



# Airless Nozzle Catalog

2016



# **Airless Nozzle Catalog**

Part 107963-08

Issued 12/19

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This comprehensive technical reference guide is designed to assist you in the selection, installation, use and proper maintenance of Nordson airless nozzles and nozzle accessories. Other technical information, including nozzle performance factors, airless safety precautions, English-to-metric conversion factors, etc., is also provided to help ensure superior performance and extend the product life of every Nordson component. Data and specifications included within this manual are accurate at the time of publication. Nordson reserves the right to make design changes to products and components to improve their function. These changes may occur between manual revisions. Nordson Corporation welcomes requests for information, comments and inquiries about its products.

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# Section A 1

## General Information

### Airless Safety Precautions



**WARNING:** Airless spray systems develop extremely high pressures. Severe injury or even death may result from coating materials being injected into skin.

- Never put your hand or fingers in front of an airless spray gun.
- Never point the spray gun at your body or anyone else.
- Never leave the spray gun pressurized when not in use or when unattended.
- Never attempt to back-flush the nozzle.
- Never place your hand, finger, or body over a hose leak.
- Never attempt to change a nozzle, or perform maintenance on any part of an airless spray system, without first releasing pressure throughout the system.
- Never operate an airless spray system if leaks are present in any component of the system.
- Never exceed the maximum rated pressure of any component of an airless system.
- At the end of a shift, always shut off the pump(s), discharge the contents of the spray gun(s) to release pressure, and lock the spray gun(s) in the off position if equipped with safety lock(s).

It is highly recommended that all users of airless equipment carry a NSEMA wallet card to present to a doctor in case an injection injury occurs. These cards are supplied with Nordson equipment, and additional cards are available free by ordering part number 247 648.

If an injection injury should occur, seek immediate medical attention at a hospital emergency room. **DO NOT** treat as a simple cut! Be ready to inform the emergency room doctor of the nature of the injury and the fluid injected.

## Airless Nozzles

Nordson Corporation manufactures three basic types of nozzles for airless spray guns: Cross-Cut®, dome, and conical. The Cross-Cut and dome nozzles produce a flat spray fan pattern, while the conical nozzles produce either a solid or hollow cone shaped pattern. These are all high quality carbide nozzles which provide excellent abrasion resistance and superior performance.

Turbulence plates (T-plates) and restrictors, which provide increased atomization at lower pressures and reduce nozzle wear, are available for use with most of these nozzles. Extensions, adapters, and swivel heads are available for many specialized applications.

In addition to the standard nozzles listed in Sections B1 through C12, nozzles can be custom-made to a customer's specifications for almost any application. Contact a Nordson representative for additional information.

## Nozzle Types

The information given here is intended to help the customer make an informed decision concerning the type and size of nozzle needed for a specific coating application. Nozzles are generally classified by type, flow rate, and pattern width.

Flat spray nozzles are produced in two basic designs: Cross-Cut and dome. Figure 1 illustrates the different nozzle geometries. A brief description of the different types of Cross-Cut and dome nozzles follows.

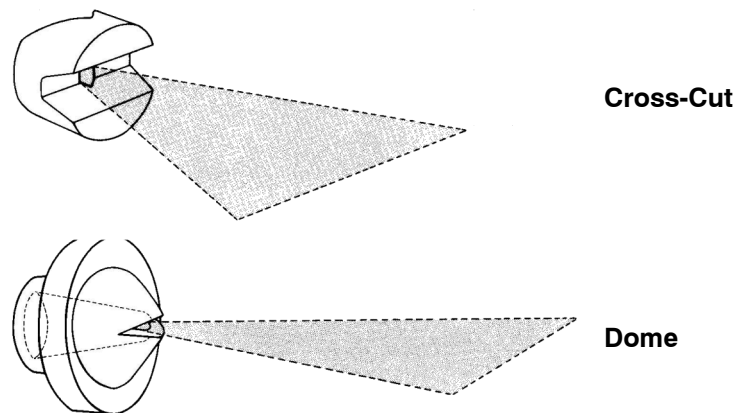


Figure A 1-1 Nozzle Types

## ***Cross-Cut Nozzles***

Cross-Cut nozzles are available in a wide variety of different types for use in almost any application. These nozzles have many advantages over standard dome type nozzles, including: wider fan patterns, lower flow rates, improved atomization at lower pressures, better resistance to plugging, and longer life. Cross-Cut nozzles are available in the following configurations:

- **Flange Cross-Cut Nozzles** – are for general use in a wide variety of applications, and are available in the greatest variety of flow rates and fan patterns. They can be used on most automatic and manual airless spray guns with flange type mounts.
- **Miniature Hex Cross-Cut Nozzles** – are relatively small in size and incorporate an integral swivel nut. Special adapters can be made upon request to attach these nozzles to A16A and A9A spray guns.
- **Insert Cross-Cut Nozzles** – are used primarily for internal coating of containers, tubes and cylinders. Valved or unvalved extensions or adapters can be used to adapt these nozzles to any spray gun that uses flanged nozzles.
- **Miniature Insert Cross-Cut Nozzles** – are used where a very small nozzle is required, usually for internal coating of containers, tubes and cylinders. They are particularly useful for multiple-orifice custom nozzles.
- **Tube Lining Cross-Cut Nozzles** – are used primarily for coating small cans and tubes. Their small size makes them ideal for coating areas that cannot be reached with conventional nozzles. A valved or unvalved extension can be used to adapt them for use with most airless spray guns with flange-type mounts.
- **Can Lining Cross-Cut Nozzles** – are used with A9A and A16A spray guns, primarily for inside striping of welded cans. With an adapter, they can be used on any spray gun that uses a standard flange mount.
- **A7AA Air-Assisted Airless Spray Gun Cross-Cut Nozzles** – are used for spraying highly-viscous and difficulty-to-atomize coatings and adhesives with air-assisted airless products.
- **Kinetix® and Prism® Cross-Cut Nozzles** – are used exclusively on Nordson Prism airless and air assisted airless spray guns.
- **Tapered Cross-Cut Nozzles** – are produced specifically for the container market. They have a tapered shape to provide ease of cleaning when used in conjunction with the CleanSpray® system. These nozzles provide close tolerance flow ( $\pm 2\%$ ) and pattern ( $\pm 7.5\%$ ) and are tested under typical container inside spray conditions.
- **CleanSpray® Cross-Cut Nozzles** – are generally mounted on a CleanSpray spray gun with the nozzle output directed toward the coating nozzle to provide a cleaning function.

## **Dome Nozzles**

Dome-style nozzles are the most commonly used type of airless flat spray nozzle. They are effective for thin, easy-to-atomize materials. Atomization quality and pattern uniformity can be affected by variations in the geometry of the inner dome cavity and surface finish.

