

# 1700 Series Syringes

The HAMILTON 1700 series is the GASTIGHT® version of the 700 series. The syringes are designed to work with liquids and gases. These syringes use PTFE as an inert plunger seal. They cover capacities from 10 µl to 500 µl. The syringes have an accuracy of ± 1% of the nominal volume. With these syringes liquids only come into contact with glass and PTFE. The plunger assemblies are interchangeable.

Typical applications are:

- Use in diluters/dispensers
- Use in autosamplers and analysers
- Pipetting of gases
- Sample injection in GC, LC and TLC



**Tech Tip**  
When initially inserting the plunger into a GASTIGHT® syringe barrel, wet the PTFE tip with deionised water or another solvent compatible with the sample.

**Economical Tip**  
Plungers for GASTIGHT® syringes are easily replaceable when your glass barrel is not broken.

## N Syringes

| Ordering information   | Needle length mm | Volume 10 µl<br>Model 1701<br>Gauge 26s | Volume 25 µl<br>Model 1702<br>Gauge 22s | Volume 50 µl<br>Model 1705<br>Gauge 22s | Volume 100 µl<br>Model 1710<br>Gauge 22s | Volume 250 µl<br>Model 1725<br>Gauge 22s | Volume 500 µl<br>Model 1750<br>Gauge 22 |
|------------------------|------------------|---|---|---|--|--|---|
| N cemented needle pst2 | 51               | 80000                                   | 80200                                   | 80900                                   | 81000                                    | 81100                                    | 81217                                   |
| N cemented needle pst3 | 51               | 80075                                   | 80275                                   | 80975                                   | 81075                                    | 81175                                    | 81216                                   |
| N cemented needle pst5 | 51               | 80039                                   | 80239                                   | 80939                                   | 81039                                    | 81139                                    | 81243                                   |
| SN cemented needle *   | *                | 80008                                   | 80208                                   | 80908                                   | 81008                                    | 81108                                    | 81214                                   |

\* Specify needle gauge, length, point style and whether electro-tapered

# 1700 Series Syringes

## RN Syringes



| Ordering information          | Needle length mm | Volume 10 µl<br>Model 1701<br>Gauge 26s | Volume 25 µl<br>Model 1702<br>Gauge 22s | Volume 50 µl<br>Model 1705<br>Gauge 22s | Volume 100 µl<br>Model 1710<br>Gauge 22s | Volume 250 µl<br>Model 1725<br>Gauge 22s | Volume 500 µl<br>Model 1750<br>Gauge 22 |
|-------------------------------|------------------|---|---|---|--|--|---|
| RN removable needle pst2      | 51               | 80030                                   | 80230                                   | 80930                                   | 81030                                    | 81130                                    | 81230                                   |
| RN removable needle pst3      | 51               | 80065 <sup>1</sup>                      | 80265                                   | 80965                                   | 81065                                    | 81165                                    | 81265                                   |
| RN <b>needle not included</b> |                  | 7653-01                                 | 7654-01                                 | 7655-01                                 | 7656-01                                  | 7657-01                                  | 7658-01                                 |

<sup>1</sup> Needle gauge is 22s

## LT Syringes



| Ordering information                      | Volume 10 µl<br>Model 1701 | Volume 25 µl<br>Model 1702 | Volume 50 µl<br>Model 1705 | Volume 100 µl<br>Model 1710 | Volume 250 µl<br>Model 1725 | Volume 500 µl<br>Model 1750 |
|---|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| LT Luer Tip<br><b>Needle not included</b> | 80001                      | 80201                      | 80901                      | 81001                       | 81101                       | 81201                       |

## TLL Instrument Syringes



| Ordering information  | Volume 10 µl<br>Model 1701 | Volume 25 µl<br>Model 1702 | Volume 50 µl<br>Model 1705 | Volume 100 µl<br>Model 1710 | Volume 250 µl<br>Model 1725 | Volume 500 µl<br>Model 1750 |
|---|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| TLL without slots (Luer Lock)<br><b>Needle not included</b>   |                            |                            | 80920                      | 81020                       | 81120                       | 81220                       |
| TLL with slots (Luer Lock)<br><b>Needle not included</b>      |                            |                            | 80927                      | 81027                       | 81127                       | 81227                       |
| TLLX, TLL with stop (Luer Lock)<br><b>Needle not included</b> |                            | 80222                      | 80922                      | 81022                       | 81122                       | 81222                       |

