

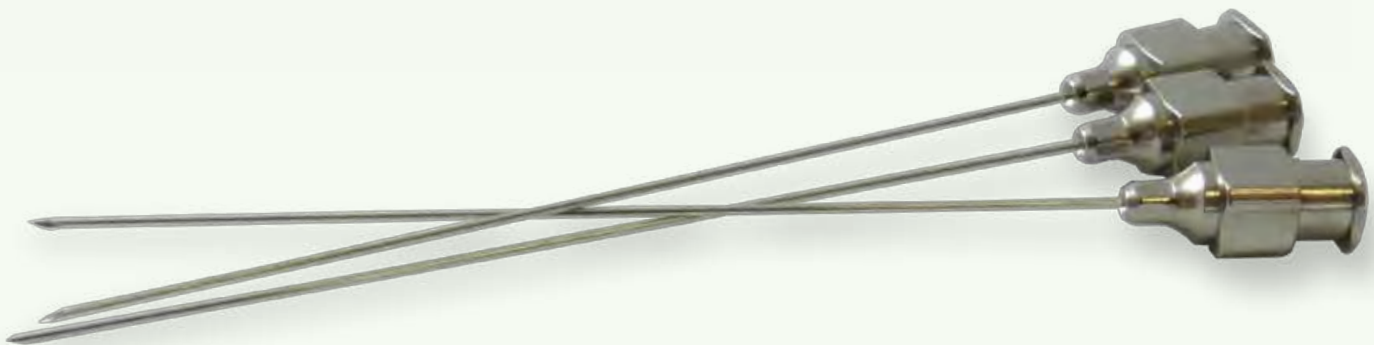
NEEDLES

NEEDLES

CADENCE SCIENCE® STANDARD
AND CUSTOM NEEDLES FOR FLUID
SAMPLING, TESTING, DIAGNOSING,
AND DISPENSING.



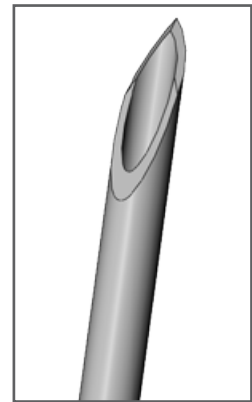
DON'T SEE WHAT YOU'RE LOOKING FOR?
SEE OUR CONFIGURE-TO-ORDER SECTION ON PAGE 30.





Hypodermic Needles

Cat No.	Gauge	Length	Pack Size	Cat No.	Gauge	Length	Pack Size
Regular Gauge				4056	20G	1"	
4000	27G	1/4"		4058	20G	1 1/2"	12
4001	27G	3/8"		4059	20G	2"	
4002	27G	1/2"	12	4060	20G	2 1/2"	
4004	27G	3/4"		4065	19G	1 1/2"	
4005	27G	1"		4066	19G	2"	12
4009	26G	3/8"		4067	19G	3"	
4010	26G	1/2"	12	4070	18G	1"	
4013	26G	1"		4071	18G	1 1/2"	12
4014	26G	1 1/2"		4072	18G	2"	
4017	25G	3/8"		4075	17G	2"	12
4019	25G	5/8"		4076	17G	3 1/2"	
4021	25G	1"	12	4090	15G	3 1/2"	12
4022	25G	1 1/2"		4093	13G	3 1/2"	12
4023	25G	2"		Ultra Fine Gauge for Laboratory Applications			
4027	24G	5/8"		4111	33G	1/4"	
4028	24G	3/4"	12	4112	33G	3/8"	12
4031	24G	1 1/2"		4113	33G	1/2"	
4034	23G	1/2"		4108	32G	1/4"	
4035	23G	5/8"		4109	32G	3/8"	12
4036	23G	3/4"		4110	32G	1/2"	
4037	23G	1"	12				
4039	23G	1 1/2"					
4040	23G	2"					
4043	22G	1"					
4045	22G	1 1/2"	12				
4046	22G	2"					
4047	22G	3"					
4050	21G	1"					
4051	21G	1 1/4"	12				
4052	21G	1 1/2"					