Dome nozzles are available in the following configurations:

- **Kinetix and Prism Dome Nozzles** – are used exclusively on Nordson Prism airless and air assisted airless spray guns.
- **Flange Dome Nozzles** – are for general use in a wide variety of applications. They have a flow rate tolerance of + 5%. They are available in the widest variety of flow rates and pattern widths and can be used with most automatic and manual airless spray guns with flange-type mounts.
- **Close-Tolerance Controlled-Pattern Flange Dome Nozzles** – are used where extremely accurate control of the fluid flow rate and a non-symmetrical pattern distribution is required.
- **Minimum Cavity Flange Dome Nozzles** – are for general use in a wide variety of applications, and should be used where a clean nozzle cutoff is required. They are available in a variety of flow rates and pattern widths and are flanged so they can be used on the same spray guns as the standard dome flange nozzles.
- **Close-Tolerance Insert Dome Nozzles** – The primary application for insert type nozzles is the inside coating of containers, tubes and cylinders. These nozzles can be used, with the addition of a valved or unvalved extension, or an adapter, on any spray gun that uses a flange type nozzle. Their flow rate tolerance is less than  $\pm 2\%$ .
- **Miniature Insert Dome Nozzles** – These are used in applications where a very small nozzle is required. They are particularly useful for multiple-orifice custom nozzles.
- **Container Close-Tolerance Tapered Dome Nozzles** – are used where extremely accurate control of the fluid flow rate is required. Their flow rate tolerance is less than  $\pm 2\%$ . These nozzles are produced specifically for the Container market. They have a tapered shape to provide ease of cleaning when used in conjunction with the Nordson CleanSpray system.
- **CleanSpray Dome Nozzles** – are primarily used on the Nordson CleanSpray gun. However, they can be used on any flange-mount type of spray gun.
- **A7AA Air-Assisted Airless Dome Nozzles** – are primarily used for spraying highly-viscous and difficult-to-atomize coatings and adhesives with the air-assisted airless process.
- **Dual Dome Nozzles** – are primarily used on inside spray applications for total coverage.

### Cross-Cut and Dome Nozzle Sizes

The following chart shows the range of sizes in which the Cross-Cut and dome nozzles are available. Cross-Cut nozzles have the greatest size range, and can be made with smaller flow rates and wider patterns.

		■ Cross-Cut Nozzles	■ Cross-Cut or Dome Nozzles	■ Dome Nozzles											
		Pattern Width (inches)													
		2	4	6	8	10	12	14	16	18	20	22	24	26	28
Flow Rate (Gallons/ Minute @ 500 PSI)	0.0038	■	■	■											
	0.0075	■	■	■	■	■	■	■							
	0.0150	■	■	■	■	■	■	■	■	■					
	0.0300	■	■	■	■	■	■	■	■	■	■				
	0.0400	■	■	■	■	■	■	■	■	■	■	■	■		
	0.0600	■	■	■	■	■	■	■	■	■	■	■	■	■	
	0.0900	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	0.1400		■	■	■	■	■	■	■	■	■	■	■	■	■
	0.2000		■	■	■	■	■	■	■	■	■	■	■	■	■
	0.3000			■	■	■	■	■	■	■	■	■	■	■	■
	0.4500			■	■	■	■	■	■	■	■	■	■	■	■
	0.6800					■	■	■	■	■	■	■	■	■	■
	1.0000						■	■	■	■	■	■	■	■	■
	1.2500								■	■	■	■	■	■	■
	1.5000									■	■	■	■	■	■



## Conical Nozzles

Conical nozzles are available with either a solid or hollow cone-shaped fan pattern. These fan patterns are shown below.

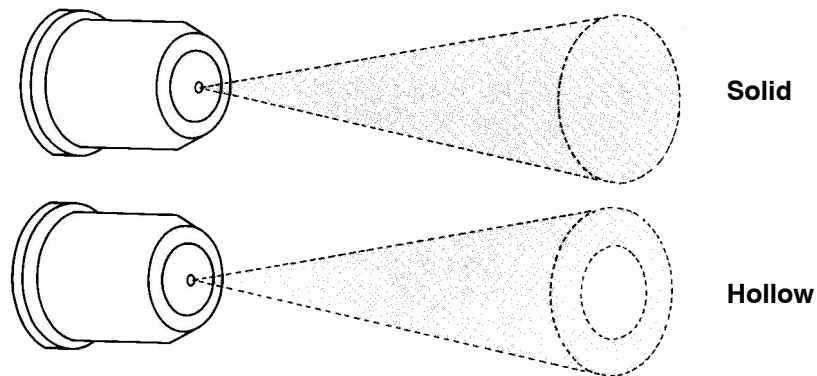


Figure A 1-2 Conical Nozzle Fan Patterns

Conical nozzles are available in the following configurations:

- **Conical Flange Mount Nozzles** – are available with either hollow or solid patterns, and can be used on most automatic and manual airless spray guns with flange mounts.
- **Miniature Conical Nozzles** – are available with either hollow or solid cone patterns. They can be adapted to any flange-mount spray gun by using a P/N 042 XXX extension (Refer to Section F). Their many applications include the internal coating of small tubes and containers.

## Pre-Atomization Devices

Pre-atomization devices are either turbulence plates (T-plates) or restrictors. They create turbulence in the fluid flow upstream from the nozzle, promoting complete atomization of the fluid and producing a small, uniform particle size. Pre-atomization devices should be used where a fine finish is required, or where complete atomization is difficult to obtain with a nozzle alone. Refer to the chart at the end of this section for suggested pre-atomization devices and filter screens to be used with different flow rate nozzles.

### T-Plates

Turbulence plates (T-plates) have either a Type I or Type II carbide orifice. Refer to the explanation of carbide types in *Reading The Nozzle Charts* on page A 1-26. T-plates are used only with internally threaded dome nozzles, with a few exceptions. They are threaded to screw into the back of the nozzle adapter, and are available in two thread sizes.

## Restrictors

Restrictors are available for most nozzles with Type I and Type II carbide orifices. Crystal restrictors are available for Kinetix and Prism nozzles. For a chart of available restrictors see the *Filter Screen, Turbulence Plate and Restrictor Selection Chart* on page A 1-20.

## Technical Data

### Nozzle Performance Factors

Many factors affect the performance of a particular nozzle. Some of these factors include fluid pressure, viscosity, temperature, and whether or not a pre-atomization device is used. The following chart shows the effect these factors have on the nozzle pattern.

FACTOR	Pattern Width	EFFECT ON PATTERN			Spray Velocity
		Atomization Quality	Flow Rate	Orifice Wear	
Pressure Increase	Increases	Increases	Increases	Increases	Increases
Viscosity Increase	Decreases	Decreases	Decreases	Decreases	Decreases
Temperature Increase	Increases	Increases	Increases	Decreases <sup>1</sup>	Increases
Add T-Plate Or Restrictor	Decreases	Increases	Decreases	Decreases	Decreases

Note 1 – Most solvent-based and some waterborne coatings exhibit a reduced viscosity and surface tension when heated, allowing the fluid pressure to be reduced. This in turn reduces nozzle and system component wear.

## Flow and Pressure Relationship

The most influential factor affecting flow rates is pressure. Theoretically, the flow rate varies as the square root of the pressure, if all other factors are neglected. The nozzle selection charts show flow rates for nozzles spraying water at 500 PSI (35 kg/cm<sup>2</sup>). The following table gives factors used to calculate the theoretical flow rate of a nozzle at different pressures.

Pressure (PSI)	100	200	300	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000	2500	3000	3500	4000
Pressure (kg/cm <sup>2</sup> )	7	14	21	28	35	42	49	56	63	70	84	98	112	127	140	176	211	245	280
Factor	0.45	0.63	0.77	0.89	1.00	1.10	1.18	1.26	1.34	1.41	1.55	1.67	1.79	1.90	2.00	2.24	2.45	2.64	2.82

To use this table:

1. Find the pressure to be used in PSI or kg/cm<sup>2</sup>.
2. Read down the column to find the factor for the desired pressure.
3. Multiply the flow rate of the nozzle by the factor to obtain the new flow rate.

For example: A .09/16 nozzle has a flow rate of .09 GPM at 500 PSI. The coating material is to be sprayed at 1000 PSI. The factor for 1000 PSI is 1.41.

$$0.09 \times 1.41 = .1269 \text{ GPM}$$

The .09/16 nozzle will have a flow rate of 0.1269 GPM at 1000 PSI.

### Theoretical Flow Rate Formula

For pressures not given in the preceding chart, use the following formula:

$$Q_2 = Q_1 \sqrt{\frac{P_2}{P_1}}$$

where: Q1 is a known flow rate at P1, a known pressure; Q2 is the new flow rate at P2, the new pressure.

