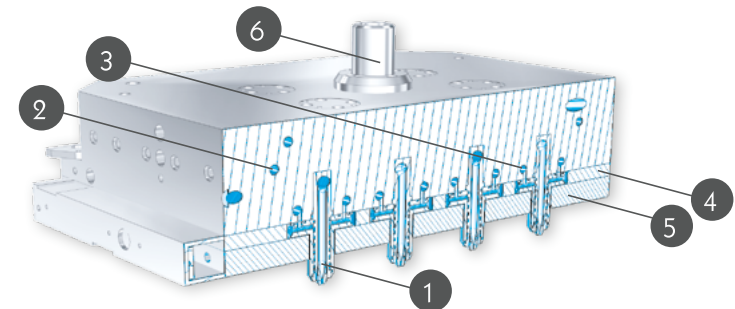


# COLD RUNNER BLOCK



The "Cold Runner Block" systems, also called "CRB", are used in injection molding processes to feed the compound as close as possible to the cavity by limiting so far the formation of runners or sprues.

## THE MAJOR COMPONENTS OF THE COLD RUNNER BLOCK

### 1 THE SMALL NOZZLES

The small floating nozzles ensure the tightness of the mold under best conditions. The compound pressure acts on the small nozzle piston, thus leading to a vertical self-adjustment of each small nozzle versus the mold.

### 2 TEMPERATURE CONTROL OF THE UPPER PART OF THE CRB

The oil circuit, which is divided into two parallel circuits is used:

- To hold the CRB at optimized and homogeneous temperature.
- For the fast cooling of the CRB.

### 3 TEMPERATURE CONTROL OF THE SMALL NOZZLE BODIES

The small nozzles are connected in parallel and fed through bores, which are located in the lower part of the CRB.

### 4 THE INSULATION STUDS

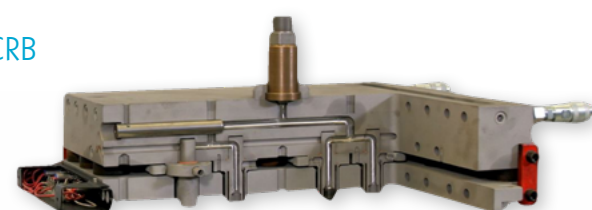
The insulating studs between the heater plate and the CRB maintain dependable thermal insulation thanks to the empty spaces generated between these two components.

### 5 THE HEATER PLATE

The heater plate uses the same technology as the press. A quick unhooking system is included for easy access to the small nozzles when necessary (operator intervention, disassembly, purge, etc.).

### 6 THE DECOMPRESSION NOZZLE ON THE INJECTION UNIT

The decompression nozzle prevents the compound from running during stripping.



## SHUT-OFF CRB

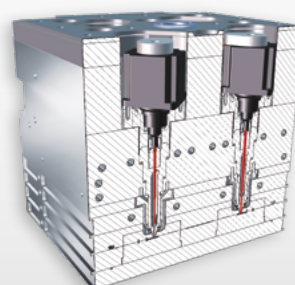
The principle consists in getting the small nozzle end as close as possible to the part and to block using a shut-off valve.

### BENEFITS:

- No runners (the compound is directly fed into the part) and therefore no compound loss.
- Enhanced automation as there are no runners to evacuate.
- Possibility to have a sequential opening for each small nozzle.

### POSSIBLE MOVEMENT OF THE SHUT-OFF VALVES THROUGH:

- The press ejectors.
- Pneumatic energizing.
- Hydraulic energizing.
- Electrical energizing. **REP offers a tool solution called ServoBloc: The electrically controlled shut-off CRB.**



ServoBloc



# TurboCure® A TWIN SOLUTION FOR MAXIMUM PERFORMANCE

## TemplInverter®

Built-in in the injection unit, TemplInverter® homogenizes the temperature of the compound by inverting the thermal breakdown in the rubber flow. This unique technology is used to achieve reduced curing time regardless of the mold installed on the press (without modifying the mold).

