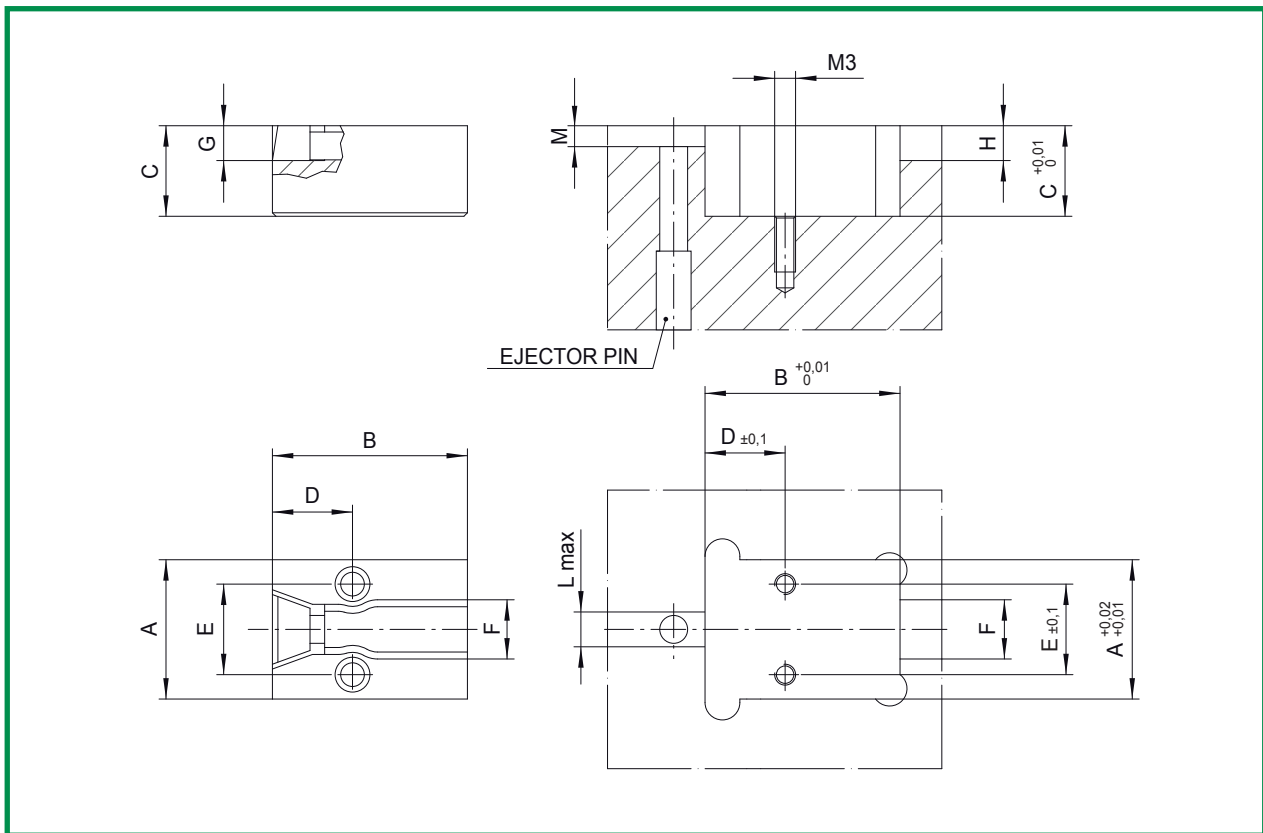


CODE: **EB**



SAITO MOLD Mfg.co.ltd  
Patented system



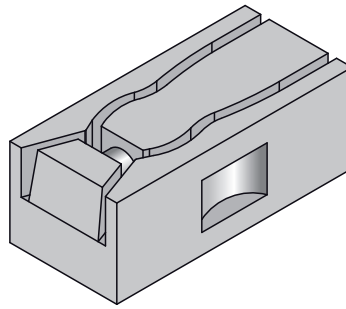
CODE	A	B	C	D	E	F	G	H	L	M
EB	20	28,0	13,0	11,5	13	8,5	5	5	5	4

