For PAL COMBI–xt® Headspace Autosampler

Innovative HDHT-Type Headspace Syringe

Glue-Free for High Temperature Applications

GERMAN DESIGN AWARD NOMINEE 2017

Hamilton introduces a new headspace syringe featuring a unique Glue-Free (GF) needle attachment in combination with the well-known High Dynamic (HD) plunger designed specifically for PAL COMBI–xt Headspace Autosamplers.

Conventional headspace syringe needles are attached to the syringe glass body using glue (cement). Common problems are detached needles or ghost peaks due to low chemical inertness of the cement to solvents or limited resistance to higher temperature.

Hamilton addresses these problems with the new Glue-Free High Temperature (HDHT) headspace syringe.

Modern GC headspace analysis requires injecting over large temperature ranges. Ordinary headspace syringes on the market use a rubber O-ring sealed plunger which has a limited sealing performance at high temperatures due to varying thermal expansion between the different materials. The high dynamic HD-type syringe employs a unique spring in the plunger tip which compensates for the materials' different expansion coefficients, creating a better seal over a larger temperature range, improving syringe lifetime.

The High Dynamic (HD) plunger is optimized for high throughput and has set the new standard for headspace syringes.



DESIGNED IN SWITZERLAND

Benefits of Hamilton HDHT headspace syringes

- Glue-Free needle attachment is chemically inert, eliminating detached needles due to contact with organic, and chlorinated solvents
- Glue-Free needle attachment minimizes ghost peaks
- Temperature stability up to 200°C means a wider range of sample components can be analyzed
- Patented spring-in-plunger design creates a dynamic seal between the plunger tip and the inside of the glass barrel for leak-free operation
- Excellent performance over a large temperature range up to 200°C
- Increased lifetime over traditional headspace syringes
- Improved accuracy and reproducibly of GC headspace analysis

Fluid paths of Hamilton HDHT headspace syringes

- Pure PTFE
- Inert glass
- Inert stainless steel

HAMILTON®

New HDHT-Type Syringe Design

PATENT PENDING

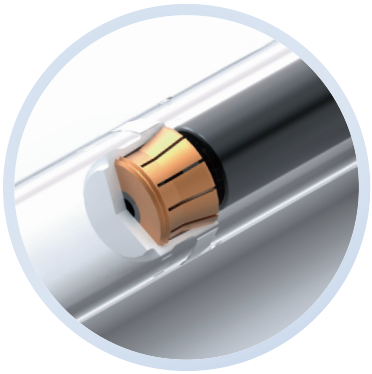


Glue-Free needle attachment

glue-free syringe up to 200°C

HD-Type Plunger Design

PATENTED



Hamilton HDHT-type syringes are specially designed for the PAL COMBI-xt® GC autosampler sold under the following brands

- AB SCIEX™
- Agilent
- Alpha M.O.S.
- Antek
- Bruker
- Dionex®
- GE®
- GERSTEL®
- GL Sciences
- Lauda
- LEAP Technologies
- MicroCal™
- MPS
- PERICHROM
- PerkinElmer®
- Shimadzu
- SOTAX
- Thermo Scientific®
- Waters®
- Zoex



Ordering Information

Part Number	Volume	Description	Gauge	Point Style
209681	1.0 mL	SYR 1001 HDHT (23/5) Headspace	23	5
209683	2.5 mL	SYR 1002 HDHT (23/5) Headspace	23	5
209685	5.0 mL	SYR 1005 HDHT (23/5) Headspace	23	5
209682	1.0 mL	SYR 1001 HDHT (26/5) Headspace	26	5
209684	2.5 mL	SYR 1002 HDHT (26/5) Headspace	26	5
209686	5.0 mL	SYR 1005 HDHT (26/5) Headspace	26	5

All syringes listed feature a Glue-Free (GF) needle termination with a High Dynamic (HD) plunger.
Point style 5: needle with side hole tip

For more information on these and other Hamilton syringes, including information on terminations, point styles, gauges and other specifications, please visit

www.hamiltoncompany.com/syringes

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