For example: Determine the flow rate of a nozzle rated at .09 GPM at 500 PSI, if the coating material is to be sprayed at 2300 PSI.

$$Q_1 = .09 \text{ GPM (rated flow at } P_1)$$

$$P_1 = 500 \text{ PSI (rating pressure)}$$

$$P_2 = 2300 \text{ PSI (new pressure)}$$

$$Q_2 = .09 \sqrt{\frac{2300}{500}} = .19 \text{ GPM}$$

## ***T-Plate or Restrictor Effect***

When a T-plate or restrictor is used with an airless nozzle, a reduction in both flow rate and pattern width will normally occur. The following table is intended to serve as a guide only. Actual flow rates will vary depending on coating materials, application conditions, and nozzle and pre-atomization device tolerances.

**NOTE:** Values given are gallons-per-minute of water at 500 PSI, using the restrictor or T-plate recommended for the nozzle. Refer to the *Filter Screen, Turbulence Plate, and Restrictor Selection* chart on page A 1-20.

<b>Nozzle Flow Rate</b>	<b>Nominal Flow w/T-Plate</b>	<b>Nominal Flow w/Restrictor</b>
.015	.013	.014
.030	.025	.025
.040	.034	.033
.060	.051	.051
.090	.076	.077
.140	.118	.105
.200	.169	.161
.300	.255	.258
.450	.380	.386
.680	.575	.586
1.000	.850	—
1.250	1.060	—
1.500	1.270	—

## Pattern Width

In choosing a nozzle for a specific application, a major consideration is the pattern width produced by the nozzle. Although pattern widths can be calculated by measuring the angle at which the material emerges from the nozzle orifice, this angle is only theoretical.

Actual pattern widths are influenced by a number of factors. As the distance from the nozzle to the substrate increases, the effective angle decreases. By the time a typical ten-inch spray distance is reached, there is a substantial difference between the actual and theoretical pattern widths.

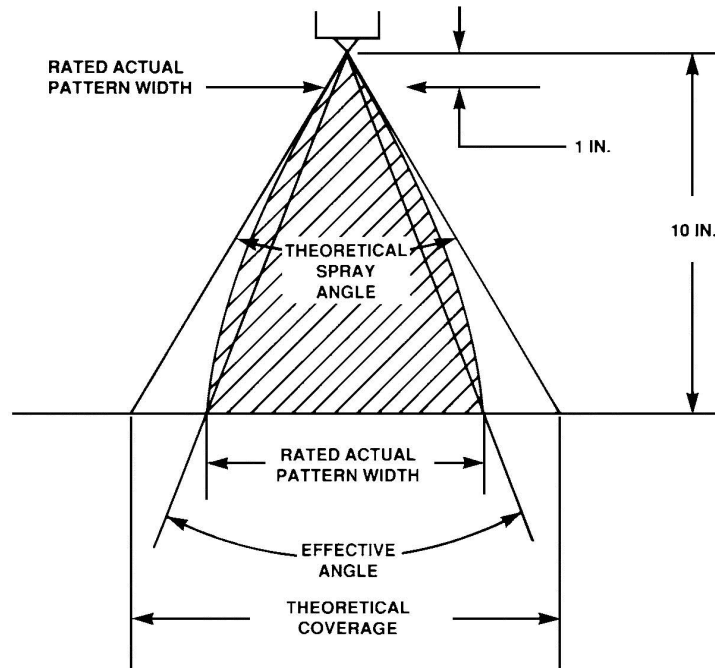


Figure A 1-3 Theoretical Versus Actual Pattern Width and Angle

As is shown in Figure A 1-3, nozzles with actual spray test distances of one inch (25.4mm) have a spray angle that closely corresponds to the theoretical spray angle. As the distance to the substrate increases, the effective angle decreases. Nozzles with an actual test spray distance of ten inches (254mm) have a theoretical angle greater than the effective spray angle.

The following chart gives approximate theoretical spray angles for a range of nominal pattern widths. This chart is included only as a guide. Nozzle pattern widths and angles vary with coating materials and application conditions.

Nominal Pattern Width at 10 Inches	Nozzle Theoretical Spray Angle (Degrees)	Actual Pattern Width (Inches)							
		Tested at 1 inch or less				Tested at 10 inches			
		1/4 in.	1/2 in.	3/4 in.	1 in.	6 in.	8 in.	10 in.	12 in.
2	20	—	—	.290	.37	1.2	1.6	2.0	2.4
4	37	—	.37	.50	.70	2.4	3.2	4.0	4.8
6	53	.25	.50	.75	1.00	3.6	4.8	6.0	7.2
8	67	.34	.67	1.00	1.33	4.8	6.4	8.0	9.6
10	79	.41	.83	1.24	1.65	6.0	8.0	10.0	12.0
12	90	.50	1.00	1.50	2.00	7.2	9.6	12.0	14.4
14	98	.57	1.15	1.73	2.30	8.4	11.2	14.0	16.8
16	106	.66	1.33	2.00	2.65	9.6	12.8	16.0	19.2
18	112	.74	1.48	2.22	2.97	10.8	14.4	18.0	21.6
20	117	.82	1.64	2.29	3.27	12.0	16.0	20.0	24.0
22	122	—	—	—	—	13.2	17.6	22.0	26.4
24	126	—	—	—	—	14.4	19.2	24.0	28.8
26	130	—	—	—	—	15.6	20.8	26.0	31.2
28	133	—	—	—	—	16.8	22.4	28.0	33.6

**NOTE:** Nozzles are given nominal pattern widths and flow rates only to provide a comparative guide. Always refer to the actual spray test results for an accurate description of the nozzle performance, using the test conditions specified. Any deviation from the test conditions may result in performance that greatly varies from the data given in the catalog.

The nominal nozzle size is given in the first column of each of the nozzle charts and is shown, for example, as .02/06. The number to the left of the slash is the flow rate of water in gallons per minute at 500 PSI. The number to the right of the slash is the nominal pattern width at a ten-inch distance.

### Controlled Pattern Nozzles

Controlled pattern nozzles produce a non-symmetrical film build, with a larger buildup of material on one side of the fan pattern than on the other. This is illustrated in the following figure.

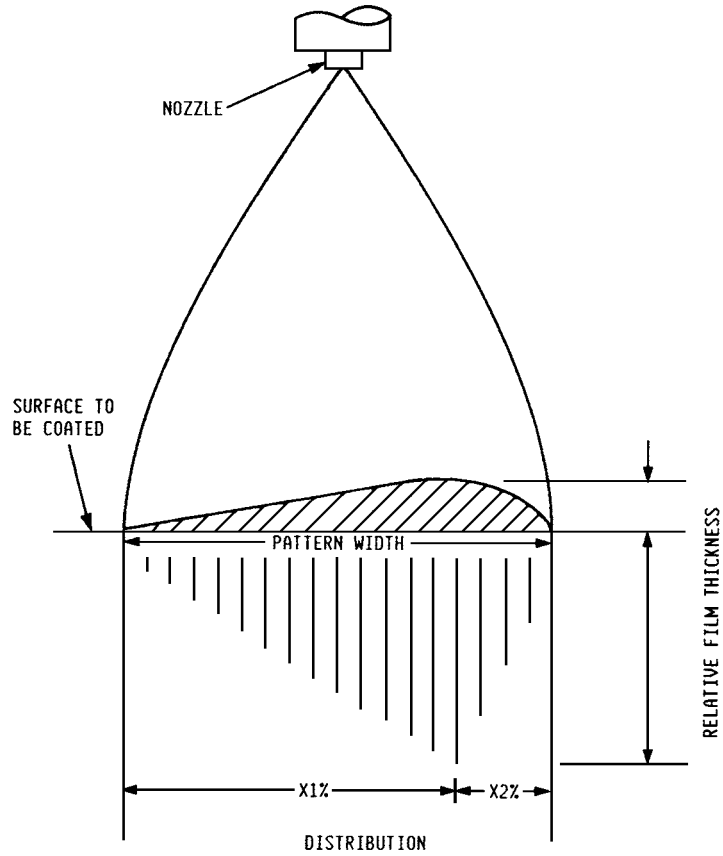


Figure A 1-4 Controlled Pattern Nozzles

These nozzles are available with the following distributions. The letter code refers to the footnote used in the nozzle charts.