Mat.: AISI 420B  
Hardness: 50+52 HRC

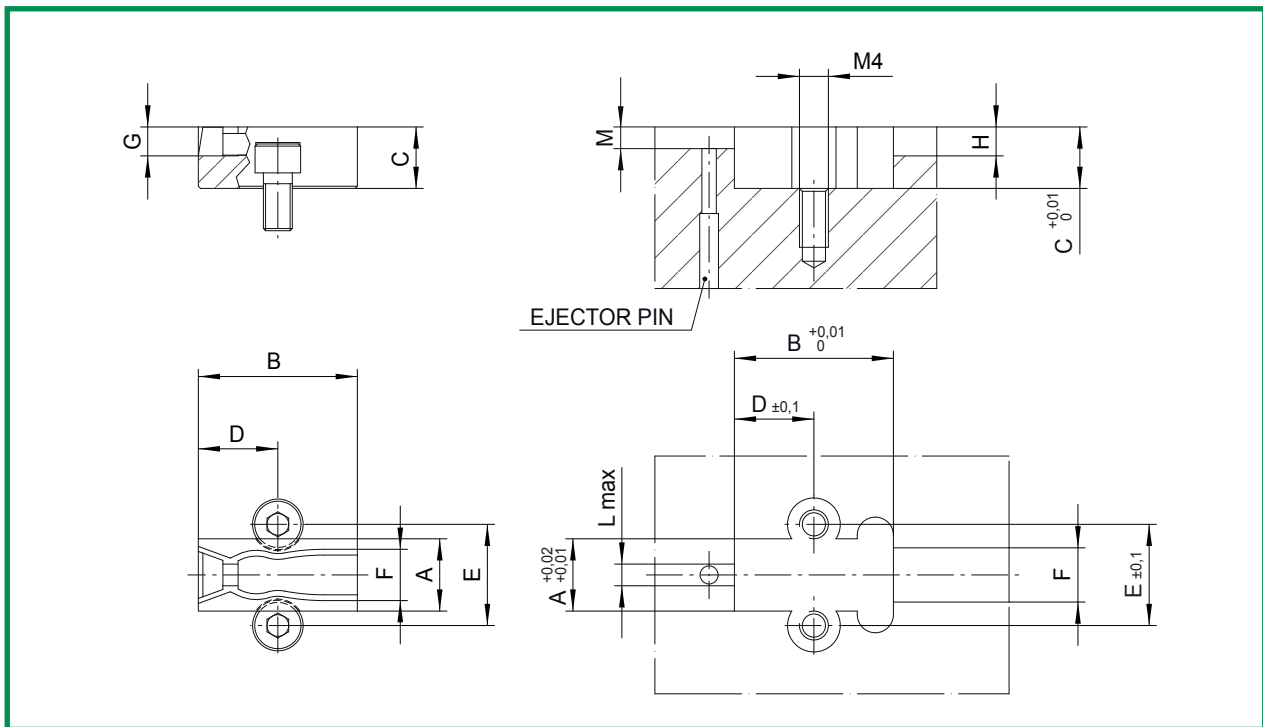
## CHARACTERISTICS

- 1) COMPLETE GAS RELEASE;
- 2) IMPROVEMENT OF THE AESTHETIC CHARACTERISTICS OF THE PART;
- 3) INJECTION PRESSURE DRAMATICALLY REDUCED;
- 4) EASY TO REMOVE AND EASY MAINTENANCE.

# ECOVENT GAS VENTING SYSTEM



CODE: **EB-MINI**



SAITO MOLD Mfg.co.ltd  
Patented system



CODE	A	B	C	D	E	F	G	H	L	M
EB-MINI	10	22,0	8,5	11	14	7,5	4	4	3	3

Mat.: AISI 420B  
Hardness: 50÷52 HRC

## CHARACTERISTICS

- 1) COMPLETE GAS RELEASE;
- 2) IMPROVEMENT OF THE AESTHETIC CHARACTERISTICS OF THE PART;
- 3) INJECTION PRESSURE DRAMATICALLY REDUCED;
- 4) EASY TO REMOVE AND EASY MAINTENANCE.

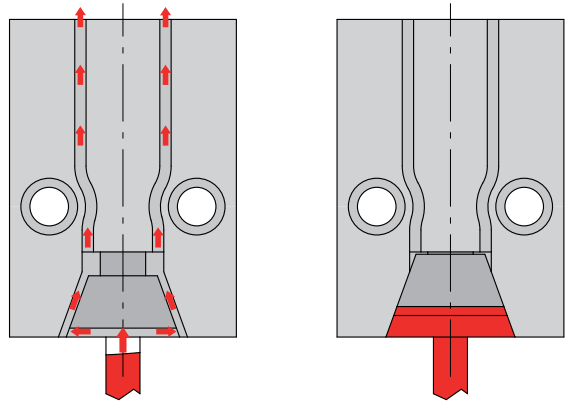
Venting issues produce bad quality parts and can also put the mould itself at risk. Voids, bubbles, short shots and surface defects such as blemishes or burn marks produce rejected parts and dramatically reduce the mould profitability .