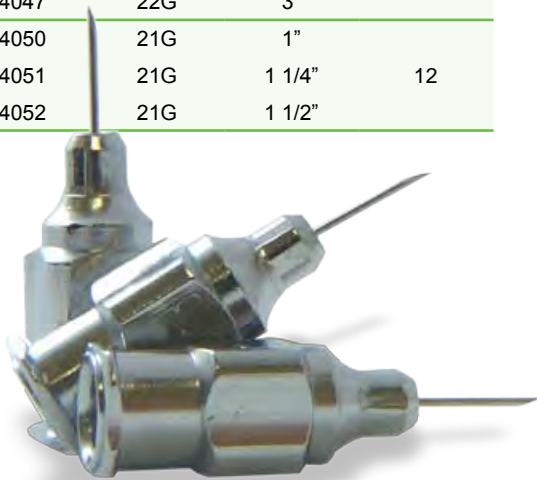


15° Bevel

Hypodermic Needles

Cadence Science® hypodermic needles are precision made and designed to ensure strict adherence with U.S. Government specification GG-N-196. Points are machine ground to achieve uniform sharpness. Precision grinding, micro-bead jet blasting, and ultrasonic cleaning assure freedom from burrs and debris. All needle cannula are fabricated of type 304 stainless steel tubing which must pass our rigorous in-plant quality control prior to acceptance and use.

Standard luer hubs comply with luer taper specifications ISO 594. This assures an interchangeable fit mating with luer slips and luer locks. Contoured hub cavity facilitates cleaning.



NEEDLES

NEEDLES

Deflected Point Septum Penetration Needles

Cat No.	Gauge	Length	Pack Size
Micro-Mate® Hub with 316 Stainless steel Tubing			
9866	22G	6"	12
9862	20G	1"	
9863	20G	6"	12
9864	20G	8"	
9865	20G	12"	
9860	18G	6"	12
9861	18G	12"	
Standard Hub with 304 Stainless Steel Tubing			
4165	26G	1/2"	12
4170	25G	1"	12
4172	22G	1"	
4173	22G	1 1/2"	
4174	22G	2"	12
4175	22G	4"	
4176	22G	6"	
4180	21G	4"	12
4181	21G	6"	
4182	20G	1"	
4184	20G	2"	
4185	20G	4"	
4186	20G	6"	12
4187	20G	8"	
4855	20G	10"	
4188	20G	12"	
4189	19G	2"	
4190	19G	4"	12
4191	19G	6"	
4192	18G	1 1/2"	
4193	18G	2"	
4194	18G	4"	12
4195	18G	6"	
4854	18G	10"	
4196	18G	12"	
4850	16G	4"	
4851	16G	6"	12
4853	16G	12"	



Deflected Point Septum Penetration Needles

*Equivalent to BD Huber**

The deflected needle style features point positioning on the axis of the needle lumen. This improved point geometry provides easier penetration and minimizes coring and tracking (particularly with finer gauge needles).

** BD Huber is a registered trademark of Becton Dickinson and Company.*

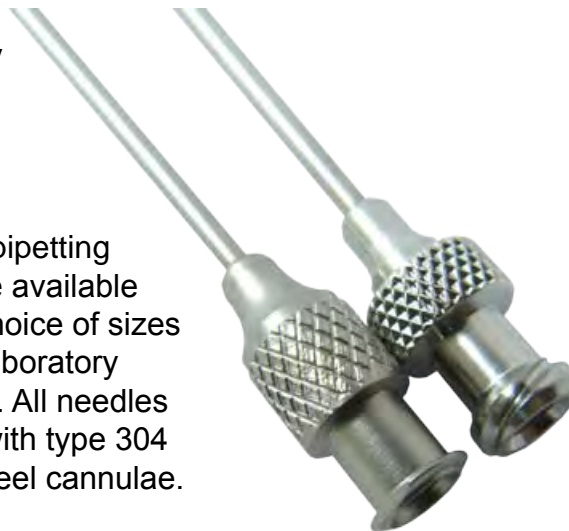


Laboratory Pipetting Needles with 90° Blunt Ends

Cat No.	Gauge	Length	Pack Size
Micro-Mate® Hub with 316 Stainless steel Tubing			
9876	20G	4"	12
9874	18G	2"	12
9875	18G	6"	12
9872	16G	4"	12
9873	16G	6"	12
9870	14G	4"	12
9871	14G	6"	12
Stainless Steel Hub with 304 Stainless Steel Tubing			
7950	20G	4"	12
7951	19G	4"	12
7952	18G	4"	12
7953	17G	4"	12
7954	16G	4"	12
7955	15G	4"	12
7956	14G	4"	12
7957	13G	4"	12
Standard Hub with 304 Stainless Steel Tubing			
7930	24G	1"	12
7931	22G	1 1/2"	12
7932	20G	1 1/2"	12
7933	20G	4"	12
7934	20G	6"	12
7935	18G	2"	12
7936	18G	4"	12
7937	18G	6"	12
7938	16G	2"	12
7939	16G	4"	12
7940	15G	4"	12
7941	14G	4"	12
7942	14G	6"	12

