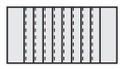
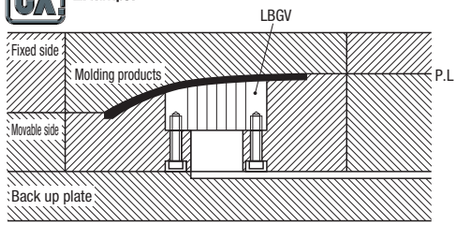
Cavity Inserts for Gas Release Overview

■ Cavity Inserts for Gas Release List

Shape type	Shape	Size lineup	Material	Part Number	Characteristics
Harmonica		A (Length): 100 B (Width): 70 to 100 T (Height): 60 to 120	SUS420J2 or equivalent	LBGV—X	A product for large molds with excellent corrosion resistance. Suitable for use with super engineering plastics and engineering plastics.
		A (Length): 40,80 B (Width): 40 to 80 T (Height): 12 to 80	S50C	BGV	A product for medium-sized or smaller molds. Also suitable for use with general-purpose resin.
Round shape		D (Diameter): 6, 8, 10 L (Length): 10, 12, 15	SUS440C	BGVS	Excellent corrosion resistance, releasing gas from the round outer slit.

● Harmonica Shape Overview

Example



■ Features

- A specific number of plates given gas release groove (S) processing is combined to make a gas release cavity insert block. (Figure 1)
- Clogged resin or tar can easily be removed by removing the fixing bolt (MSB) and disassembling during maintenance.
- Gas as well as air is released from the 0.03 or 0.05mm groove, lowering flow resistance and facilitating molding.
- The vent surface can be processed to suit the shape of finished products. (See Example)
- Effective in releasing gas during mold processing in medium to large size molds.

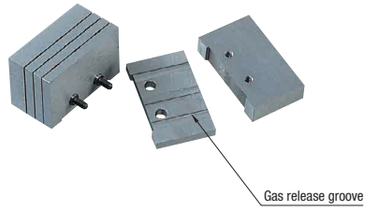
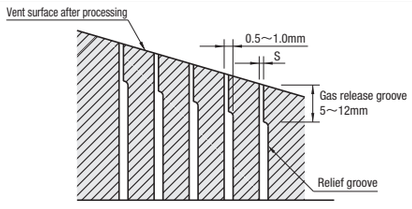
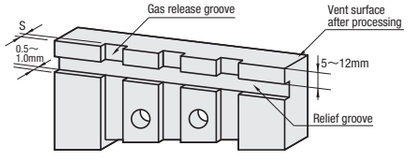


Fig.1



Example 1. Machining a relief groove on existing gas release groove.



Example 2. Machining a relief groove on each plate parallel to the vent surface.

Fig.2: Cavity Inserts for Gas Release Example of relief groove addition

■ How to Mount

1. Insert where gas is apt to collect such as final filling section.
2. Process the vent surface to suit product type as necessary.
3. We recommend the addition of a relief groove in order to decrease resin clogging in the gas release groove. Ideally, a relief groove should be added by alteration of approximately 0.5 to 1.0 mm thickness, leaving 5 to 12 mm of the gas release groove from the vent surface. (Figure 2)
4. A/B dimension tolerances are positive. Insert into mold by actual fitting process.
5. A tap hole is added on the bottom of the cavity insert. It is for fixing the insert. (See Example)

■ When Using

1. In BGV, groove thickness (S) can be selected. Select 0.03 for groove depth when resin has a high fluidity, and 0.05 when resin has a low fluidity.
2. Be sure to identify bolt hole and tap hole (BGV only) on the inside of the cavity insert in the blueprint when processing the vent surface, to avoid problems.
3. Note that tapering on the vent surface enlarges the groove area and may cause clogging.
4. Positioning should be carefully done since groove shapes may appear on the finished product depending on the groove depth and the kind of resin.
5. This product achieves dimensional precision by performing the final machining in the shape of a block which is a combination of plates with gas release grooves. Be sure to reassemble in original order if you happen to disassemble it. You can identify the correct order by the diagonal 0.1 mm depth V groove on the bottom of the insert. Slight imbalance may occur due to precision error in shoulder bolt and hole. Thus assembly should be done on a flat surface with dimension fitting.
6. Each plate for BGV is raw material. Note that it will be damaged if struck with a hard object.

● Round Shape Overview

···›Refer to BGVS's page

New

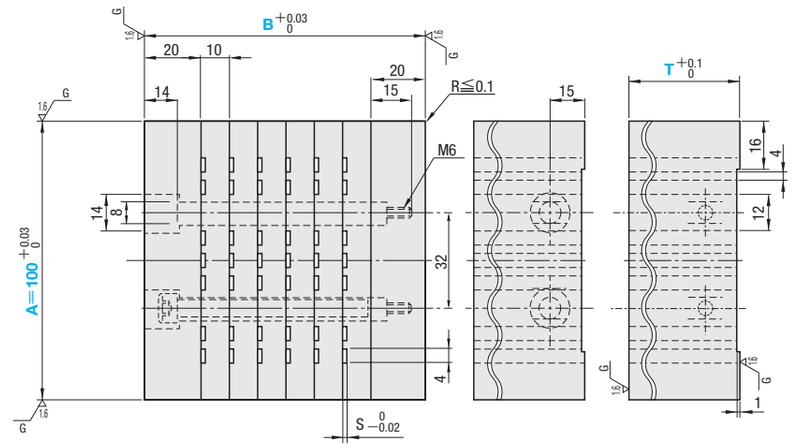
SUS420J2 or equivalent

Cavity Inserts for Gas Release

Harmonica Shape Large

LBGV—X

Part Number	Material	Hardness	Accessories	Precision Standard
LBGV—X	SUS420J2 or equivalent	31～35HRC	Shoulder bolts (MSB) 2 pcs	Squareness for A/B surfaces 0.02 mm or less for 100 mm Parallel accuracy of upper and lower surfaces 0.02 mm or less for 100 mm



Number of plates	Number of grooves	Supplied bolts	S	Part Number Type	Part Number A	B	T
5	21	MSB8 — 40	0.03	LBGV—X	100	70	100 120
6	28	MSB8 — 50				80	
7	35	MSB8 — 60				90	
8	42	MSB8 — 70				100	

Order

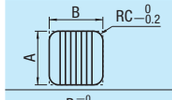
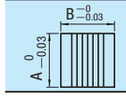
Part Number	B	T
LBGV—X100	100	100

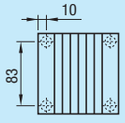
Days to Ship: Quotation

Alterations

Part Number	B	T	(RC/CMK/BC)
LBGV—X100	70	120	RC6—BC

Quotation

Alterations	Code	Details
	RC	R-chamfering at 4 corners on A/B surfaces with R≦0.1. RC (Selection): 6 10 12
	CMK	Changed tolerances of A dimension and B dimension. $A^{+0.03}_{0}$ ···› $A^{0}_{-0.03}$ $B^{+0.03}_{0}$ ···› $B^{0}_{-0.03}$

Alterations	Code	Details
	BC	Mounting tap hole machining Tapping mounting holes for fixing at four corners of A/B surfaces. Size: M8 Depth 15