ECOVENT is an innovative solution able to solve the most familiar effects of poor venting and to reduce the maintenance of venting grooves and channels.

ECOVENT is based on a simple mechanical system that allows the gas to escape from a venting window a few square millimeter wide that automatically closes down under plastic flow front pressure. As a consequence the pressure inside the cavity decreases significantly allowing to modify the injection parameters and optimize the filling pattern. ECOVENT can be applied at last filling point or at runner side according to part design and aesthetic demands. Application on runner allows anyway a pressure decrease: according to Bernoulli's principle an increase in the speed of the fluid occurs simultaneously with a decrease in pressure. With the application of ECOVENT the speed of gas flowing into the runner increases causing a pressure drop, the pressure gradient between runner and cavity intakes the gas from the cavity into the runner and outside of the mould through ECOVENT.

## WORKING SYSTEM

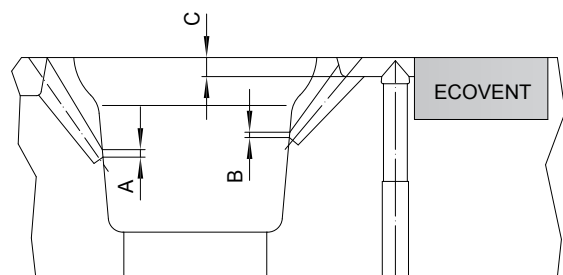
During the injection process the spring keeps the slider in "OPEN POSITION" allowing the gas to pour out through the proper channels. When the flow front reaches ECOVENT the slider moves back under plastic pressure and closes the gas venting channels. ECOVENT working system is not based on the over flow concept, the small mark called "TAB" is a kind of certification that the gas has been completely released.



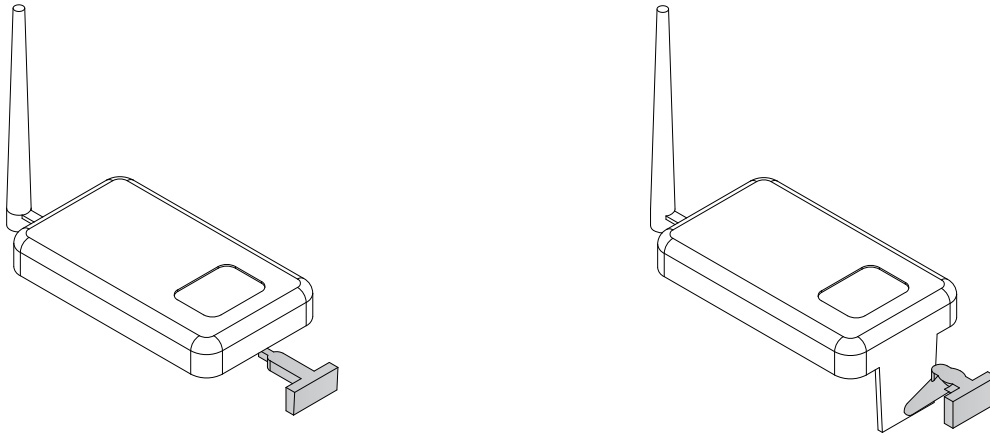
## APPLICATION EXAMPLE

ECOVENT can be connected to last filling point of the cavity with a "submarine" channel. With such a design it is possible to automatically cut the connecting channel during the ejection of the injected part.

The dimension of the venting hole "B" has to be as big as possible in order to help the gas venting.