Laboratory Pipetting Needles

Cadence Science® pipetting needles are available in a wide choice of sizes for use in laboratory procedures. All needles are made with type 304 stainless steel cannulae.



Catalog numbers 7950 to 7957 needles are fitted with stainless steel hubs for special applications with corrosive materials or critical procedures. Catalog numbers 7930 to 7942 needles are fitted with standard nickel plated luer hubs. These needles are used in conjunction with both manual and automatic volumetric dispensers, dilutors, and pipettors.

For those applications requiring the use of plastic syringes with pipetting needles, **Cadence Science®** has developed the Micro-Mate® pipetting needle. These 90° blunt end needles are made with a 316 stainless steel cannula and a special 316 stainless Micro-Mate® female luer hub. These hubs provide a secure, leakproof mating of plastic luer tip syringes with metal luer pipetting needles.



NEEDLES

Cancer Implant Needles

Cat No.	Gauge	Length	Pack Size
7926	16G	3 1/4"	12
7927	13G	3 1/4"	12
7928	11G	3 1/4"	12

Cancer Implant Needles

Two piece needle set consists of a sharp pointed stainless steel outer cannula and a stainless steel blunt obturator which protrudes 3.2mm (1/8") beyond

the needle point. The needle provides a simple procedure to obtain and implant tumorous tissue cells beneath the skin of lab animals for observation while maintaining a sterile field.

Micro-Emulsifying Needles

Cat No.	Gauge	Length	Pack Size
With Reinforcing Bar			
7974	25G	2 7/8"	4
7975	22G	2 7/8"	4
7976	20G	2 7/8"	4
7977	18G	2 7/8"	4
7969	16G	2 7/8"	4
Without Reinforcing Bar			
7971	22G	2 7/8"	4
7978	20G	1 7/8"	4
7972	20G	2 7/8"	4
7979	18G	1 7/8"	4
7973	18G	2 7/8"	4

Micro-Emulsifying Needles

Widely used for allergens and the mixing of adjuvants and antigens, oil based liquids or any two liquid media differing in viscosity. By locking two syringes on to the double hub needle or double hub adapter, two liquids such as a mineral oil and an emulsifying agent may be readily pumped between the two syringes to produce a uniform mixture.

Indicated lengths are the overall length. Researchers and technicians utilize **Cadence Science®** Micro-Mate® 5mL and 10mL luer lock tip glass syringes for micro-emulsifying procedures. The outstanding quality

of the glass and the special secure luer locking tip provide quality and reliability.



With Reinforcing Bar



Without Reinforcing Bar



Dissolution Cannulae

Cat No.	Gauge	Length	Pack Size
9880	14G	4 3/8"	1
9881	14G	7 1/2"	1



Dissolution Cannulae

Ideal for drug dissolution testing. Drug dissolution testing is routinely used in the pharmaceutical industry to provide critical release information for quality control purposes, in new drug development, and to predict in vivo drug release profiles. These cannulae feature 316 stainless steel hub and tubing for maximum resistance to chemical reaction.

Veterinary Luer Needles

Cat No.	Gauge	Length	Pack Size
7200	22G	1/2"	12
7201	22G	3/4"	
7203	20G	1/2"	12
7263	19G	3"	12
7212	18G	1"	12
7215	18G	2"	
7238	18G	2 1/2"	
7239	18G	3"	
7220	16G	1 1/2"	
7221	16G	2"	12
7222	16G	3"	12
7268	15G	1 1/2"	
7271	15G	3"	
7227	14G	1 1/2"	12
7228	14G	2"	
7229	14G	3"	
7230	12G	1"	
7231	12G	1 1/2"	12
7232	12G	2"	
7233	12G	3"	



Veterinary Needles

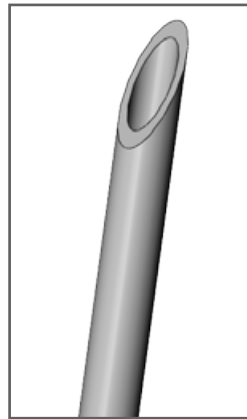
These hypodermic needles are all fitted with a large knurled chrome plated hub which allows for secure gripping even under the most difficult circumstances.