UP TO 60% SAVINGS IN THE CURING TIME FOR HIGHER QUALITY

SAVINGS IN REDUCED CURING TIME



Anti-vibration mount  
- 40 %



Shock absorber  
- 42 %



Grommet  
- 40 %



Seal  
- 63 %

## FillBalancer®

Inside the mold, FillBalancer® rebalances the filling and temperature between the cavities (can be installed on existing molds).



### ADVANTAGES

- Reduced curing time
- Reduced injection time
- Improved compound flow ability
- Reduced risk of pre-curing
- Improved balancing between cavities
- Improved physical properties of the parts

- Improved bonding on metal inserts
- Reduced flashes
- Reduced energy consumption
- Reduced manual operations
- Reduced scrap rates
- Improved capability



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# ADVANCED TOOLING SOLUTIONS

# PROCESS

OPEN-ENDED - PRECISE - FLEXIBLE - MODULAR - RELIABLE



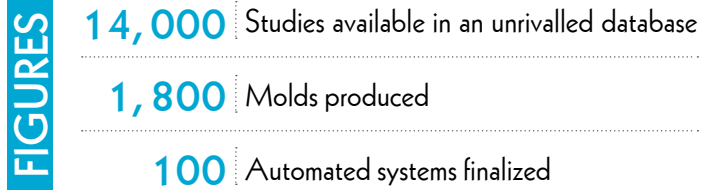
RUBBER  
IN MOTION

RUBBER  
IN MOTION



VALUE-GENERATING  
INNOVATING SOLUTIONS

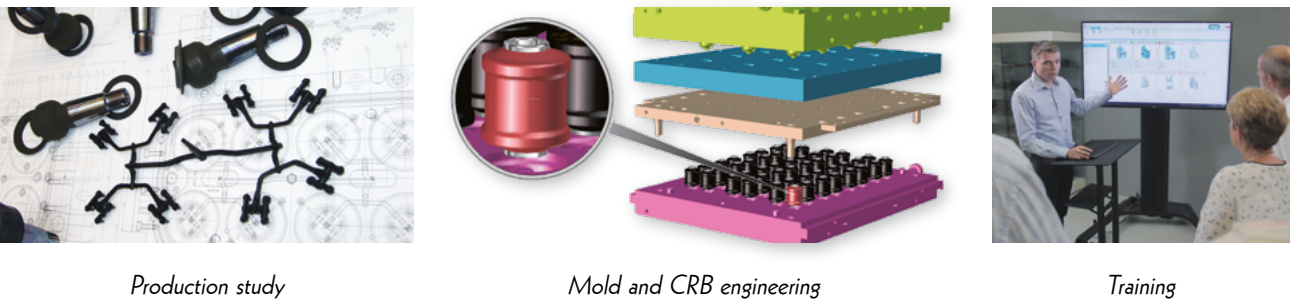
Thanks to their technical expertise, REP is able to perform projects, which optimize the customer's productivity in any industrial field. REP's teams share their experience and advice throughout the project for the development of pertinent solutions.



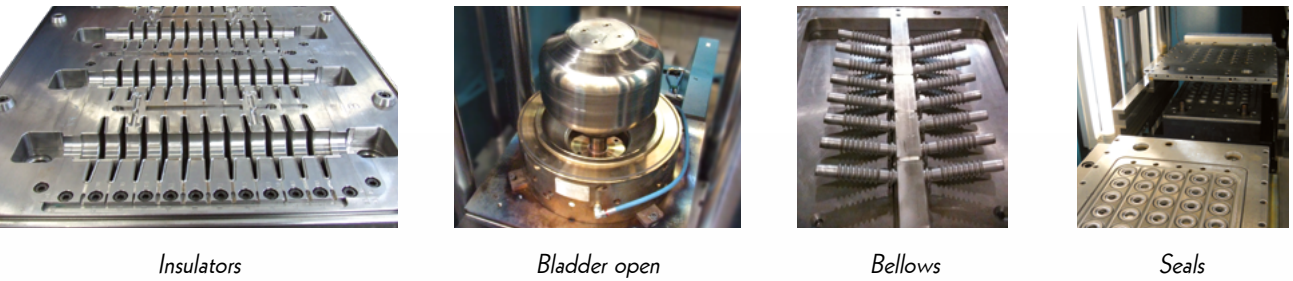
"We focus on continuous innovation for profitable performance of our customers"



