

AGILENT J&W PLOT PT COLUMNS WITH INTEGRATED PARTICLE TRAPS

The Measure of Confidence

Installation and User Guide

Thank you for purchasing this Agilent J&W PLOT PT column with built-in particle traps. These columns represent the latest innovation from Agilent Technologies, designed to provide you with the same high performance you have come to expect from the leader in capillary PLOT column manufacturing without the worry of particles fouling your detectors or valves that may be installed in your GC system.

Before proceeding, please take a moment to read and understand the information in this Installation and User Guide.

What is different about Agilent J&W PLOT PT columns?

Through our innovative coating technology, your PLOT PT column has a coating of stationary phase between particle traps on both the front and the end of a single length of capillary column. With the inclusion of these built-in particle traps, under normal use*, you can confidently connect these PLOT columns to backflush valves, heart-cut valves, capillary flow technology (CFT) devices and any of your GC detectors without concern of stationary phase particles causing valve failures or chromatographic anomalies that you can experience with a standard PLOT column. PLOT PT columns are even suitable for use in GC/MS applications and because they are one continuous length of capillary tubing, there are no unions attaching the particle traps, and therefore are leak-free. The direction of carrier gas flow through the column is unrestricted, so feel free to connect your column “backwards” and do not worry about reverse gas flow applications causing problems with particle spiking or valve damage.

There are some other functional differences that you need to be aware of as you get ready to install your new column and set up your GC system. There are sections on the bottom and the top of the column that will have a different appearance (see photo on back); these are the particle trap sections of your PLOT PT column. There are approximately 5 coils (ca. 2.5 meters) for each of the particle traps. You may also notice that there appear to be voids or particles inside the column at the interface where the particle trap and the stationary phase coating meet – *this is normal for this type of column*. The column you received has been individually inspected to a visual cosmetic standard and has been individually tested to verify the highest chromatographic performance available in any PLOT column.

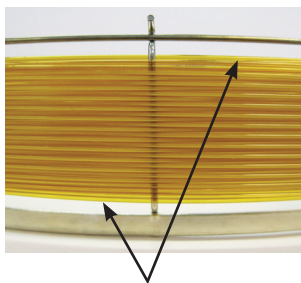
PLOT PT columns are coated to have the same phase ratio (β), that is, the same stationary phase film thickness through the coated section of the column, as their standard PLOT column counterpart. This means that your new PLOT PT column will have the same chromatographic characteristics as the standard column of that nominal coated length. **Attention:** The maximum allowable temperature for CP-Molsieve 5A PT columns is 300 °C. Due to bleeding of the particle traps, the maximum temperature is lowered compared to the non-PT Molsieve columns. Please use 300 °C as the maximum temperature when conditioning the column.

* Please note that under extreme conditions of excessive carrier gas pressure, damage to the stationary phase can occur. Under such conditions, it is possible that stationary phase particles may break through the particle traps. The following Table provides guidelines for the upper maximum flow based on inside diameter.

0.25 mm PLOT PT	3 mL/minute
0.32 mm PLOT PT	5 mL/minute
0.53 mm PLOT PT	10 mL/minute



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*2.5 m particle trapping portions
identified by different
colored tubing*

Installing an Agilent J&W PLOT PT column

PLOT columns are highly retentive. Trace amounts of water, oxygen and light hydrocarbon contaminants in your carrier gas stream can adversely affect chromatography. The use of a moisture trap, an oxygen trap, and a hydrocarbon trap on your carrier gas line is highly recommended.

Choose the column orientation best suited for your hardware application and install the PLOT PT column according to the instructions at the back of the Quality Control Certificate.



Speed up GC column selection with the Agilent J&W GC Column Selection Guide

Make it easier to choose the right GC column for all your applications.



Agilent's full portfolio of high-performance packed GC columns at your fingertips

Designed and manufactured to offer excellent, reproducible performance for all sample types associated with packed column separations.



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Agilent CrossLab is a growing portfolio of GC supplies manufactured to perform seamlessly with a wide variety of non-Agilent GCs in your lab.

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Printed in The Netherlands July 26, 2013
Publication Number 5991-1906EN



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