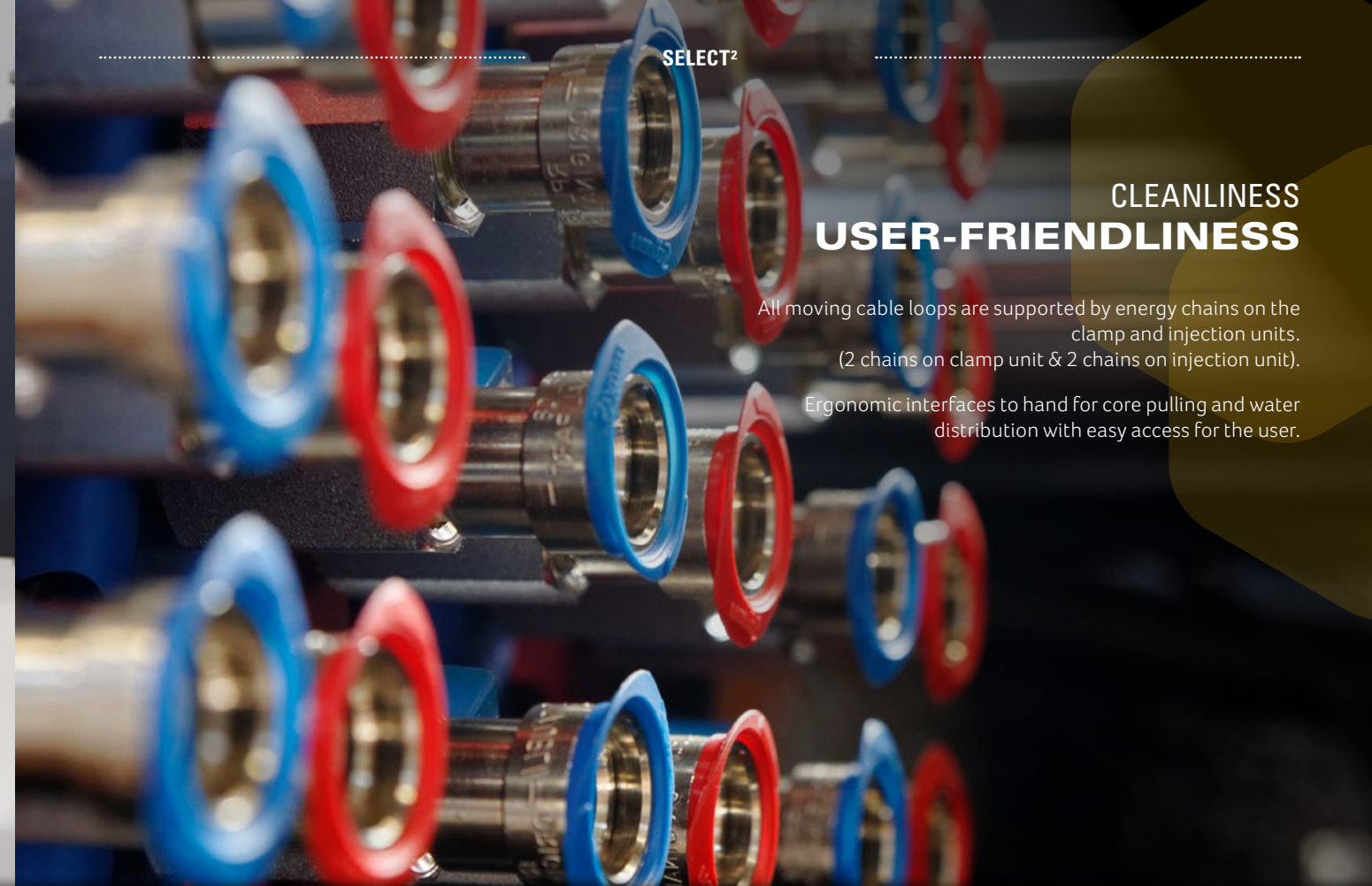
⌚ INJECTION CARRIAGE CYLINDER



## CLEANLINESS USER-FRIENDLINESS

All moving cable loops are supported by energy chains on the clamp and injection units.  
(2 chains on clamp unit & 2 chains on injection unit).