Code	X1%/X2%
A	90/10
B	80/20
C	70/30
D	60/40
X	Custom pattern

Custom patterns can be made for specific applications. Call for specifications.

## Heavy Center Pattern Nozzles

Special Cross-Cut can lining and miniature hex nozzles produce a pattern in which the film build is heavier in the center than on the edges. The following illustration shows the pattern distribution of these nozzles.

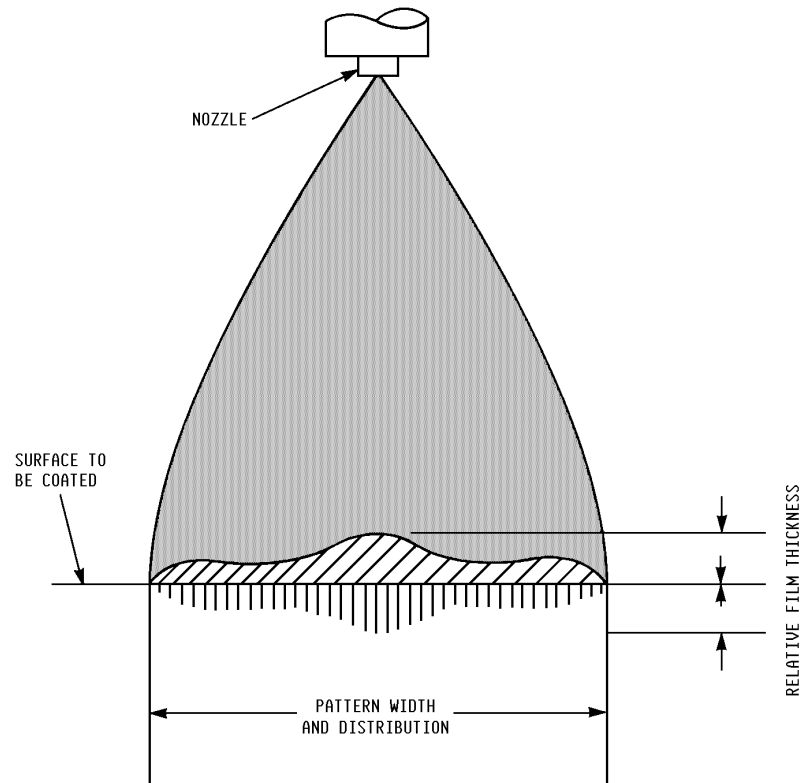


Figure A 1-5 Heavy Center Pattern Nozzles



## Square Pattern Nozzles

Special Cross-Cut nozzles produce a pattern in which the film build is consistent across the pattern width. The following illustration shows the pattern distribution of these nozzles.

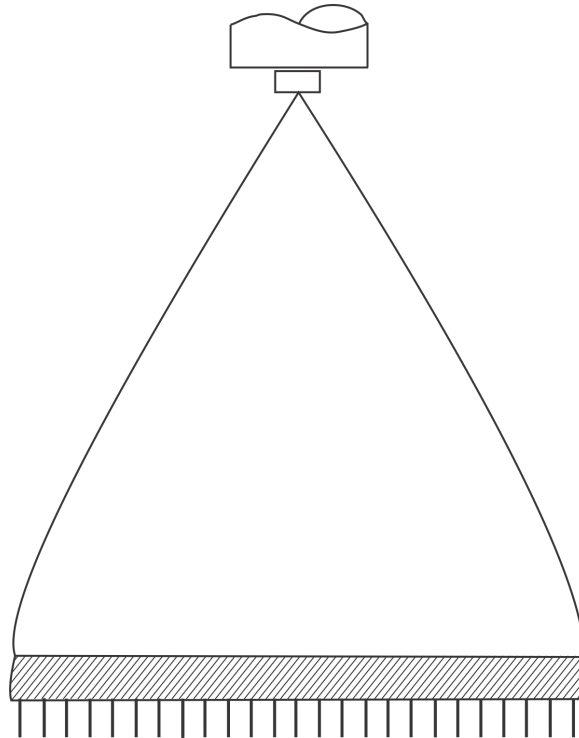


Figure A 1-6 Square Pattern Nozzles

# Commonly Used Spray Gun/Nozzle Combinations

Catalog Section																						
Gun/Spray Device	Flange Cross-Cut	Miniature Hex Cross-Cut	Insert Cross-Cut	Miniature Insert Cross-Cut	Tube Lining Cross-Cut	Can Lining Cross-Cut	A7AA Air-Assisted Airless Cross-Cut	Kinetix and Prism Cross-Cut	Tapered Cross-Cut	CleanSpray Cross-Cut	Kinetix and Prism Dome	Flange Dome	Close-Tolerance Controlled-Pattern Flange Dome	Minimum Cavity Flange Dome	Close-Tolerance Insert Dome	Miniature Insert Dome	Container Close-Tolerance Tapered Dome	CleanSpray Dome	A7AA Air-Assisted Airless Dome	Dual Dome	Flange Conical	Miniature Conical
A10A	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
A16A		O				X																
A20A	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
A4B	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
A7A	X		O	O	O		X		X			X	X	X	X	X	O	X		X	X	O
A7A Lance Ext. 170496	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
A9A		O				X																
CleanSpray			O	O	O					X							O		X			O
CleanSpray XT					X																	
Continuous Coater	X		O	O	O				X			X	X	X		X	O	X		X	X	O
MAG	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
MEG®	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
MEG II	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
MEG Inside Spray	X		O	O	O				X			X	X	X	X	X	O	X		X	X	O
Kinetix, Prism								X			X											

X = Standard nozzle for this gun/nozzle combination  
 O = Possible combination; an optional adapter may be required

## Care, Cleaning, and Installation

Nordson nozzles and pre-atomization devices (turbulence plates [T-plates] and restrictors) are made of tungsten carbide in a stainless steel holder. Tungsten carbide is very brittle, but withstands the abrasiveness of the coating material better than most other materials. Forcing hard objects such as knife blades, wires, etc. into the nozzle orifice will cause it to chip or crack. A small chip or crack in an orifice will be magnified many times in the spray pattern, resulting in costly rejects.

The nozzles and pre-atomization devices must be installed correctly and cleaned properly at regular intervals to provide maximum life and optimum performance.

## **Nozzle Care**

- Always install turbulence plates or restrictors correctly. Refer to *Turbulence Plate Installation* on page A 1-17.
- Clean nozzles and pre-atomization devices daily with solvent and a nozzle brush or equivalent.
- Use nozzle broaches to remove contaminants that cannot be removed with a brush. Refer to the following instructions for proper use of nozzle broaches.
- Thoroughly clean nozzles before extended storage.
- Store nozzles temporarily in a small, closed container of solvent, or clean immediately.
- Maintain ONE proper storage place for nozzles to prevent loss.
- Never clean a nozzle with a wire brush, sharp instrument (other than the correct nozzle broach or probe), wires, or acids. Damage to the nozzle could result.
- Never leave coating material in an unused nozzle. The coating material will cure in the nozzle, making it difficult to clean.
- Never over- or under-tighten turbulence plates when installing them into nozzle adapters.
- Never operate spraying systems at pressures higher than necessary to properly atomize coating material. Doing so will shorten the life of the nozzle.