NEEDLES

NEEDLES

22° Bevel Matched Point Needle Sets

Cat No.	Gauge	Length	Pack Size
4300	26G	3 1/2"	1
4352	25G	3"	1
4301	25G	3 1/2"	1
4302	24G	3 1/2"	1
4303	22G	1 1/2"	1
4304	22G	2"	1
4305	22G	2 1/2"	1
4306	22G	3"	1
4307	22G	3 1/2"	1
4308	22G	4"	1
4354	22G	5"	1
4372	22G	6"	12
4373	22G	8"	12
4376	22G	9"	12
4374	22G	10"	12
4310	20G	2"	1
4311	20G	2 1/2"	1
4312	20G	3"	1
4313	20G	3 1/2"	1
4314	20G	4"	1
4315	20G	5"	1
4316	20G	6"	1
4319	19G	3"	1
4320	19G	3 1/2"	1
4321	19G	4"	1
4322	18G	3"	1
4323	18G	3 1/2"	1
4324	18G	4"	1
4325	18G	6"	1
4375	18G	7"	12
4371	18G	8"	12
4326	17G	3"	1
4327	17G	3 1/2"	1
4328	17G	4"	1
4329	17G	6"	1



22°



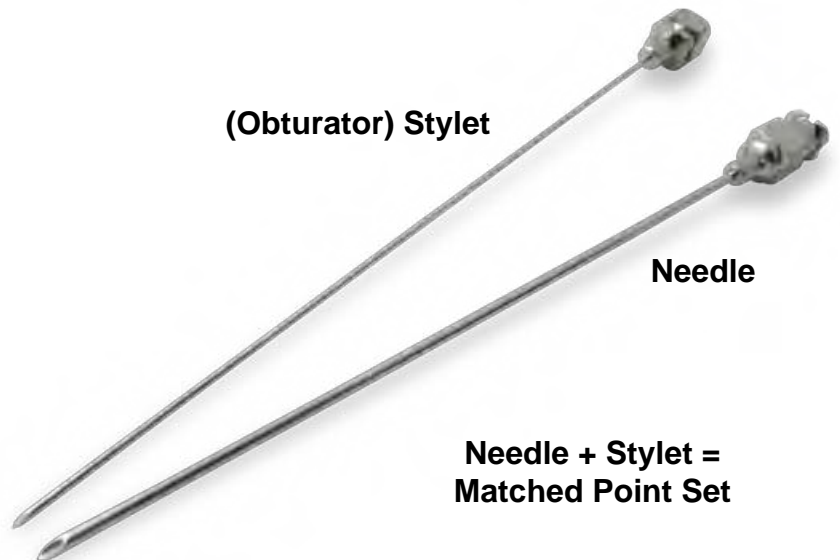
22° Bevel Matched Point Needles

These needle sets are manufactured to strict standards providing assurance of perfectly “matched bevels”. They incorporate type 304 stainless steel needles and stylets (obturators) to assure needle point strength, sharpness, and integrity of point geometry. The nickel plated brass hubs and stylet caps have matching serial numbers to facilitate matching after cleaning or sterilization. The point of the needle is aligned with the flat of the hub. The hub slot and cap guide are aligned with the point of the needle for easier orientation.

