

**Restek offers complementing lines of syringes from Hamilton & SGE.**

If you don't find the syringe you're looking for on the following pages, contact us.

**Needle Gauge Chart**

Gauge	Nominal OD		Nominal ID	
26s	0.019 in.	0.47mm	0.0050 in.	0.13mm
26	0.018 in.	0.46mm	0.0102 in.	0.26mm
25	0.021 in.	0.51mm	0.0102 in.	0.26mm
23s	0.025 in.	0.64mm	0.0060 in.	0.15mm
23	0.025 in.	0.64mm	0.0132 in.	0.34mm
22s	0.028 in.	0.72mm	0.0060 in.	0.15mm
22	0.028 in.	0.72mm	0.0162 in.	0.41mm

did you know?

Syringes and needles manufactured by Hamilton Company and SGE are intended for scientific research and laboratory use only and are not intended for human *in vivo* use.

**Needle Point Style**

Restek offers several different point styles on syringe and needle products. Choose one based on your application.



**Point Style 2, BV:** beveled needle tip. Recommended for optimum septum penetration and prevention of septum coring.



**Point Style 3, LC:** square/blunt needle tip. For use with HPLC injection valves and for sample pipetting.



**Point Style 5:** conical needle with side hole. Liquid samples are filled and dispensed through the side hole.



**Point Style H:** domed needle tip with side hole. Liquid samples are filled and dispensed through the side hole. The solid tip minimizes septum damage.



**Point Style Agilent/Cone:** special conical style needle point used exclusively on syringes for autosamplers.

**Guide to Needle Termination Codes**

**Hamilton:**

- (N) Cemented Needle
- (RN) Removable Needle
- (ASN) Autosampler Cemented Needle
- (ASRN) Autosampler Removable Needle
- (TLL) Teflon® Luer Lock
- (KH) Knurled Hub
- (LT) Luer Tip
- (LTN) Luer Tip Cemented Needle

**SGE:**

- (F) Fixed Needle
- (R) Removable Needle
- (LL) Luer Lock
- (LT) Luer Tip

**Syringe Termination**

From cemented to removable needles and from Teflon® luer-lock to special syringe fittings, syringe barrel terminations create the interface between a syringe and its mating connection. For your reference, we describe the most common Hamilton/SGE terminations below.



**N, Cemented Needle / F, Fixed:**

Needle cemented into the glass syringe barrel at a point corresponding to the zero graduation mark. Not autoclavable.



**KH, Knurled Hub / R, Removable:**

Used on 7000 Series Hamilton syringes, exclusively. Knurled hub enables 6000 psig maximum injection pressures and the attachment of a spacer for repeatable depth injections. Autoclavable when disassembled.



**RN, Removable Needle / R, Removable:**

Needle seats precisely to the zero graduation mark of the syringe. Allows the use of different specification needles on the same syringe barrel. Autoclavable when disassembled.



**TLL, Teflon® Luer-Lock / LL, Luer Lock / LT, Luer Tip:**

Male luer taper with nickel-plated brass hub accepts and locks into place luer hub needles and connectors. Autoclavable when disassembled.



SuperfleX Flexible Plunger Syringe page 287



Agilent Autosampler Syringes page 278



Gas-Tight Luer-Lock Syringe page 291