



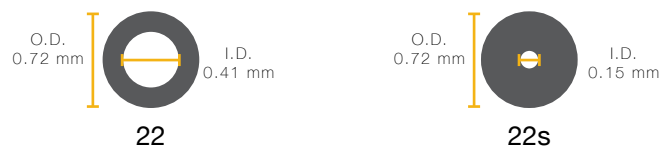


## Standard Needle Point Styles

POINT STYLE	DESCRIPTION	APPLICATION
2 	10–12° sharp, beveled, curved non-coloring	Gas chromatography, septum piercing
3 	Blunt, electro-polished	HPLC injection, thin layer chromatography (TLC), general liquid handling, controlled animal injections
5 	Conical with side port for penetration without coring	Headspace, applications prone to needle clogging, minimal septum damage
AS 	Conical, non coring designed to withstand multiple injections	Autosampler injection, pre-pierced septa










## Needle Gauge

“s” indicates a thicker wall for added strength.



GAUGE	O.D. (mm)	I.D. (mm)
32	0.24	0.11
26s	0.47	0.13
25	0.51	0.26
24	0.57	0.31
23	0.64	0.34
22s	0.72	0.15
22	0.72	0.41

## Syringe Terminations

TERMINATION	REMARK	AUTOCLAVABLE
Cemented Needle (N) 	For low-volume syringes	No
Luer Tip Cemented Needle (LTN) 	For mid-volume syringes	No
Removable Needle (RN) 		Yes if disassembled
Knurled Hub (KH) 	For Modified Microliter syringes only	Yes if disassembled
Luer Tip (LT) 		Yes if disassembled
PTFE Luer Lock (TLL) 		Yes if disassembled
SampleLock™ (SL) 	Integrated on/off valve	No
Fixed Needle (FN) 	Found on CTC C-Line and X-Type syringes	No
ChemSeal™ (C) 	1/4" – 28 UNF/ threaded connection	No

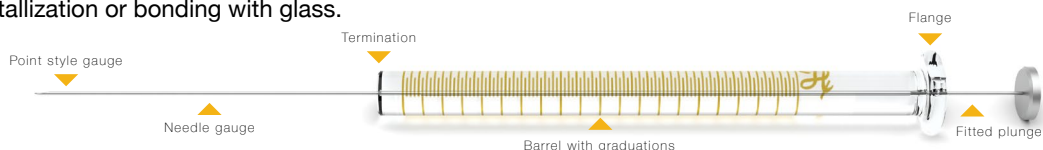
## Hamilton Syringe Series Guide

The key to selecting the right syringe for your application is to identify your sample type and determine the smallest volume to be dispensed or injected. Hamilton offers two type of syringes, Gastight and Microliter, which differ in the design of the plunger.

SYRINGE SERIES	VOLUME	SYRINGE TYPE	PLUNGER TYPE	PAGE NO
700	5 µL – 500 µL	Microliter	Stainless steel fitted	3
600	2.5 µL – 5 µL	Microliter	Reinforced stainless steel fitted	4
7000	0.5 µL – 5 µL	Modified Microliter	Tungsten	5
800	5 µL – 250 µL	Microliter	Reinforced stainless steel fitted	6
900	5 µL – 10 µL	Microliter	Reinforced stainless steel fitted	7
1700	10 µL – 500 µL	Gastight	Polymer tipped	8 – 9
1000	1 mL – 100 mL	Gastight	Polymer tipped	10 – 11
1800	10 µL – 250 µL	Gastight	Reinforced polymer tipped	12
Super Syringe	0.5 L – 2 L	Gastight	Plunger with polymer tip with Buna-N-seal	13

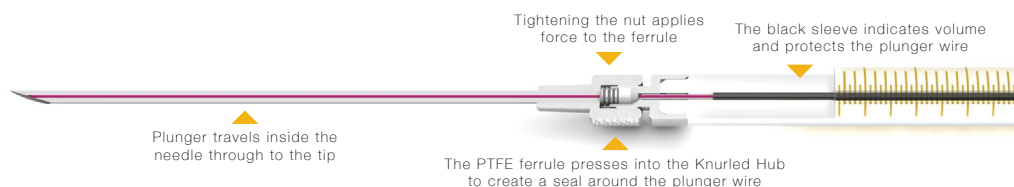
### Microliter Syringes | 600, 700, 800 and 900 Series

Microliter syringes are for use with liquids and incorporates a stainless steel plunger that is individually fitted to its matching syringe barrel. These micro-volume syringes have a very close tolerance between the plunger and the barrel which creates a liquid-tight seal without parts such as O-rings that eventually wear out. These syringes are ideal for aqueous and organics samples that are not prone to precipitation, crystallization or bonding with glass.



### Modified Microliter Syringes | 7000 Series

These syringes are designed to dispense volumes below 5 µL. This requires an extremely small tungsten plunger wire that travels to the tip of the needle. The resulting design has zero dead volume and is accurate below 50 nL.



### Gastight Syringes | 800, 1000, 1700 and 1800 Series

Gastight syringes are ideal for dispensing both liquids and gases. They have a precision-machined polymer plunger tip, often PTFE, which creates a leak-free seal. With the tight fit, the tip essentially wipes the interior of the syringe barrel free of sample. This feature is useful for samples with dissolved or suspended molecules because it reduces the chance a deposit will occur and result in a damaged plunger. The plungers are replaceable.



### Reinforced Plunger Syringes | 900 and 1800 Series

Small volume syringes require extremely small plunger wires. For uses that are prone to bending and breaking these small plungers, it is recommended to use a reinforced plunger syringe. These plungers are available in both Microliter and Gastight versions.