Ergonomic interfaces to hand for core pulling and water distribution with easy access for the user.



Much care has been applied on SELECT<sup>2</sup> machine range to match processor's needs in terms of cleanliness, in particular in the molding area.

The range is compatible with dedicated clean room environments.





## SMART PRODUCTION WITH DIXIT CONTROL SYSTEM

Outstanding freedom! DIXIT control system is powerful, user-friendly and intuitive.

Totally FREE programming for core pulling sequences.

Unlimited functionality for the most demanding molds and applications.

Equipped with DIXIT featuring EASYPACK, SELECT<sup>2</sup> is ready for success.

## INCREASED PRODUCTIVITY THROUGH MACHINE INTELLIGENCE

**EASYPACK**: 4 FEATURES TO IMPROVE YOUR PRODUCTIVITY

### EASY PACK

#### EASY flow

##### EASYFLOW

Profiling of clamping force over 5 independent steps according to screw position

- Stress free progressive filling
- Improved product aspect
- Cycle time saving
- Reduced clamping force requirement

#### EASY filling

##### EASYFILLING\*

**Multi-cavity mold balance** optimized during the transition between injection filling and hold phases.

Molding flash, shorts and split line wear controlled: reduced rejects and improved product quality.

#### EASY control

##### EASYCONTROL

Change over and holding pressures are automatically compensated, according to material viscosity in real time.

- Process stabilization
- Reduced rejects
- Increased efficiency
- Improved product quality

*EasyControl is a perfect solution for processing recycled polymers.*

#### EASY purge

##### EASYPURGE

Automatic purge of barrel and hot runner system

- Reduction of rejects
- Production changes optimized
- Stabilized process

\* Only available on all-electric injection units

## SMART PRODUCTION & HIGH TRACEABILITY

You need reliability and transparency for production management? You are interested in unlimited traceability? In the spirit of INDUSTRY 4.0, BILLION provides the answer. EASYCONNECT PRO dialogue & EUROMAP 63 communication protocol are available on SELECT<sup>2</sup>.



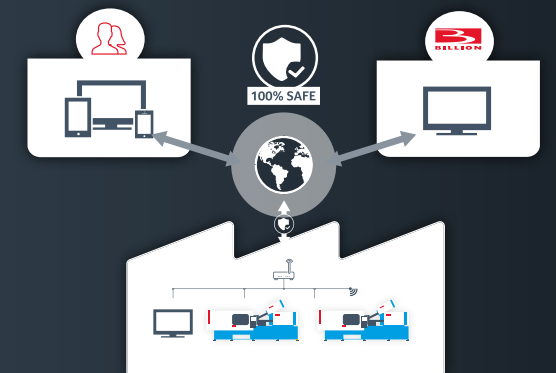
### EASYCONNECT, YOUR PRODUCTION CONNECTED 24H / 24

SELECT<sup>2</sup> machines can be integrated to your IT network via cable Ethernet or Wi-Fi. Action your production controls and data centrally within the factory or worldwide via remote access:

- Request machine and production data remotely
- Read Dixit settings pages via your PC, Smartphone or Tablet
- Download files directly from the injection molding machine to your chosen destination

### REMOTE MAINTENANCE WITH EASYCONNECT PRO

- Allow remote access for a Billion technician to optimize fault diagnosis time or process advice
- Modify settings remotely
- Software upgrades







- › INJECTION MOLDING MACHINES 40T-1 100T
- › ELECTRIC, HYDRAULIC AND HYBRID RANGES
- › MULTI-INJECTION SPECIALIST
- › MAJOR CONTRIBUTOR FOR EUROPE AND WORLDWIDE
- › CERTIFIED NORM ISO 9001

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