

ramé-hart instrument co.
Guide to Dispensing Needles (Sep-2016)

Gauge	Standard 304 SS (p/n 100-10-12-xx)	Inverted 304 SS (p/n 100-10-13-xx)	Disposable 304 SS (p/n 100-10-15-xx)	Extra-long 4" 304 SS (100-26-NE-XX)	Outside Diameter (OD) inches*	Outside Diameter (OD) mm*	Inside Diameter (ID) inches*	Inside Diameter (ID) mm*	Wall Thickness inches*	Wall Thickness mm*	Plastic Taper Tip (p/n 100-10-16-xx)	Plastic Taper Tip Original ID	PTFE Teflon (p/n 100-10-17-xx)	PTFE OD*	PTFE ID*
8	✓	SO			0.165	4.19	0.135	3.43	0.015	0.381					
9	✓	SO			0.148	3.76	0.118	3.00	0.015	0.381					
10	✓	✓		✓	0.134	3.40	0.106	2.69	0.014	0.356					
11	✓	✓		✓	0.120	3.05	0.094	2.39	0.013	0.330					
12	✓	✓		✓	0.109	2.77	0.085	2.16	0.012	0.305					
13	✓	✓			0.095	2.41	0.071	1.80	0.012	0.305					
14	✓	✓	✓	✓	0.083	2.11	0.063	1.60	0.010	0.254	SO	0.063	✓	0.082	0.066
15	✓		SO		0.072	1.83	0.054	1.37	0.009	0.229					
16	✓	✓	✓	✓	0.065	1.65	0.047	1.19	0.009	0.229	SO	0.048	✓	0.065	0.053
17	✓				0.058	1.47	0.042	1.07	0.008	0.203					
18	✓	✓	✓	✓	0.049	1.24	0.033	0.84	0.008	0.203	SO	0.034	✓	0.054	0.042
19	✓	✓	SO		0.042	1.07	0.027	0.69	0.0075	0.191					
20	✓	✓	✓	✓	0.035	0.889	0.023	0.584	0.0060	0.152	SO	0.024	✓	0.046	0.034
21	✓	✓	SO		0.032	0.813	0.020	0.508	0.0060	0.152					
22	✓	✓	✓	✓	0.028	0.711	0.016	0.406	0.0060	0.152	✓	0.017	✓	0.040	0.028
23	✓	✓	SO		0.025	0.635	0.013	0.330	0.0060	0.152					
24	✓	✓		✓	0.022	0.559	0.012	0.305	0.0050	0.127	SO	0.013			
25	✓	✓	✓		0.020	0.508	0.010	0.254	0.0050	0.127	SO	0.011			
26	✓	✓	SO	✓	0.018	0.457	0.010	0.254	0.0040	0.102					
27	✓		✓		0.016	0.406	0.008	0.203	0.0040	0.102	SO	0.008			
28	✓	✓		✓	0.014	0.356	0.007	0.178	0.0035	0.089					
29	✓				0.013	0.330	0.007	0.178	0.0030	0.076					
30	✓				0.0120	0.305	0.0055	0.140	0.0033	0.083					
31	SO				0.0100	0.254	0.0045	0.114	0.0025	0.064					
32	✓				0.0090	0.229	0.0035	0.089	0.0028	0.070					
33	✓				0.0080	0.203	0.0035	0.089	0.0023	0.057					

Key: ✓, In stock; SO, Special Order (3-5 days); 22 gauge is standard size; *dimensions in inches

Standard Type 304 Stainless Steel Needle p/n 100-10-12-xx replace xx with actual gauge; 22g is standard size; available in all gauges from 08 to 33; all sizes are kept in stock except 31g, 2" long.

Inverted Type 304 Stainless Steel Needle p/n 100-10-13-xx replace xx with actual gauge; 22g is standard size; available in most gauges from 10 to 28, see chart for stock sizes, for captive bubble, inverted pendant drop, sessile and other liquid/liquid studies with environmental fixture/chamber.

Disposable Type 304 Stainless Steel Needle p/n 100-10-15-xx replace xx with actual gauge; 22 gauge is standard and in stock (other sizes, see chart, 2-3 days), 1.5" long

Extra-long Type 304 Stainless Steel Needle p/n 100-26-NE-xx replace xx with actual gauge; 22g is standard, 4" long

Plastic Taper Tip p/n 100-10-17-xx replace xx with actual gauge, see chart for sizes; 22g is standard size and kept in stock; other sizes 2-3 days, tip can be cut to increase dia, 1.25" long

PTFE Teflon Needle p/n 100-10-17-xx replace xx with gauge, available in 14, 16, 18, 20, and 22 gauge, 22g is standard size, PTFE is flexible and can be cut to length.

Note All needles above use Luer Lock and will work on the ramé-hart Microsyringe p/n 100-10-20. For use with Automated Dispensing System, use adapter p/n 100-22-37.