## TLL-XL Instrument Syringes



| Ordering information                             | Volume 10 µl<br>Model 1701 | Volume 25 µl<br>Model 1702 | Volume 50 µl<br>Model 1705 | Volume 100 µl<br>Model 1710 | Volume 250 µl<br>Model 1725 | Volume 500 µl<br>Model 1750 |
|--|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| TLL-XL (Luer Lock)<br><b>Needle not included</b> |                            |                            | 201790                     | 201797                      | 201802                      | 201807                      |

# 1700 Series Syringes

## TLLXB Instrument Syringes



| Ordering information  | Volume 10 $\mu$ l<br>Model 1701 | Volume 25 $\mu$ l<br>Model 1702 | Volume 50 $\mu$ l<br>Model 1705 | Volume 100 $\mu$ l<br>Model 1710 | Volume 250 $\mu$ l<br>Model 1725 | Volume 500 $\mu$ l<br>Model 1750 |
|---|---------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|
| TLLXB, TLL with stop<br>& backbushing.<br>Needle not included |                                 | 80223                           | 80947                           | 81047                            | 81147                            | 81247                            |

## DX Instrument Syringes



| Ordering information                         | Volume 10 $\mu$ l<br>Model 1701 | Volume 25 $\mu$ l<br>Model 1702 | Volume 50 $\mu$ l<br>Model 1705 | Volume 100 $\mu$ l<br>Model 1710 | Volume 250 $\mu$ l<br>Model 1725 | Volume 500 $\mu$ l<br>Model 1750 |
|--|---------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|
| DX Diluter with stop<br>No needles available |                                 | 80226                           | 80926                           | 81026                            | 81126                            | 81226                            |

## CX Cheminert Instrument Syringes



| Ordering information                           | Volume 10 $\mu$ l<br>Model 1701 | Volume 25 $\mu$ l<br>Model 1702 | Volume 50 $\mu$ l<br>Model 1705 | Volume 100 $\mu$ l<br>Model 1710 | Volume 250 $\mu$ l<br>Model 1725 | Volume 500 $\mu$ l<br>Model 1750 |
|--|---------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|
| CX Cheminert with stop<br>No needles available | 80062                           | 80262                           | 80962                           | 81062                            | 81162                            | 81262                            |

## C-XP Instrument Syringes



| Ordering information         | Volume 10 $\mu$ l<br>Model 1701 | Volume 25 $\mu$ l<br>Model 1702 | Volume 50 $\mu$ l<br>Model 1705 | Volume 100 $\mu$ l<br>Model 1710 | Volume 250 $\mu$ l<br>Model 1725 | Volume 500 $\mu$ l<br>Model 1750 |
|------------------------------|---------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|
| C-XP<br>No needles available |                                 |                                 | 201720                          | 201730                           | 201740                           | 201750                           |

# 1700 Series Syringes

## AD, DAD AccuDil® Instrument Syringes



| Ordering information  | Volume 10 µl<br>Model 1701 | Volume 25 µl<br>Model 1702 | Volume 50 µl<br>Model 1705 | Volume 100 µl<br>Model 1710 | Volume 250 µl<br>Model 1725 | Volume 500 µl<br>Model 1750 |
|---|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| AD, AccuDil® with stop<br><i>No needles available</i>         |                            |                            | 201000                     | 201050                      | 201100                      | 201150                      |
| DAD Diluter AccuDil® with stop<br><i>No needles available</i> |                            |                            | 201500                     | 201550                      | 201600                      | 201650                      |

## Accessories

| Ordering information             | 1701<br>10 µl | 1702<br>25 µl | 1705<br>50 µl | 1710<br>100 µl | 1725<br>250 µl | 1750<br>500 µl |
|----------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| PB600 Repeating Dispenser        | 83700         | 83700         | 83700         | 83700          | 83700          | 83700          |
| Reproducibility (Chaney) Adapter | 14700         | 14725         | 14725         | 14725          | 14725          | 14725          |
| Syringe guide                    | 14806         | 14906         | 14906         | 14906          | 14906          | 14906          |