## **Nozzle Cleaning Tools and Procedures**

### **Tools**

**Nozzle Brush** – a soft bristle brush with a wooden handle.

**Broaches** – broaches are machined steel and are available in two sizes: 0.003 in. for use with .03 to .09 flow rate nozzles, and 0.008 in. for use with .14 and above flow rate nozzles. They are sold in vials of ten.

**Probes** – probes are thin wire probes that are inserted into a pin vise. They are available in four sizes:

Probe Size	Nozzle Flow Rate
0.003 in.	.03 and .04
0.07 in.	.06 to .30
0.011 in.	.45 and above
0.014 in.	Large flow rate nozzles used for sealers, mastics, and glue.

Probes are sold in vials of 25. A kit is available that includes a pin vise, and 0.003, 0.007, and 0.011 inch probes. Refer to Section F for part numbers and ordering information.

## **Cleaning Procedures**

1. Remove the nozzle from the spray gun. Remove the pre-atomization device, if used, from the nozzle.
2. Soak the nozzle and pre-atomization device in solvent. Using an ultrasonic cleaner will help loosen cured coating material.
3. Use a nozzle cleaning brush to clean the nozzle. **DO NOT** use a steel, or any other type of brush, to clean nozzle as the carbide tip may be damaged.
4. Examine the nozzle orifice with a magnifying glass. If material remains in the nozzle orifice, use a broach or probe to remove. Carefully insert the broach or probe into the orifice **AGAINST** the direction of fluid flow. **DO NOT** twist the broach or probe or try to clean the orifice with a sawing motion.
5. Using an OSHA approved blow gun, remove loosened contaminants from the nozzle by blowing air through the orifice **AGAINST** the direction of fluid flow.

## ***Turbulence Plate and Restrictor Installation***

### **Turbulence Plate Installation**

See Figure A 1-7.

Turbulence plates (T-plates) must be properly installed into nozzles if they are to perform as designed. If the T-plate is not snugly seated against the rear face of the carbide nozzle tip, the correct turbulence passage will not be formed, resulting in poor atomization or distorted patterns. If over-tightened, the T-plate and/or nozzle could be damaged.

1. Inspect the screw threads of the T-plate and interior of the nozzle to make sure that no foreign matter, hardened coating material, etc., is present that would prevent proper seating.
2. Make sure that the T-plate is oriented properly with respect to the nozzle. Holding the nozzle firmly in one hand, start threading the T-plate into the nozzle with the fingers of the other hand. **DO NOT** hold the nozzle with pliers, clamps or a vise.
3. When the screw threads are properly started, use a small screwdriver to turn the T-plate into the nozzle until firmly seated. **DO NOT** overtighten.

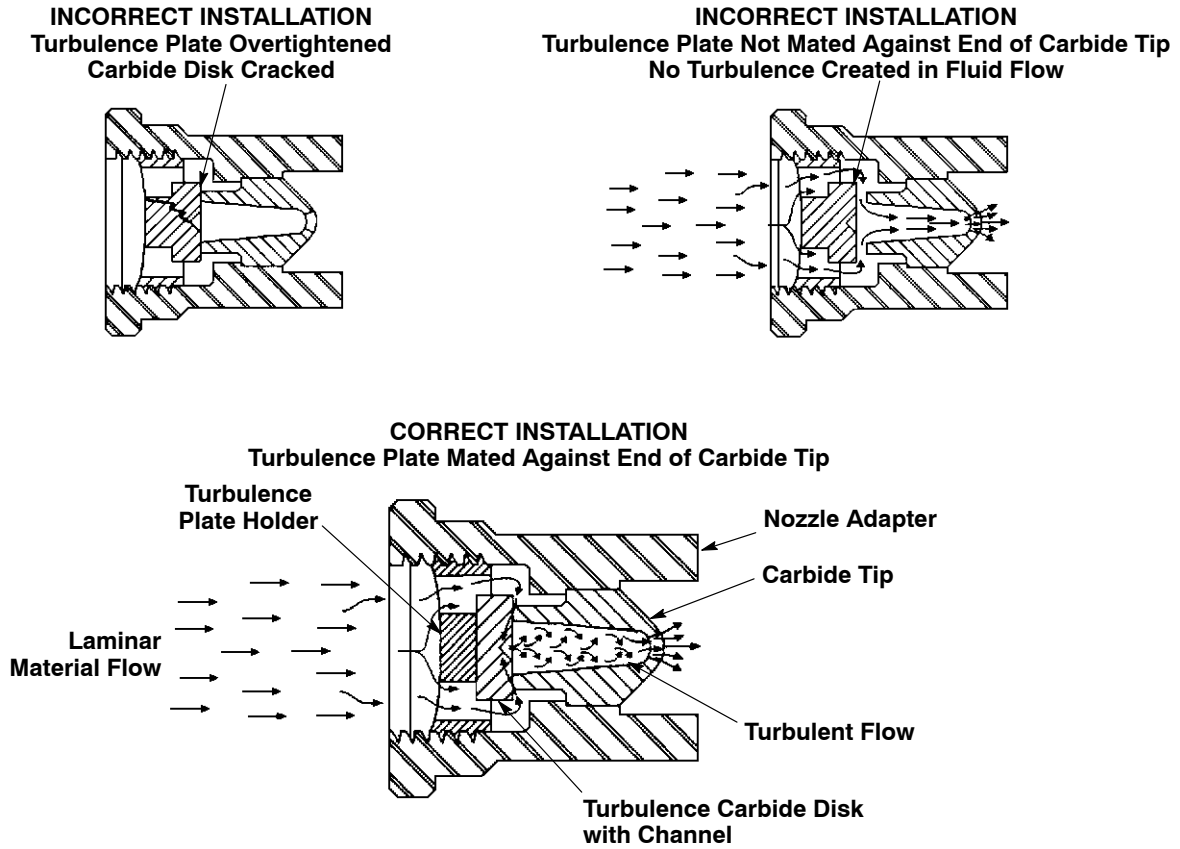


Figure A 1-7 Turbulence Plate Installation

### Restrictor Installation

1. Inspect the restrictor, nozzle, and the front of the spray gun to ensure that all mating parts are clean and free of foreign material.
2. Place the restrictor between the nozzle and the front of the spray gun and secure in place with the nozzle nut. Orientation of the restrictor is a matter of choice depending on the specific spray characteristics desired. Actual spray tests should be made to determine the best restrictor orientation.

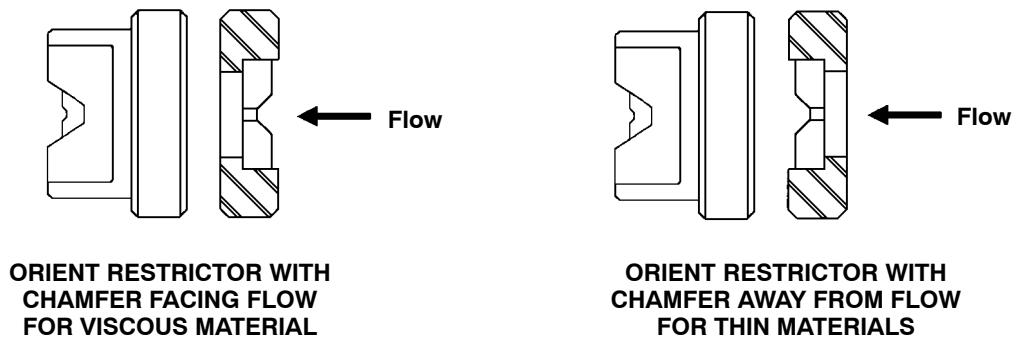


Figure A 1-8 Turbulence Plate Installation

If desired results cannot be obtained with the recommended pre-atomization device, try one a size smaller. The nozzle flow rate will be reduced an additional 10 to 15%, and the fan pattern width will be reduced an additional 2 inches at a 10 inch spray distance. The spray pattern, as shown in the following illustration, will become rounder and the edges will feather out more. This will sometimes allow better blending of spray patterns where they overlap.

