

# Codes and Explanations



## **N, NR (Cemented Needle, Cemented Needle Rheodyne)**

The stainless steel needle is cemented into the glass barrel such that it aligns with the zero point of the scale. **NR** stands for Rheodyne specified syringes.



## **LTN (Luer Tip Cemented Needle)**

The needles of the 1000 series syringes are cemented into the conical glass luer tip.



## **SN, LTSN (Special Cemented Needle, Special Luer Tip Cemented Needle)**

Syringes with special lengths. To manufacture SN Syringes we need the following specifications: (\*=gauge/\*=length/\*=point style) whether electro-tapered. Example of a correct needle specification: 701 SN gauge 25 length 70 mm pst3 = 80308 701 SN (25/70/3).



*Cemented needles are not recommended for use with halogenated solvents such as  $\text{MeCl}_2$ .*



## **RN, RNR (Removable Needle, Removable Needle Rheodyne)**

RN needles like cemented needles are adjusted to the zero graduation mark of the syringe scale. Their connection is therefore dead volume free. Needles for syringes with a volume capacity of 2.5  $\mu\text{l}$  to 100  $\mu\text{l}$  are interchangeable, likewise needles for syringes with a capacity of 250  $\mu\text{l}$  to 10 ml. RN Needles are available from gauge 19 up to gauge 34.



*RN Needles are recommended for advantageous laboratories with multiple users, economical since you can replace the needle without having to purchase a new syringe.*



## **KH (Knurled Hub)**

Removable plunger/needle assembly, knurled hub is used exclusively in 7000 series syringes. The attachment of different spacer lengths enables repeatable depth injections.



## **LT (Luer Tip)**

Ground glass tip can be used with most hypodermic needles (Kel-F<sup>®</sup> needles, PTFE tubing assemblies and connectors for a tight seal.) The LT Syringe offers a wide flexibility. LT Syringes can be heated up to 115°C.



## **SL (SampleLock™)**

Lock your SampleLock Syringe with the easy-to-use twist valve. An internal standard can be injected through the valve port into samples contained in the SampleLock Syringe. The positive rear plunger stop prevents loss of sample and plunger blowout at elevated pressure.



## **TLL/TLLX (PTFE Luer Lock, PTFE Luer Lock with stop)**

Male luer taper with nickel plated hub accepts, and locks in place, luer hub needles and connectors. TLL and TLLX are used in HAMILTON Diluters/Dispensers and in many other pipetting systems. The X-style plunger stop incorporates a 6-32 UNC female thread on the end of the stop to allow attachment to drive arm mechanism.

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## **DX (Diluter)**

TLL PTFE Luer Lock male fitting with M6X1 female side port. The X-style plunger stop incorporates a 6-32 UNC female thread on the end of the stop to allow attachment to drive mechanism. Such as on the ML 500 Diluters/Dispensers. These syringes are used on the sample side of ML 500 Diluters.



## **TLL-XL (60 mm Syringe)**

These 60 mm stroke TLL style syringes are compatible with many Liquids Handling Instruments, including XL-3000 modular digital syringe pump, Tecan, Rosys and Cavro sample processors and Liquid Handling Applications.



## **TLL/TLLX (30 mm Syringe)**

These syringes are designed specifically for the PSD.



## **C, CX (Cheminert)**

1/4"-28 UNF male fitting. Used in low volume applications where system dead volume need to be minimized. The X style plunger stop incorporates a 6-32 UNC female thread on the end of the stop to allow attachment to drive arm mechanism. Such as on the ML 500 Diluters/Dispensers. These syringes can also be screwed into HAMILTON micro valves HV, HVP and HVX.



## **C-XP**

These 30 mm stroke C-style syringes are compatible with many Liquid Handling Instruments like Tecan, Cavro, Rosys and other OEM Liquid Handling Systems.



## **AD (AccuDil®)**

This syringe has been specially developed for use with Diluters/Dispensers. It's screwed directly into the carrier with a fine thread M8X0.5. These syringes have no scale.



## **DAD (Diluter AccuDil®)**

These syringes have an axial fine thread M8X0,5 and a M6 side connector. As with the DX syringe they are used on the sampleside of Diluters.



## **N, NR, KH, SN, RN, RNR, LTN, LTSN and SL**

Syringes are shipped with needles.

## **RN without needle, LT, TLL, TLLX, TLL-XL DX, C, CX, C-XP, AD, DAD**

Syringes are shipped without needles.