(Obturator) Stylet

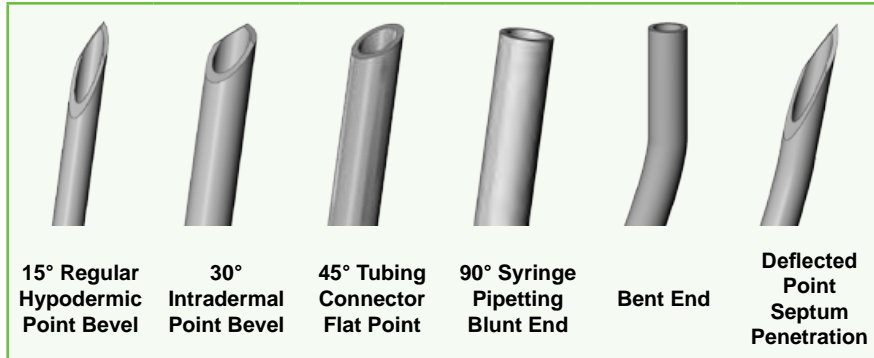
Needle

Needle + Stylet = Matched Point Set

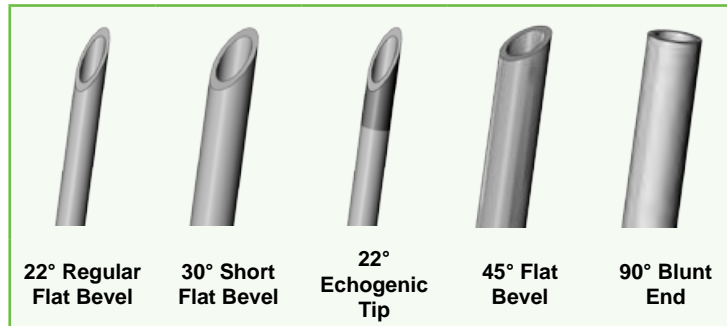


POINT STYLES

Standard Needle Tip Styles



Matched Point Tip Styles



HUB STYLES

	Standard Female 5/16" Luer Hub		Female Luer 304 Stainless Steel Hub
	Veterinary Female Luer Hub		Female Luer Kel-F Hub
	Webster Hose Hub for 3/16" to 1/4" I.D. Rubber or Plastic Tubing		Micro-Mate® Nickel Plated Brass Female Luer Hub (For mating plastic to metal luers w/o stripping)
	Female Luer to Male Luer Hub Fits Coaxially into a Female Luer Hub		Micro-Mate® 316 Stainless Steel Female Luer Hub (For mating plastic to metal luers w/o stripping)

NEEDLES



CONFIGURE-TO-ORDER NEEDLES











Catalog products that can be configured to your specifications include:

- Hypodermic Needles
- Perforated Needle Sets
- Matched Point Needle Sets
- Cannulae
 - 90° Blunt End Cannulae
 - Pointed Cannulae - Regular Wall
 - Pointed Cannulae - Thin Wall

Design Your Own Needle

- **Catalog Number**
- **Gauge** - Regular or Thin Wall Tubing
- **Length** - Specify Exact Length
- **Point Style**
- **Minimum Order** - 12 of the same configuration

Custom Fabricated Perforated Needle Sets

Cat No.	Description	
4430	Single Hole Closed Pencil Point	
4431	Single Hole Closed 45° Bevel Point	
4432	Single Hole Closed Round End	
4433	Single Hole Closed Trocar Point	
4434	Single Hole Closed 22° Bevel Point	
4435	Single Hole Open 30° Bevel Point	
4436	3 Single Holes Closed Trocar Point	
4437	Thru Hole Open 22° Bevel Point	
4438	3 Single Holes Closed Pencil Point	
4439	Side Hole Dead Volume Pencil Point	

Configure-to-Order as Easy as...

1. Select Catalog Number (Point Style)
2. Select Gauge - Regular or Thin Wall Tubing
3. Specify Needle Length
4. Specify Quantity