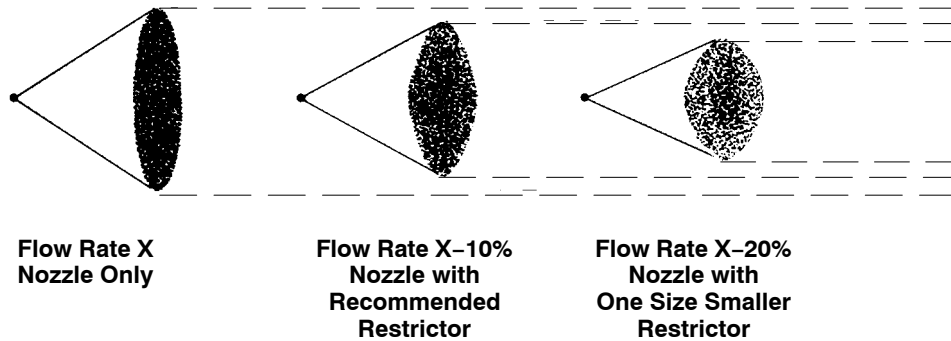












Figure A 1-9 Restrictor Size and Pattern Width Relationship

# Filter Screen/T-Plate/Restrictor Selection

Filter Screen, Turbulence Plate and Restrictor Selection Chart												
Nozzle Type	Turbulence Plates					Restrictors					Filter Screens	
	◆ Standard Flanged Dome Standard Tolerance	◆ Flanged Close Tolerance & Controlled Pattern Dome	◆ Standard, close Tolerance & controlled Pattern Flanged Dome	Threaded Cross-Cut & Dome Insert, Taper	Close Tolerance Threaded Cross-Cut & Dome Insert, Taper	Dome Minimum Cavity & Cross-Cut Flanged	Dome Minimum Cavity & Cross-Cut Flanged	Kinetix, Prism, Dome, & Cross-Cut	Flanged Restrictor	Flanged Restrictor	Nozzle with T-Plate	Nozzle with Restrictor
Orifice Material Type	Type 1 Carbide	Type 1 Carbide	Type 2 Carbide	Type 1 Carbide	Type 1 Carbide	Type 1 Carbide	Type 2 Carbide	Crystal	Type 1 Carbide	Type 2 Carbide	Recommended Filter Screen Size/Part No.	
Nozzle Flow Rating @ 500 psi												
<.015	n/a	n/a	n/a	n/a	027452	029010	115711	n/a ▲	029910	115678	■ .002 in. 161344	■ .002 in. 161344
.015	n/a	027352	105372	027452	027452	029010	115711	n/a ▲	029910	115678	■ .002 in. 161344	.002 in. 161102
.03	027003	027303	105373	027103	027403	029010	115711	123050	029910	115678	.002 in. 161102	.003 in. 161103
.04	027004	027304	105374	027104	027404	029012	115712	123051	029912	115720	.003 in. 161103	.004 in. 161104
.06	027006	027306	105375	027106	027406	029015	115713	123052	029915	115721	.004 in. 161104	.006 in. 161106
.09	027009	027309	105376	027109	027409	029018	115714	123053	029918	115722	.004 in. 161104	.009 in. 161109
.12	n/a	1068849	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
.14	027014	027314	105377	027114	027414	029020	115715	123054	029920	115723	.006 in. 161106	.012 in. 161112
.20	027020	027320	105378	027120	02742	● 029025 245992	115716	123055	029925	115724	.006 in. 161106	.015 in. 161115
.30	027030	027330	n/a	027130	02743	029033	115717	123056	029933	115725	.009 in. 161109	.020 in. 161120
.45	027045	n/a	n/a	027045	n/a	029040	115718	123057	029940	115726	.009 in. 161109	.020 in. 161120
.68	027068	n/a	n/a	n/a	n/a	029050	115719	n/a ▲	029950	115727	.012 in. 161112	.020 in. 161120
1.00	027075	n/a	n/a	n/a	n/a	n/a	n/a	n/a ▲	n/a	n/a	.015 in. 161115	.020 in. 161120
1.25	027080	n/a	n/a	n/a	n/a	n/a	n/a	n/a ▲	n/a	n/a	.015 in. 161115	.030 in. 161130
1.50	027085	n/a	n/a	n/a	n/a	n/a	n/a	n/a ▲	n/a	n/a	.020 in. 161120	.030 in. 161130

**NOTES:**  
 ◆ A blank turbulence plate, P/N 702616, may be used to reduce volume when a standard turbulence plate is not used.  
 ■ Optional screen assembly with .002 inch screen.  
 ● P/N 245992 restrictor is a square corner orifice for use with controlled pattern Cross-Cut nozzles.  
 ★ If mixed flow rate combinations are used in a system with a common filter, always size the filter for the smaller orifice.  
 ▲ Blank gasket P/N 122481 is available to eliminate the use of a restrictor when desired.

## ***Viscosity***

Coating material viscosity also affects flow rates and pattern widths. Viscosity is a liquid's resistance to flow. It is a measure of molecular motion, in that the greater the movement of molecules within a liquid, the less resistance there is to flow. The addition of heat to a liquid will increase its molecular motion. Viscosity may change as much as 10% per 1 degree centigrade change in the temperature of a liquid.

Viscosity readings are an important tool for controlling dry spray, the amount of dry film thickness, and runs and sags. Viscosity readings contribute to better control of the finishing process, and should be taken at the beginning of each shift, after lunch breaks, and whenever material is changed or added.

Viscosity can be measured using Zahn cups, among other devices. Zahn cups are simple devices which consist of a stainless steel cup of a known volume with a fixed orifice at the bottom. A long wire holder is attached to the cup. The temperature of the fluid is taken, then the Zahn cup is immersed in the fluid and the cup is filled. The cup is lifted from the fluid, and a stop watch is used to find the time it takes for all the fluid to drain out of the cup through the orifice.

This figure is the viscosity in seconds, which is translatable into absolute viscosity as measured in centipoise. The higher the viscosity in seconds (or centipoise), the more viscous the material. Highly viscous fluids will have a lower flow rate and narrower pattern width than less viscous materials.



## Solvents

### Solvent Factors

The factors assigned to each solvent are relative and should be used for comparison only. Temperature, humidity, etc. will cause the factors to change.

**Boiling Range** – The boiling range is the initial and end temperatures recorded while test boiling a solvent sample. The initial temperature is the temperature at which the solvent begins to boil. The end temperature is the temperature at which the solvent is boiled dry.

The initial temperature is an aid in determining the flash point of a solvent. The lower the initial temperature, the lower the flash point. The end temperature helps in determining the speed of evaporation. The lower the end temperature, the faster the solvent will totally evaporate.

**Speed of Evaporation** – The evaporation speed is stated in terms of minutes required for 0.5 cc of a solvent to evaporate from filter paper.

**Vapor Pressure** – Vapor pressure is the outward pressure exerted by a mass of vapor, at a given temperature, enclosed in a gas-tight vessel. It is measured by the increase in height of a column of mercury, caused by the pressure.