PROCESS ENGINEERING, DEVELOPMENT & CONSULTING



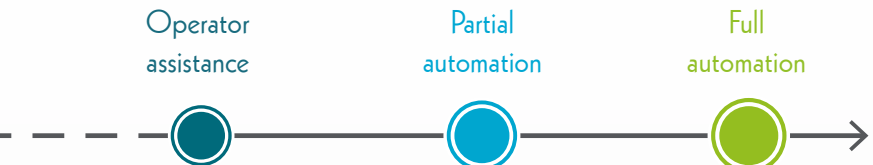
MOLD AND CRB SOLUTIONS



AUTOMATION

REP also innovates in the field of processes dedicated to tailor-made projects for fully automated production.

DEGREES OF AUTOMATION :



Release agent spraying and/or mold cleaning



APPLICATIONS ON SPECIFIC PRESSES

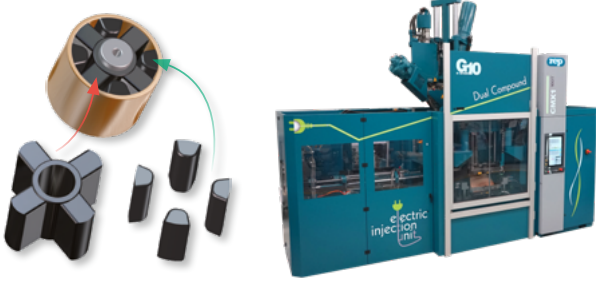


BLADDERS

- FROM V810 TO S22 AND ABOVE
- Press range for bladders from 8,000 to 22,000kN.
  - Injection volume up to 25 liters in the standard version.
  - Increased mold height and opening stroke.
  - Central ejector.
  - Core heating system through steam, hydraulic or electrical unit.

TWO-COMPONENT PARTS

- ON THE WHOLE RANGE, INCLUDING CMX
- Simultaneous or delayed compound injection.
  - Injection into the same cavity or into separate cavities.
  - Injection unit at the top, in the rear or on the side.
  - Double circuit CRB.

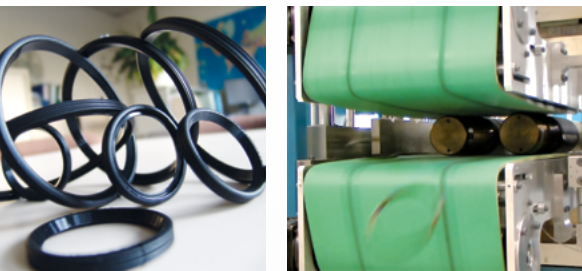


INSULATORS

- FROM V510 TO S24 L100
- Silicone or EPDM.
  - Possible molding of large insulators even on small presses thanks to a step-by-step method with CRB.
  - Possibility to have several injection units for increased injection volumes.

PIPE SEALS

- ON V510 / V710
- Specific kit for the automatic stripping of seals.
  - Electrical translation of the cores to the backside and simultaneous rotation of two belts for the sequential stripping of the pipe seals.



FLAT GASKETS

- ON S01 / S03 / S05 / S06
- Large-sized platens, larger than deeper for improved ergonomics.
  - Double-plate kit.

INSPECTION WINDOW GASKETS

- ON V710 / V810
- Single or double deck mold.
  - Increased opening stroke thanks to the extended columns.
  - Pre-arrangement for an ancillary movement (jaws or sliding motion for parts stripping purposes).
  - Special cycle.



"And various other realizations!"