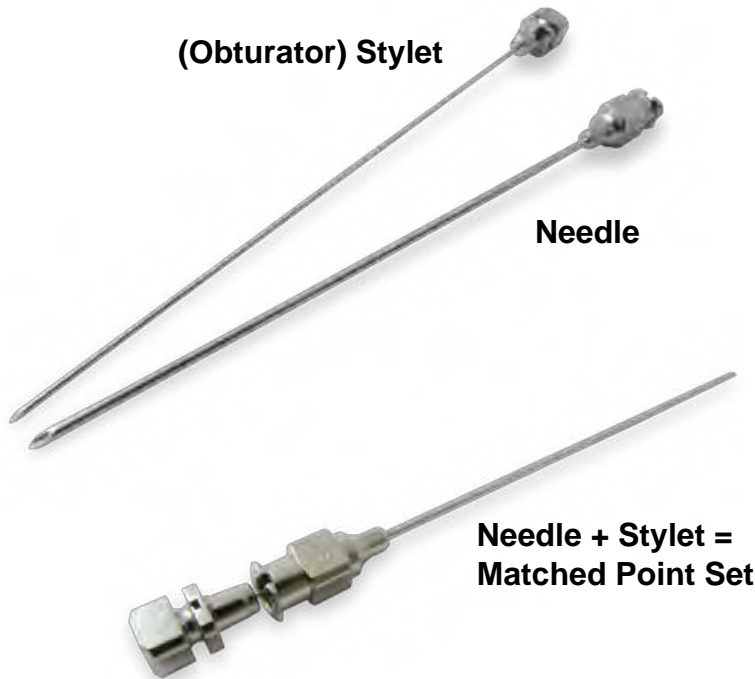
Example = 4435 - 20G X 7" Qty. 35

- All hubs are nickel plated and comply with ISO 594 specifications
- Minimum order is 12 of the same configuration.

NEEDLES

NEEDLES

Custom Made Matched Point Sets



Configure-to-Order as Easy as...

1. Select Catalog Number
2. Select Gauge - Regular or Thin Wall Tubing (26G to 10G)
3. Specify Needle Length (1/2" to 9")
4. Specify Quantity

Example = 4420 - 22G X 5"
Qty. 12

- Minimum order is 12 sets of the same configuration

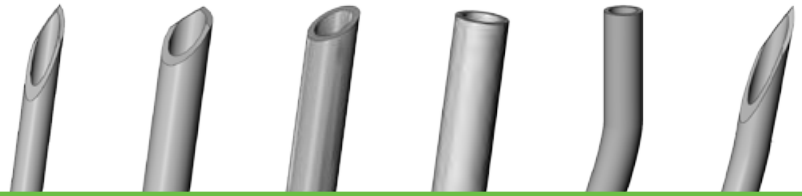


	22° Regular Flat Bevel	30° Short Flat Bevel	45° Flat Bevel	90° Blunt End	22° Echogenic Tip
Regular Wall 10G - 26G	4420	4421	4422	4426	4428
Thin Wall 12G - 25G	4423	4424	4425	4427	4429







- Type 304 stainless steel needles with stainless fitted stylets (obturators) with matched bevels
- Nickel plated needle lock hubs and obturator (stylet) caps with matching serial numbers
- All hubs are nickel plated and comply with ISO 594 specifications
- Point of needles aligned with flat of hub; hub slot and cap guide aligned with point of needle

NEEDLES

Custom Fabricated Hypodermic Needles



NEEDLES

	Cat. No Hub Style	15° Regular Hypodermic Point Bevel	30° Intradermal Point Bevel	45° Tubing Connector Flat Point	90° Syringe Pipetting Blunt End	Bent End*	Deflected Septum Point*
	4400 Standard Female 5/16" Luer Hub	32G to 6G	30G to 6G	32G to 6G	32G to 6G	27G to 10G	27G to 11G
	4401 Veterinary Female Luer Hub	24G to 10G	24G to 10G	24G to 10G	24G to 10G	24G to 10G	24G to 15G
	4402 Webster Hose Hub for 3/16" to 1/4" I.D. Rubber or Plastic Tubing	19G to 12G	19G to 12G	19G to 12G	19G to 12G	19G to 12G	19G to 12G
	4403 Female Luer to Male Luer Hub Fits Coaxially into #4400 Needles	25G to 15G	25G to 15G	25G to 15G	25G to 15G	25G to 15G	25G to 15G
	4404 Female Luer 304 Stainless Steel Hub	23G to 11G	23G to 11G	23G to 11G	23G to 11G	23G to 11G	23G to 11G
	4405 Female Luer Kel-F Hub	25G to 10G	25G to 10G	25G to 10G	25G to 10G	25G to 10G	25G to 15G
	4470 Micro-Mate® Nickel Plated Brass Female Luer Hub (For mating plastic to metal luers w/o stripping)	32G to 6G	30G to 6G	32G to 6G	32G to 6G	27G to 10G	27G to 11G
	4471 Micro-Mate® 316 Stainless Steel Female Luer Hub (For mating plastic to metal luers w/o stripping)	23G to 11G	23G to 11G	23G to 11G	23G to 11G	23G to 11G	23G to 11G

Note: * Deflected and Bent Needles - minimum length is 3/4"

Configure-to-Order as Easy as...

