Gas generation suppressing screw

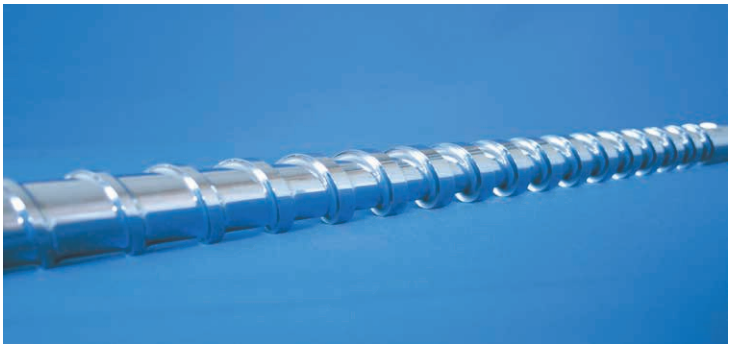
Screw Against Gas

SAG screw

Concept

Commonly applicable SAG screw reduces below-stated various gas-caused problems in injection molding, so that yield ratio in plastic molding can be improved.

- Molding defects : Silver, discoloring, burn, short shot, burr, etc.
- Harmful effect on mold : Smirch, vent clogging
  ⇒ Frequent maintenance is required.



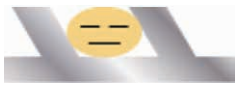
A single SAG screw can suppress gas generation.

Features

What you need is a SAG screw only.

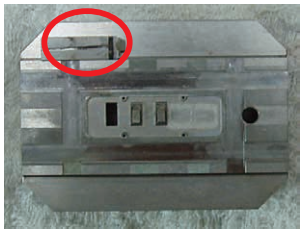
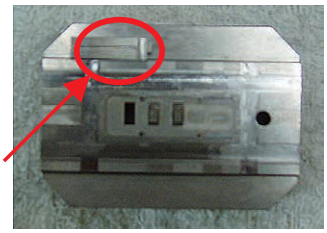
By reducing resin feeding volume and shearing heat during plasticizing, the SAG screw suppresses gas generation. With no special equipment required, what you need is only to replace a standard screw with the SAG screw.

※The performance varies depending on molding conditions.

	Compression zone	Feeding zone
Conventional screw	Shearing heat! 	
SAG screw		

Advantage

SAG screw makes a difference in mold smirch

	Conventional screw	SAG screw
Mold state after use for one month		
		 Reduced vent clogging
Mold maintenance cycle	Maintenance is required every other day.	**Maintenance is not required even after 90-day use.**

Combining vacuum hopper with SAG screw, de-gassing performance is improved further.

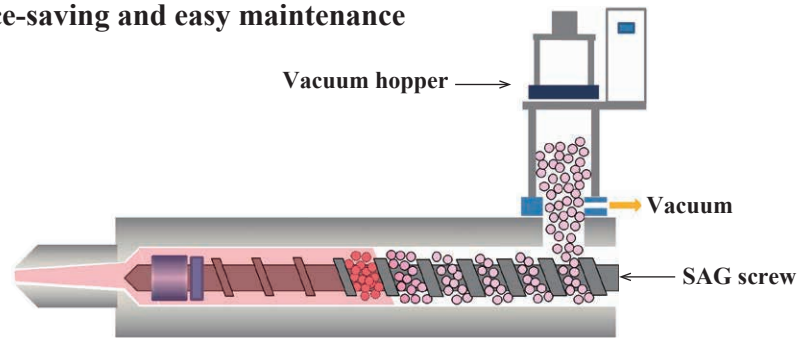
SAG+α Ⅱ

Concept

The newly developed vacuum hopper suctions low-boiling-point gases inevitably generated during plasticizing process, so that amount of such gases drawn into the mold can be reduced. Combining it with a gas generation suppressing SAG screw, the SAG＋αⅡ system greatly reduces gas-caused molding defects, resulting in improved productivity.

Features

- Feeder-less, single damper simple structure
- Condition setting and operation are made from screen on molding machine.
  （※This option is available in the Si-6 series.）
- Vacuum pump can be built-in in the molding machine (Option)
- Space-saving and easy maintenance



Conceptual scheme of SAG+α Ⅱ

Vacuum hopper
（SAG+α Ⅱ）

Advantage

- Mold maintenance cycle can be extended further.

Resin	Cycle time	Standard screw	SAG screw	SAG+α Ⅱ
PA66	16 sec	Mold maintenance required every 14 to 17 hours	Mold maintenance required every 32 – 42 hours	Mold maintenance not required for 65 to 90 hours.
PPA	34 sec	Mold maintenance required every 4 to 6 hours	Mold maintenance required every 72 hours	Mold maintenance not required for 275 hours or longer.

- Variation of drying condition is accommodated.

Standard screw

Lots of silvers

Resin : PC not processed with dryer

SAG-design screw suppresses gas generation and demonstrates high de-gassing performance.

SAG screw

Vacuum hopper vacuums up low boiling-point gases.

SAG+α Ⅱ

No silvers

※SAG+αⅡ requires a SAG screw and a vacuuming-applicable heat barrel in addition to the vacuum hopper.
※Products, resins and mold structures affect the performance of SAG＋αⅡ.