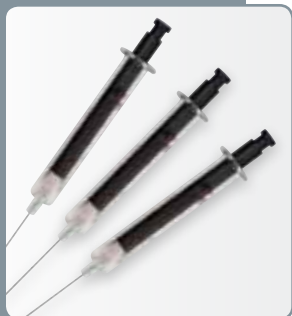


GC Autosampler Syringes

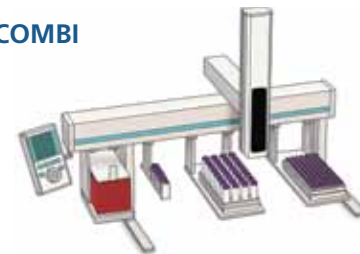
CTC CombiPAL (headspace mode)

HAMILTON



Hamilton's HD-Type Syringes fit the following CTC COMBI autosampler models (headspace mode):

- ▶ CombiPAL
- ▶ PAL COMBI-**xt**
- ▶ PAL COMBI-**xt** extended



The models above are sold under the following company brands:

- | | | | |
|---------------|---------------|---------------------|---------------------|
| ▶ AB Sciex | ▶ Dionex | ▶ LEAP Technologies | ▶ Shimadzu |
| ▶ Agilent | ▶ GE | ▶ MicroCal | ▶ Sotax |
| ▶ Alpha M.O.S | ▶ Gerstel | ▶ MPS | ▶ Thermo Scientific |
| ▶ Antek | ▶ GL Sciences | ▶ Perichrom | ▶ Waters |
| ▶ Bruker | ▶ Lauda | ▶ Perkin Elmer | ▶ Zoex |

Why Hamilton is the trusted name in syringes for CTC CombiPAL autosamplers:

- ▶ Unique 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 and temperature gradients
- ▶ Increased lifetime compared to traditional headspace syringes
- ▶ Increased accuracy and reproducibility of GC headspace analysis

The HD-Type Syringe Design



HD-Type Syringes

Modern GC Headspace analysis, like ITEX, requires injecting over large temperature ranges. Conventional headspace syringes on the market use a rubber O-ring sealed plunger which have a limited sealing performance at high temperatures due to varying thermal expansion between the different materials. The 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.



GC Autosampler Syringes

CTC CombiPAL (headspace mode)

Ordering Information

Headspace Sampling

(GASTIGHT) 1000 Series Syringes

Part Number	Description	Needle (gauge/length (mm)/point style)
203082	1.0 mL, HD-Type Syringe (headspace)	(23/51/5)
203084	2.5 mL, HD-Type Syringe (headspace)	(23/51/5)
203086	5.0 mL, HD-Type Syringe (headspace)	(23/51/5)
203141	1.0 mL, HD-Type Syringe (headspace)	(26/51/5)
203181	2.5 mL, HD-Type Syringe (headspace)	(26/51/5)
203182	5.0 mL, HD-Type Syringe (headspace)	(26/51/5)



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