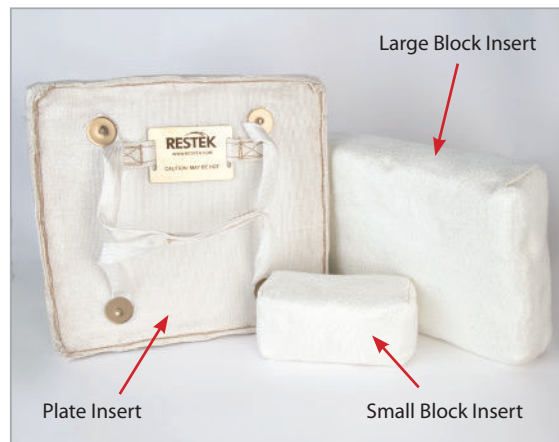# GC Accelerator Kit

cat.# 23849

The Restek GC Accelerator kit **(Figure 1)** reduces oven volume in Agilent 6890 and 7890 GCs equipped with mass spectrometers. This allows for faster oven ramp rates and quicker cool-down times, which means faster chromatographic methods can be developed. Existing methods can also be sped up by transferring them to scaled-down columns using the *EZ*GC method translator **(www.restek.com/ezgc)**. This free online tool calculates the ramp rates and other conditions that will produce an equivalent separation in less time. The maximum ramp rates attainable with the GC Accelerator kit are presented in **Table I**.

Figure 1: Components of the GC Accelerator Kit

Table I: Maximum Ramp Rates in an Agilent GC-MS Oven with and without GC Accelerator Inserts Installed

Temperature Range (˚C)	120 V Oven Ramp Rate (˚C/min)		>200 V Oven Ramp Rate (˚C/min)	
	Without GC Accelerator	With GC Accelerator	Without GC Accelerator	With GC Accelerator
50–70	75	**120**	120	120
70–115	45	**95**	95	120
115–175	40	**65**	65	110
175–300	30	**40**	45	70
300–350*	20	**30**	35	65

* Agilent ovens are programmable to 450 ˚C, but this product was only tested to a maximum operating temperature of 350 ˚C. Prior to analysis, confirm the analytical column can withstand the temperatures and ramp rates you plan to use.

Restrictions

The Restek GC Accelerator kit has been designed specifically to work with Agilent 6890 and 7890 GCs equipped with mass spectrometers.

The Accelerator will fit in GCs equipped with other detectors mounted in either the front or back positions of the GC, although the only recommended use is with a front or back installed inlet and a mass spectrometer.

The presence of certain switching valves and/or GCxGC modulators in certain models restrict the placement of the GC Accelerator inserts.

The GC Accelerator is not recommended for columns on cages that have a depth of greater than 40 mm.

Restek recommends wearing protective gloves when handling the GC Accelerator kit components.

GC Accelerator Use

Installation

1. Turn off the oven and wait until the oven, inlets, detectors, and MS transfer line have cooled.

2. Ensure the column and the column hanger are in the back position in the oven.

3. If no detector is in the front position, install the two block inserts in front of the column as shown in **Figure 2**. If there is a detector in the front position, install the two block inserts in front of the column as shown in **Figure 3**.

    Caution: The block inserts should not touch the analytical column or the MSD source nut **(Figure 4)**.

4. Install the plate insert in the front of the oven so that the front is flush with the edge of the oven **(Figure 5)**.

Removal

Turn off the oven and wait until all oven, inlets, detectors, and MS transfer line surfaces have cooled.

Caution: To avoid burns, use the strap to remove the plate insert or wear heat-resistant gloves. The metal fasteners and label tag on the plate insert may still be hot even after the GC oven has cooled down.

1. Grip the strap on the plate insert and remove it by pulling the bottom edge out first **(Figure 6)**.

2. Remove the block inserts carefully; do not allow them to contact the column or the MSD source nut.

Figure 2: Installation *without* detector in front position.

Figure 3: Installation *with* detector in front position.

Figure 4: Ensure that the block inserts do not touch the column or the MSD source nut.
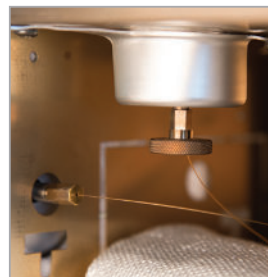
Figure 5: A correctly installed plate insert should be flush with the edge of the oven.

Figure 6: Only remove the plate insert once the system has sufficiently cooled.

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