1. Select Hub Style
2. Select Gauge (Regular Wall is Standard)
3. Specify Needle Length (3/8" to 24" typical)
4. Select Point Style (Regular Hypodermic is Standard)
5. Specify Quantity

Example = 4403 - 18G X 4" with 30° point Qty. 24

- Hubs comply with ISO 594 specifications (excl. 4402)
- Minimum order is 12 of the same configuration.

NEEDLES

NEEDLES

Custom Cannulae - 90° Blunt End

Gauge Product No.	Length	Standard Tolerance
30G - 24G 4450 RW 4451 TW	3/8" - 1"	±.010"
	1 1/8" - 3"	±.015"
	3 1/8" - 6"	±.015"
23G - 16G 4450 RW 4451 TW	3/8" - 1"	±.010"
	1 1/8" - 3"	±.015"
	3 1/8" - 6"	±.015"
	6 1/8" - 9"	±.031"
	9 1/8" - 11 15/16"	±.031"
15G - 10G 4450 RW 4451 TW	3/8" - 1"	±.010"
	1 1/8" - 3"	±.015"
	3 1/8" - 6"	±.015"
	6 1/8" - 9"	±.031"
	9 1/8" - 11 15/16"	±.031"
9G to 6G 4450 RW 4451 TW	3/8" - 1"	±.010"
	1 1/8" - 3"	±.015"
	3 1/8" - 6"	±.015"
	6 1/8" - 9"	±.031"
	9 1/8" - 11 15/16"	±.031"

Configure-to-Order as Easy as...

1. Select Catalog Number
RW=Regular Wall
TW=Thin Wall
2. Select Gauge (30G to 6G)
3. Specify Needle Length
4. Specify Quantity

Example = 4450 - 15G X 3"
Qty. 12

- Minimum order is 12 of the same configuration.



**90° Blunt Tubes
Finished Ends**

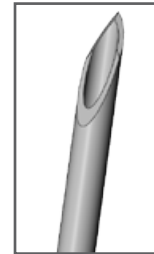
Custom Pointed Cannulae - Thin Wall

Gauge Product No.	Length	Standard Tolerance
25G - 16G 4461 TW	3/8" - 2 1/2"	±.015"
	2 5/8" - 5"	±.015"
	5 1/8" - 10"	±.031"
	10 1/8" - 12"	±.062"
15G - 10G 4461 TW	3/8" - 2 1/2"	±.015"
	2 5/8" - 5"	±.015"
	5 1/8" - 10"	±.031"
	10 1/8" - 12"	±.062"

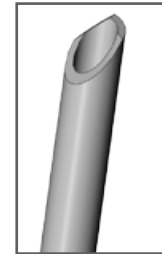
Custom Pointed Cannulae - Regular Wall

Gauge Product No.	Length	Standard Tolerance
30G - 24G 4460 RW	3/8" - 2 1/2"	±.015"
	2 5/8" - 5"	±.015"
	5 1/8" - 10"	±.031"
23G - 16G 4460 RW	3/8" - 2 1/2"	±.015"
	2 5/8" - 5"	±.015"
	5 1/8" - 10"	±.031"
15G - 10G 4460 RW	3/8" - 2 1/2"	±.015"
	2 5/8" - 5"	±.015"
	5 1/8" - 10"	±.031"
9G - 6G 4460 RW	3/8" - 2 1/2"	±.015"
	2 5/8" - 5"	±.015"
	5 1/8" - 10"	±.031"
	10 1/8" - 12"	±.062"

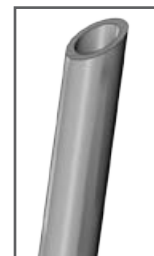
- For additional point configurations and other special fabrication services, consult our technical staff.
- Minimum order is 12 of the same configuration.



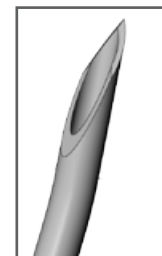
15°



30°



45°



**Deflected Point
Septum
Penetration**

Other Tip Styles Available

Configure-to-Order as Easy as...

1. Select Catalog Number
2. Select Gauge (30G to 6G)
3. Specify Needle Length
4. Select Point Style
5. Specify Quantity

Example = 4460 RW - 18G X 8" with 30° Point Qty. 20



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