Solvent enclosed in a hot airless spray system cannot vaporize until released to the atmosphere. At the moment of atomization, paint and solvent are released to the atmosphere. The fast vaporization of the solvent aids the nozzle in atomization. The higher the vapor pressure, the greater the atomization.

**KB (Kauri Butanol) Value** – The KB Value refers to the maximum quantity, by volume, of a hydrocarbon solvent that can be added to a test solution of kauri gum in butyl alcohol before the solution fails.

The value determined by the test indicates the strength of the solvent. Toluol is considered to be the strongest, and is given a value of 105 (in recent years 100). All other hydrocarbon solvents decrease in value from this point.

**Toxicity** – The maximum allowable solvent vapor concentration is expressed in terms of parts of solvent vapor per million parts of air (PPM). The more toxic the solvent vapor, the lower the maximum allowable concentration. The higher the PPM number, the less toxic the solvent.

**Basic Solvent Data**

Factor values for the most commonly used solvents are given in this chart. If your solvent is not included in the following chart, or you do not know which solvents you are using, contact your supplier.

SOLVENT		Speed of Evaporation	Electrical Resistance	KB Value	Vapor Pressure @ 20°C MMHG	Boiling Range ° F	Flash Point °F TCC	Rule 66 Exempt
<b>Aliphatic Hydrocarbon</b>		N Butyl Ace = 1						
A	Hexane	8.1	> 20	28	140	150-158	0	YES
B	Cyclohexane	5.2	> 20	55	45	175-180	0	YES
C	Heptane	4.5	> 20	32	–	202-209	25	YES
D	VMGP naphtha	0.45	> 20	32	2	246-278	52	YES
E	Odorless mineral spirits	0.2	> 20	28	0.5	351-395	128	YES
<b>Aromatic</b>								
F	Toluene (Toluol)	1.5	> 20	105	38	230-233	45	NO
G	Xylene (Xylo)	0.75	> 20	98	9.5	280-288	90	NO
H	SC100	0.19	> 20	90	0.1	315-350	110	NO
I	SC150	0.04	> 20	90	0.1	360-400	140	NO
<b>Ketones</b>								
J	MEK — methyl ethyl ketone	4.6	0.2	–	70.6	172-176	24	YES
K	MIBK — methyl isobutyl ketone	1.6	0.4	–	16	237-24	61	NO
L	Diacetone alcohol, AF	0.14	< 0.1	–	1	293-342	120	NO
M	Cyclohexanone	0.31	< 0.1	–	7 at 30	313-316	112	YES
N	Isophorone	0.03	< 0.1	–	0.2	410-424	180	NO
<b>Alcohols</b>								
O	Isopropyl 91%	1.6	1.7	–	31.5	176-178	63	YES
P	N-propyl alcohol	0.89	1.0	–	14.5	205-208	74	YES
Q	Isobutyl alcohol	0.63	0.6	–	8.8	225-228	86	YES
R	N butyl alcohol	0.46	0.5	–	4.39	241-245	96	YES
S	Methyl amy alcohol (MIBC)	0.30	0.3	–	2.2	266-271	103	YES
T	Cyclohexanol	0.08	0.08	–	1	320-325	140	YES
<b>Acetates</b>								
U	Ethyl acetate 99%	4.1	4.1	–	75	168-17	26	YES
V	Isopropyl acetate	3.1	3	–	23	187-194	47	YES
W	N butyl acetate	1	1	–	7.8	244-262	81	YES
X	Isobutyl rate	0.43	0.4	–	–	291-30	101	YES
<b>Glycol Ether Acetates</b>								
Y	Glyco ether acetate EM	0.2		–	2	284-297	120	YES
Z	Glyco ether acetate EE	0.2	< 0.1	–	1.7	302-320	130	YES
AA	Glyco ether acetate EB	0.03	< 0.2	–	0.29	367-381	160	YES
AB	Glyco ether acetate DE	< 0.01	< 0.2	–	0.05	417-430	235 c.o.c.	YES
AC	Glyco ether acetate DB	< 0.01	< 0.3	–	< 0.001	455-482	240 c.o.c.	YES

*continued...*

SOLVENT		Speed of Evaporation	Electrical Resistance	KB Value	Vapor Pressure @ 20°C MMHG	Boiling Range ° F	Flash Point °F TCC	Rule 66 Exempt
<b>Glycol Ethers</b>								
AD	Ethylene glycol monoethyl ether (EE)	0.2	< 0.1		5.3	273-277	105	YES
AE	Ethylene glycol monoethyl ether (DE)	< 0.01	< 0.2		0.13	374-401	196	YES
AF	Ethylene glycol monoethyl ether (DB)	< 0.01	< 0.3		0.023	441-455	230 pm cc	YES
AG	Ethylene glycol monoethyl ether (EB)	0.1	< 0.2		0.88	336-343	150	YES
AH	Ethylene glycol monoethyl ether (DM)	< 0.01	< 0.2		0.18	378-385	195 pm cc	YES

### **Fluid Filter Screen**

Using the proper filter screen in an airless system is important. The following table gives the maximum Nordson fluid filter screen sizes that can be used with various flow rate nozzles. A finer screen may be used to reduce nozzle plugging, if the screen will not “strip out” the fluid pigments and fillers.

Coating Material	Maximum Filter Screen Sizes			
	Noz. Flow Rate @ 500 PSI	Nozzle w/T-plate (inches)	Nozzle w/Restrictor (inches)	Nozzle Only (inches)
<b>Non-pigmented Coatings</b>	Below .015	.002	.002	.002
	.015	.002	.002	.002
	.03	.002	.003	.003
<b>High Quality Enamels &amp; Lacquers</b>	.04	.003	.004	.004
	.06	.004	.004	.004
	.09	.004	.009	.009
<b>Primers, Maintenance Coatings &amp; Protective Coatings</b>	.14	.006	.012	.012
	.20	.006	.015	.015
	.30	.009	.020	.020
<b>High Volume Applications</b>	.45	.009	.020	.020
	.68	.012	.020	.020
	1.00	.015	.020	.030

## Troubleshooting Film Faults

**NOTE:** It may be necessary to apply more than one solution to a given fault.

+ = Add  
- = Subtract

+ =Add - =Subtract	SOLUTION														
	Make coating W=Wetter or D=Drier	Fluid Pressure	Coating Material Temperature	Restrictor or Turbulence Plate	Nozzle Flow Rate	Fan Pattern Width	Gun-to-Part Distance	More of same Solvent	Faster Solvent or Co-Solvent	Slower Solvent or Co-Solvent	Distance between spray stations	Electrostatic voltage	Shear force	Waterborne only	
														Water	Relative humidity
<b>FAULT</b>															
Orange peel (1)	W	+	-	+	+	-	-	+	-	+	-	+	0	+	+
Sagging	D	-	+	-	-	+	+	-	+	-	+	-	0	-	-
Dry Spray	D	-	-	+	+	-	-	+	-	+	-	-	0	-	+
Cobwebbing	W	-	-	+	+	-	-	+	-	+	0	-	0	-	-
Low gloss	W	-	-	+	+	-	-	+	-	+		+	-	+	+
Fatty edges	D	-	+	-	-	-	+	-	+	-	+	-	0	-	-
Fish eyes	D	-	+	-	-	+	+	-	+	-	+	-	0	-	0
Popping (2)	D	-	+	-	-	+	+	-	+		-	-	-		-
Blushing	W	+	+	+	+	-	-	0	-	+	0	+	0	0	0
Mottling	D	-	-	-	-	+	+	-	+	-	-	-	0	-	-
Overspray cratering	D	-		-	+	-	-	+	-	+	-	0	0	-	0
Edge pull	D	-	+	-	-	+	+	-	+	-	+	-	0	-	-
Bubbles/ Foaming (3)	W	+	-	+	+	-	-	NA	-	+	+	+	-	+	+
Color mismatch	D	-	+	-	-	+	+	-	+	-	+	-	-	-	-
Stripping		+	+	-	-	-	0	0	0	0	0	0	0	0	0
Wrinkling (4)	D	-	+	-	-	+	+	0	+	0	+	-	0	-	-
Poor hiding: Mix paint well															
Mud cracking	W	+	-	+	+	-	+	0	-	+	+	+	0	+	-
Cracking, crazing, peeling, blistering and oven fouling: Check part preparation or oven															
(1) pH (coater only)															
(2) Popping with air dry and baking materials may differ. A slow solvent added to a bake material may hold the surface of the film open long enough to let the major solvents escape during the temperature rise of the part in the oven.															
(3) May require an additive.															
(4) Possible oven fouling.															

