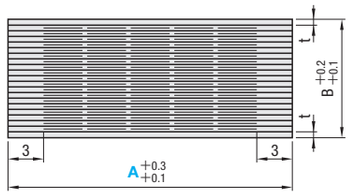
New Cavity Insert Blocks with Slit Vent

SGWD



* Gas Release Slit Width: 0.012 mm (guideline)

M Material SUS304C

t	B	T	Part Number	
			Type	A
0.5	5.5	5	SGWD	12
1	10	10		24

Order — Part Number: SGWD24

Days to Ship — Quotation

■ Precautions for Processing

(1) The four ⒶⒷ sides can be polished.
Abrasive residue from polishing entering the vent area may cause blockage.

(2) Wire cutting and electric discharge are the only available processing for the upper and lower surfaces of the slit.
This product is made of layered stainless steel material about 0.2 mm thick. Make sure the surface roughness is about 10 μm under the electric conditions for thin plates, since large sparks may be produced and clogging may occur under the conditions for thick plates.

■ How to Mount

(1) Square up four surfaces
Since right angles are not provided on the product sides (**Fig. 1** ⒶⒷ surfaces), perform squaring by grinding.
···› We recommend using additional processing KD.

(2) Processing of upper and lower slit surfaces (as needed)
To adjust the shape to match the product part, perform wire cutting or electric discharge on the **Fig. 1** upper and lower slit surfaces.

(3) Assembling into cavity core
Assembly methods include **1) press-fitting** and **2) flange + spacer**.
For the flange + spacer method, provide flange processing according to **Fig. 2**. Milling, wire cutting or grindstone polishing are possible.
···› When specifying additional machining FC, the product will be delivered with flange processing provided to the specified dimensions.

■ Maintenance Method

When the gas release effect weakens, wash with an organic solvent, etc. In addition, a vacuum generator (M-VCL, M-VCLH) can be used in combination to support the gas release.

Fig.1

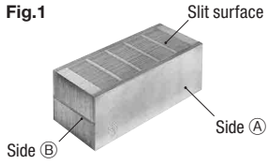
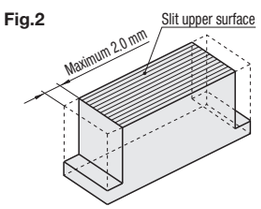
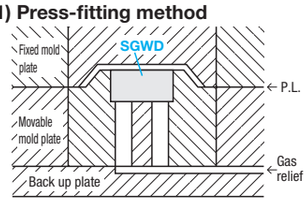


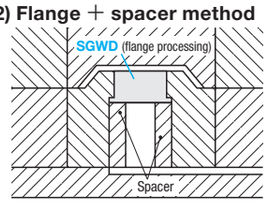
Fig.2



1) Press-fitting method

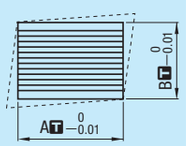


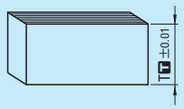
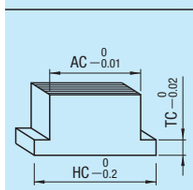
2) Flange + spacer method



Alterations — Part Number SGWD12 — KD (KD/FC/TK); SGWD24 — KD-FC-AC21-HC22.4-TC2.0-TK

Quotation

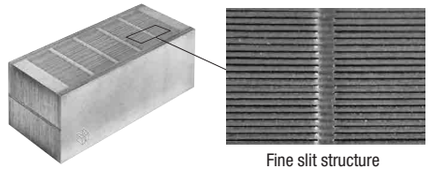
Alterations	Code	Details
	KD	Squaring Grinding on four surfaces excluding the upper and lower slit surfaces, and determination of dimensions A and B. A +0.3 +0.1 ···› A 0 −0.01 B +0.2 +0.1 ···› B 0 −0.01 Precision Standard Items / Standard values Squareness: b≦0.005 Parallelism: c≦0.01

Alterations	Code	Details
	TK	Height determination Processing upper and lower slit surfaces, and determination of dimension T. T +0.3 +0.1 ···› T±0.01 Must be used with KD
	FC	Flange processing Flange processing of dimensions A and B. Must be used with KD Designation method: FC-AC21-HC22.4-TC2.0 Range of designation A: 12, 24 / AC: 8 ~ 10, 20 ~ 22 / HC: 10 ~ 12, 22 ~ 24 / TC: 1 ~ 2.5, 2 ~ 5 Unit of designation: 0.1mm increments

The dimensional reference is with the flange + spacer method.
For the press-fitting method, adjust according to the hole tolerance.