## APPLICATION AT LAST FILLING POINT

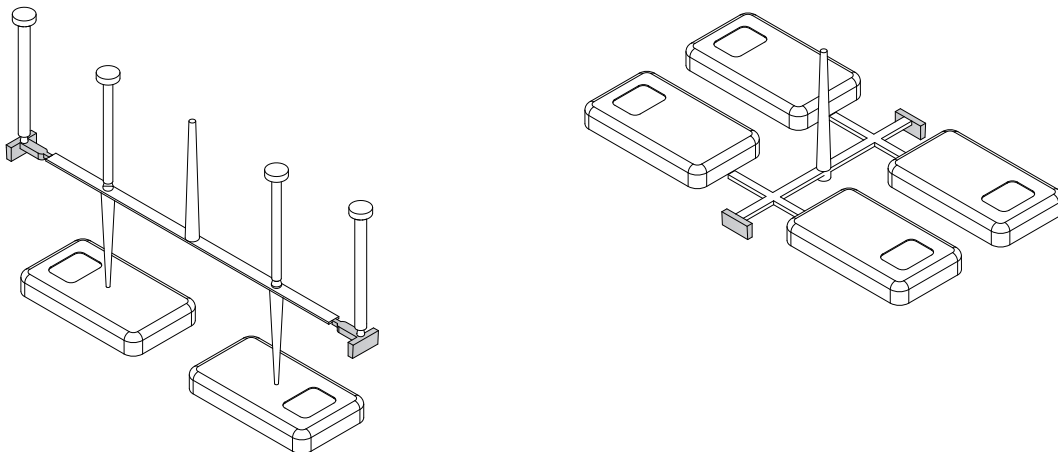


During the filling phase the plastic flow front pushes air and gases contained in the cavity trough ECOVENT where a big gas vent channel is open. In such a condition the plastic fills the cavity with a very low backpressure and the injection pressure decreases accordingly.

The main positive outcomes are:

- In cavity pressure dramatically reduced
- Part quality improvement
- Extended mold maintenance frequency

## APPLICATION AT RUNNER SIDE



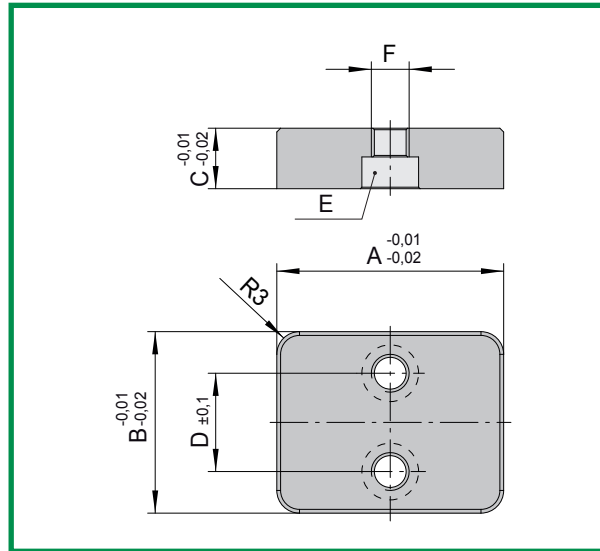
With ECOVENT application a big gas venting area is set up at the end of the runner that allows the gases produced during the melting process to flow through the system instead of flowing into the cavity.

Moreover it avoids to compress the air contained into the sprue and runner into the cavity and, according to Bernoulli's principle, it is possible to extract air from the cavity itself

The main positive outcomes are:

- Extended mold maintenance frequency
- Part quality improvement
- Reduced in cavity pressure

# PLATE FOR ECOVENT

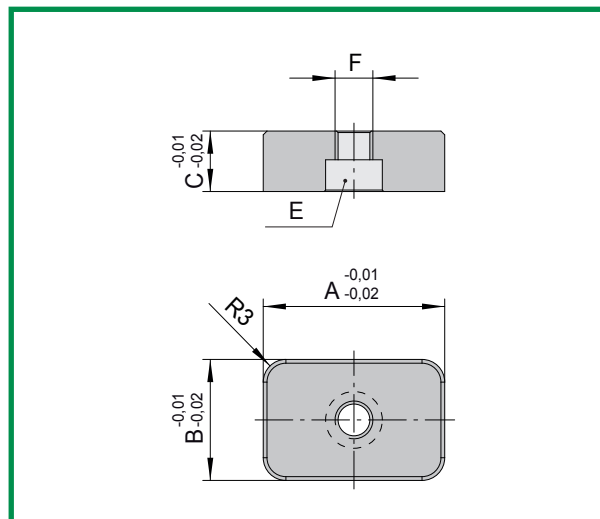


CODE: **EB-P**

CODE	A	B	C	D	E	F
EB-P	30	24	8	13	M4	M5

Mat.: AISI 420B Hardness: 50-52 HRC

# PLATE ECOVENT MINI



CODE: **EB MINI-P**

CODE	A	B	C	E	F
EB MINI-P	24	16	8	M4	M5

Mat.: AISI 420B Hardness: 50-52 HRC

**ECOVENT PLATE APPLICATION**

The slider housed in the ECOVENT valve is designed to be a few hundredths of a millimeter lower than the parting line. This gap allows the slider to move back when the plastic reaches the valve.

During the production process the mechanical stress can lead to a restrike of the parting line. This modification of the surface could close the gap between the parting line and the slider preventing the correct operation of the valve.

This problem is most likely to happen in big molds with not hardened cavity.

ECOVENT plate dramatically reduces the above described problems and allows for an easy restoration if necessary.

