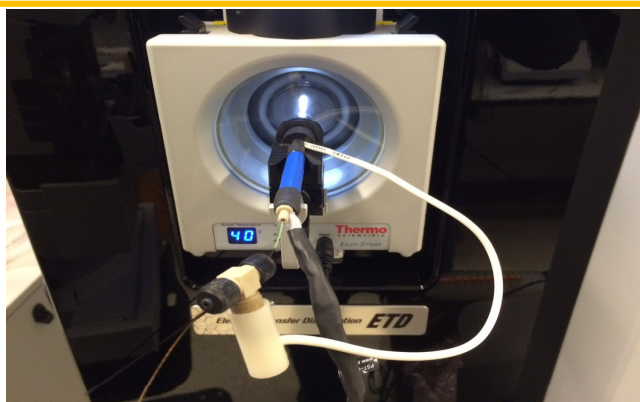# Phoenix S&T

"Jailbreak" Column Heater for Easy-Spray source

Use any of your favorite columns!

• Plug-and-Play directly into the Easy-Spray source and is supported by the trap-column bracket on the source.

• Temperature is controlled by the Easy-Spray source with the same precision as that of the OEM Easy-Spray columns.

• Pack your own columns or use any fused silica capillary column with an integrated spray emitter.

• The high voltage for nanospray comes from the source and is applied through a liquid junction - Supply your own Tee or stainless steel union or purchase as a set.

• Simple, flexible and low-cost
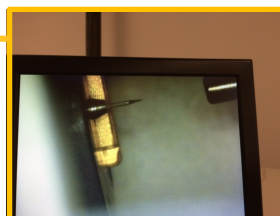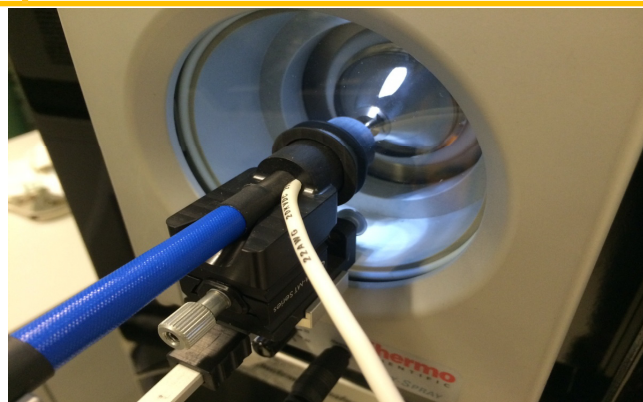

PST-ESR- xx, xx=10-25 cm

PST-ESR-xxB, xx=26-50 cm, bendable

PST-ESR-xxT with a PEEK Tee liquid junction

PST-ESR-xxU with a uPLC-compatible metal union

PST-ESRxx-RU heater with a reducing metal union compatible with NanoViper® fittings.- a trademarked product of Thermofisher.

PST-ES Adaptor insert for a spray emitter without heater. Optional –T, -U and -RU

We thank Toni Koller of Columbia University for helping with the development of PST-ESR and allowing us to use these pictures.

Butterfly Portfolio Heater for nanoLC-MS

Heats analytical column, vented trap column, filter, fittings, transfer lines, spray tip, >50 cm long columns...

PST-BPH-xx, xx=15, 20 cm x 4 cm

Other dimensions available

PST-BPH-xx xx=10-30 cm
Needs a column heater controller, PST-CHC or PST-CHC-RC

PST-ES-BPH
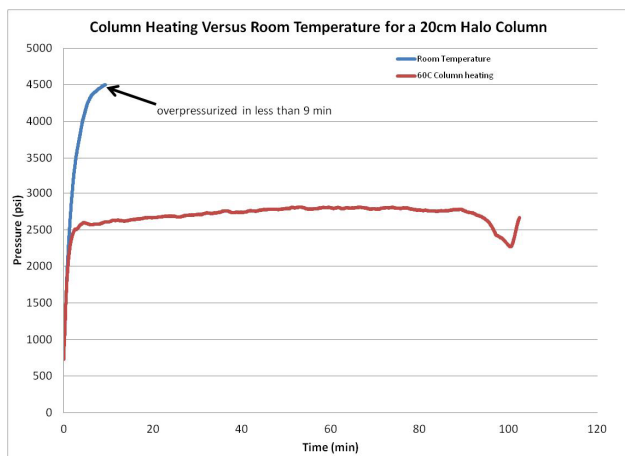Butterfly heater for the Easy-spray source

Ordering Information:
(610) 876.6081 info@phoenix-st.com www.phoenix-st.com

PST
phoenix s&t

NanoLC Column Heater and Temperature Controller

o Improve reproducibility, mass transfer and dramatically reduce run pressures and carry-overs.

o Designed specifically for nano/microspray applications to increase resolution and throughput.

o Temperature range between ambient and 100 º C, with stability control to 0.2 º C

o Lengths available between 6 to 25 cm for most styles. Specify when ordering. Inquire about custom lengths.
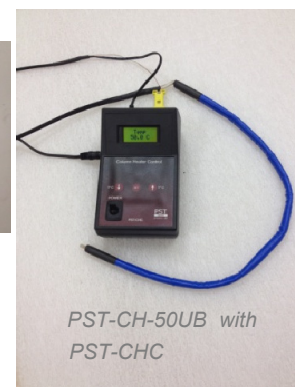
Model numbers:

▪ NEW! PST-ESR-xx Column heater for the Easy-Spray ® source. Use your own columns! xx=12-25 cm; xxU= with liquid junction union, xxT=with liquid junction Tee.

▪ "Butterfly" Portfolio Heater – Our most versatile heater, available as 20 cm x 4 cm and15 cm x 4 cm heaters. For other dimensions, please inquire.

▪ PST-BCH heater with 0.5" diameter for a commercial PEEKsil column with end fittings. Can be inserted into the CaptiveSpray™ source.

• PST-CH-xxU: our popular "pencil" heater for bare fused silica

• PST-CH-xxUB: Bendable "pencil" heater, xx= 15-50 cm

• PST-CHC column heater controller

• PST-CHC-RC: Column heater controller with contact closure-controlled (LC or MS) switching between two temperatures. Controller has decimal point read out.

PST-ESR – compatible with the Thermo Easy-Spray source. Pack your own columns!

PST-CH-50UB with PST-CHC

PST-CHC-RC:
• Run an analysis at around room temperature, but rinse the column at a higher temperature to eliminate carry-over.
• Run at a low temperature for the first part of a gradient to maximize coverage of hydrophilic peptides, and switch to a higher temperature at the last part of the gradient for better coverage and peak shapes of hydrophobic peptides.
• Remote shut-down of the column heater at the end of all the analyses.

Column Heating Versus Room Temperature for a 20cm Halo Column

Room Temperature
60C Column heating

overpressurized in less than 9 min

Pressure (psi) vs *Time (min)*

Acknowledgment: We thank Stephen Master, MD, PhD, Assistant Professor of Pathology at the University of Pennsylvania School of Medicine for the permission to publish this data.