







## NEEDLE SELECTION GUIDE

### NEEDLE POINT STYLE

Several needle point options are available and should be selected based on the syringe applications.

<b>Pt. 2</b>  17° Bevel optimum septum penetration	<b>Pt. 3</b>  90° Tip polished precision pipetting	<b>Pt. AS</b>  Taper improves seal. 90° tip precision	<b>Pt. 5</b>  Blunt Tip. Side Port avoids coring
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**Point Style 2:** *Manual GC* – This point is optimal for penetration of the septa without coring the septa and clogging the needle.

**Point Style 3:** *HPLC* – This point is designed for precise liquid pipetting and injection into LC systems.

**Point Style AS:** *GC Autosampler* - This point is ideal for piercing septa without coring. The tapered tip prolongs the life of GC septa.

**Point Style 5:** *Headspace* – This point has a side port for dispensing and aspirating. The closed tip makes this style ideal for penetrating thicker septa without coring.

## NEEDLE GAUGE

L-Mark syringe needles are available in a number of gauges. The outer diameter (O.D.) and the inner diameter (I.D.) of the specific needle gauges are listed below. The “s” identifier after the needle gauge indicates a smaller I.D. for that needle gauge. The smaller I.D. (“s”) needle has a decreased dead volume in the needle post aspiration therefore reducing carryover opportunities.

### Needle Gauge Index

Needle Gauge	O.D. mm	I.D. mm
26	0.45	0.25
26s	0.47	0.13
25	0.50	0.20
24	0.55	0.32
23	0.64	0.35
23s	0.64	0.15
22	0.72	0.40
22s	0.72	0.20
21	0.80	0.50
20	0.90	0.60
19	1.10	0.80