■ Features

This part is used for gas release, with a fine slit structure made possible by diffusion bonding technology.
It is installed to release gas and residual air from the slit part (approx. 0.012 mm).
With multiple slits, it demonstrates high gas releasing performance.

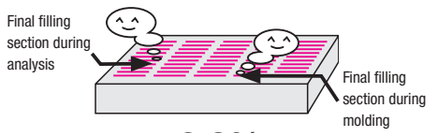


Fine slit structure

1 Vent is wide enough to handle final filling part misalignment as well

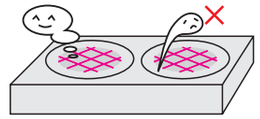
Since slits are arranged on the entire product part contact surface, it can also handle deviation of the final filling position due to minute fluctuations in molding conditions and differences in the resin lot. This greatly increases the efficiency of positioning during designing and condition setting during molding.

Cavity Insert Blocks with Slit Vent (SGWD24)



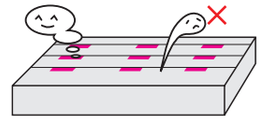
Vent area ratio **3.2%**

Slitted pin (Shaft diameter ϕ10×2 pcs)



0.45%

Harmonica cavity insert (Three slits of 0.01×4 mm per plate)

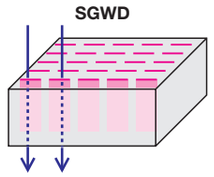


0.45%

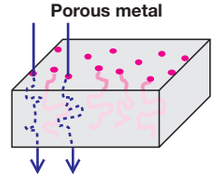
2 Linear passage makes resin clogging unlikely

Since the gas passage is linear, clogging of resin due to solidification of gas in the middle of the passage is reduced.
This reduces downtime due to maintenance and contributes to the efficiency of the molding cycle.

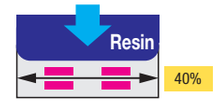
SGWD



Porous metal

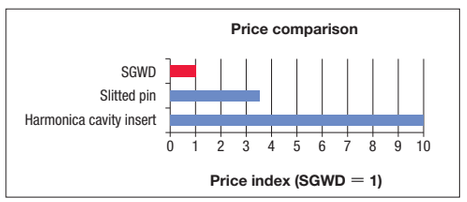


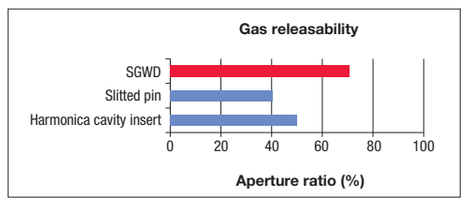
＊ What is an "aperture ratio"?
The vent width ratio in the direction perpendicular to the flow of resin.
The larger it is, the more easily gas is released



3 Equivalent or higher gas release effect at low cost

The installation costs are lower compared to other methods when releasing gas from the same area, and since the aperture ratio (＊) is high, it exhibits high gas releasing performance.





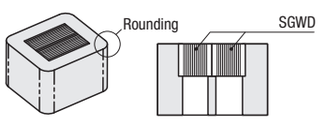
Guide to Cavity Insert Set

We'd like to try SGWD, but...

- ☑ Press-fitting into the mold must be avoided
- ☑ Processing before mounting is cumbersome
- ☑ Can it be implemented into mass production types?

Available with cavity insert installed.

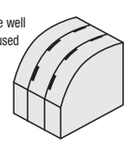
Product example:



＊ Other variations are available for dimension R and number of installed SGWDs.

Consult MiSUMi for custom production of gas releasing cavity inserts for replacement, matching the shape of the currently used cavity insert.

Gas doesn't release well with the currently used cavity insert...



SGWD cavity insert sets with the same outer frame dimensions and shape can be easily replaced.

＊ The shape height difference has production restrictions.