### Needles

|                     |         |         |         |         |         |         |
|---------------------|---------|---------|---------|---------|---------|---------|
| Standard RN needles | 7758-02 | 7758-03 | 7758-03 | 7758-03 | 7779-03 | 7779-01 |
| Standard N needles  | 90039   | 90038   | 90038   | 90038   | 90038   | 90022   |
| Standard KF needles | 90139   | 90138   | 90138   | 90138   | 90138   | 90122   |



### Syringe Calibration Service

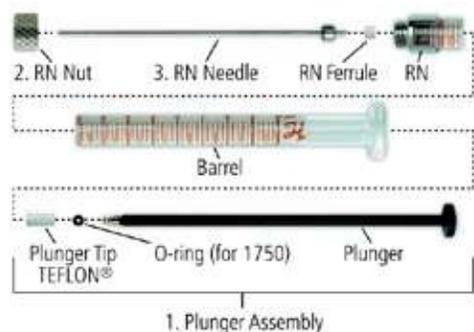
Add the prefix "CAL" in the beginning of the syringe part number.

# 1700 Series Syringes

## Spare Parts

### Ordering information

|                                      | 1701<br>10 µl | 1702<br>25 µl | 1705<br>50 µl | 1710<br>100 µl | 1725<br>250 µl | 1750<br>500 µl |
|--------------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| RN nut                               | 30902         | 30902         | 30902         | 30902          | 30902          | 30902          |
| Plunger assembly N                   | 13205         | 1122-01       | 1162-01       | 1162-02        | 1162-03        | 1169-01        |
| Plunger assembly RN                  | 13205         | 1122-01       | 1162-01       | 1162-02        | 1162-03        | 1169-01        |
| Plunger assembly LT/LTN              | 13205         | 1122-01       | 1162-01       | 1162-02        | 1162-03        |                |
| Plunger assembly TLLX/DX/CX          |               | 13269         | 1117-01       | 1117-02        | 1117-03        | 1120-01        |
| Plunger assembly TLL-XL              |               |               | 201793        | 201800         | 201805         | 201810         |
| Plunger assembly AD                  |               |               | 201020        | 201070         | 201120         | 201170         |
| Plunger assembly DAD                 |               |               | 201520        | 201570         | 201620         | 201670         |
| Plunger assembly TLL (without slots) |               | 13269         | 1162-01       | 1162-02        | 1162-03        | 1169-01        |
| Plunger assembly C-XP                |               |               | 201725        | 201735         | 201745         | 201755         |



## Technical Specifications

|                              | Syringe type<br>Syringe capacity | 1701<br>10 µl | 1702<br>25 µl | 1705<br>50 µl | 1710<br>100 µl | 1725<br>250 µl | 1750<br>500 µl |
|------------------------------|----------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| Needle length (mm)           |                                  | 51            | 51            | 51            | 51             | 51             | 51             |
| Needle gauge                 |                                  | 26s           | 22s           | 22s           | 22s            | 22s            | 22             |
| Needle outer diameter (mm)   |                                  | 0.47          | 0.72          | 0.72          | 0.72           | 0.72           | 0.72           |
| Needle inner diameter (mm)   |                                  | 0.13          | 0.15          | 0.15          | 0.15           | 0.15           | 0.41           |
| Needle point style           |                                  | 2             | 2             | 2             | 2              | 2              | 2              |
| Electro-tapered              |                                  | Yes           | Yes           | Yes           | Yes            | Yes            | No             |
| Dead volume in needle (µl)   |                                  | 0.68          | 0.90          | 0.90          | 0.90           | 0.90           | 6.73           |
| Scale length (mm)            |                                  | 60            | 60            | 60            | 60             | 60             | 60             |
| Test pressure (MPa)          |                                  | 0.6           | 0.6           | 0.6           | 0.6            | 0.6            | 0.6            |
| Max working temperature (°C) |                                  | 50            | 50            | 50            | 50             | 50             | 50             |
| Min working temperature (°C) |                                  | 20            | 20            | 20            | 20             | 20             | 20             |