## Reading the Nozzle Charts

### ***Nominal Size***

The nominal size of a nozzle is given using two nominal performance factors: flow rate and pattern width. An approximation of the nozzle size required for a particular application can be made using these columns.

### **Flow**

Nominal flow rates are specified in gallons of water per minute at a pressure of 500 PSI. The tolerance is  $\pm 5\%$ , unless otherwise specified, on nozzles with a flow rate of 0.015 GPM or higher. Close Tolerance nozzles have a flow tolerance of less than  $\pm 2\%$ . Nozzles with flow rates of less than 0.015 GPM have a slightly higher tolerance.

### **Width**

This is the nominal fan pattern width at the given flow rate with the nozzle ten inches from the substrate. This figure should be used for comparison only.

Actual test pattern width and spray distance are shown in the columns under the heading "ACTUAL SPRAY TEST CONDITIONS." Actual tests use side seam coating, container inside spray coating, or white bake enamel. Results obtained in a particular application may vary from the data given here, since the actual pattern width is greatly influenced by many factors.

Refer to the information on flow rates on page A 1-8 and pattern widths on page A 1-10 in this section.

### ***Equivalent Orifice Diameter***

The value in this column is the diameter of a round hole whose calculated area is equal to the area of the nozzle orifice. Use this column for comparison purposes only.

### ***Relative Film Build***

This column provides the relative film build of the nozzle. Relative film build is a dimensionless number used to compare nozzles that have different nominal sizes. For example, in an application requiring a 12-inch wide pattern, a .03/10 nozzle (relative film build = .26) was found to provide the desired film thickness but not the desired pattern width.

Looking down the relative film build column for a nozzle with the same, or close to the same, relative film build number, a .04/14 nozzle is found that will provide the same film thickness (.26) along with the desired increase in pattern width, assuming that all other parameters (pressure, spray distance, etc.) remain constant.

## ***Footnotes***

This column provides additional information about the nozzle, such as carbide type and pattern orientation, to aid in proper nozzle selection.

### **Type I Carbide**

Type I carbide is a high grade of tungsten carbide that provides exceptional abrasion resistance in most applications. It is the standard material for most nozzles, recommended for all solvent-based and most waterborne applications.

### **Type II Carbide**

Type II carbide is a high grade of tungsten carbide that provides greater resistance to chemicals found in some waterborne materials than in Type I carbide. Type II carbide is recommended for waterborne materials where rapid erosion of the orifice is a problem.

### **Type III Carbide**

The III carbide is a high grade of tungsten carbide that provides greater resistance to highly abrasive materials. This material is recommended for highly abrasive waterborne applications. Type III carbide is only available in cross-cut nozzles.

## ***Nozzle Style***

This column refers to the configuration of the nozzle adapter.

## ***Tip Number***

This column provides a nozzle tip number, used to identify nozzles that are too small to allow the entire part number to be stamped on them. Tip numbers are used on some miniature hex nozzles.

## ***Nozzle Angle***

This column provides the nozzle orifice orientation relative to the axis of the adapter, in degrees, for tube and can lining nozzles.

## ***Recommended Pre-Atomization Device Part Number***

The recommended pre-atomization device may be either a T-plate or a restrictor that has been found to provide the best performance under most conditions. With some applications, it may be necessary to use different pre-atomization devices to provide optimum nozzle performance. Refer to the *Filter Screen, Turbulence Plate and Restrictor Selection* chart on page A 1-20 for a complete listing.

## ***Actual Spray Test Conditions***

### **Pattern Width Range**

The pattern width range is the maximum and minimum pattern widths between which the spray pattern falls during an actual spray test.

### **Spray Distance**

This is the actual test distance from the nozzle to the substrate. Due to a wide variety of nozzle application requirements, the test distances and fluids are varied to closely duplicate actual application conditions.

### **General Finishing Tests**

With a test spray distance of 1 inch or less:

Test Fluid – Solvent-based side seam stripe coating

Test Pressure – 150 psi

With a test spray distance of 10 inches:

Test Fluid – Solvent-based white bake enamel

Test Pressure – 500 psi

### **Container Tests**

With a test spray distance of 1 inch or less:

Test Fluid – Solvent-based side seam stripe coating

Test Pressure – 150 psi

With a test spray distance of 3 inches:

Test Fluid – Waterborne inside spray coating

Test Pressure – 800 psi

## ***Nozzle Part Number***

Use the part number to order a nozzle.

# Section B 1

## Flange Cross-Cut<sup>®</sup> Nozzles

### Application

For general use in a wide variety of coating applications. Most common style of nozzle, provides the widest variety of flow rates and pattern widths.

### Spray Guns and Adapters

Used with the following Nordson airless spray guns, and most automatic and manual airless spray guns made by other manufacturers:

A4B MAG	A7A MEG <sup>®</sup>	A10A MEG II	A20A
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### Features

- Custom sizes are available upon request
- Can be used with angle adapters and extensions for special applications
- Controlled pattern distribution nozzles available
- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging







# Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0025/02	0.0022	N/A	1,5,Ct,S	029010	1.00	1.06	1.00	1600168
.0038/02	0.0028	0.12	1,Ct,S	029010	0.31	0.56	1.00	050140
.0038/06	0.0028	0.05	1,Ct,S	029010	0.75	1.19	1.00	715313
.0055/02	0.0033	0.18	1,Ct,S	029010	0.56	0.81	1.00	122503
.0055/04	0.0033	0.11	1,Ct,S	029010	0.69	1.00	1.00	1603254
.0055/06	0.0033	0.08	1,Ct,S	029010	0.75	1.19	1.00	715314
.0055/10	0.0033	0.05	1,Ct,T	029010	1.75	2.00	1.00	122475
.0055/10	0.0033	N/A	1,5,Ct,S	029010	1.75	2.00	1.00	1095401
.0060/10	0.0035	0.05	1,Ct,S	029010	1.75	2.00	1.00	109529
.0065/07	0.0036	0.08	1,Ct,S	029010	1.22	1.34	1.00	1102898
.0075/02	0.0039	0.24	1,Ct,S	029010	0.56	0.81	1.00	221124
.0075/02	0.0039	0.24	1,Ct,T	029010	0.56	0.81	1.00	1603004
.0075/04	0.0039	0.14	1,Ct,S	029010	0.69	1.00	1.00	713805
.0075/04	0.0039	N/A	1,Ct,S	029010	0.69	1.00	1.00	1603255
.0075/06	0.0039	0.10	1,Ct,S	029010	0.75	1.19	1.00	221134
.0075/08	0.0039	0.08	1,Ct,S	029010	1.38	1.63	1.00	714328
.0075/08	0.0039	0.08	10,Ct,S	029010	1.38	1.63	1.00	121781
.0075/10	0.0039	0.07	1,Ct,S	029010	1.75	2.00	1.00	221129
.0075/10	0.0039	0.07	2,Ct,S	115711	1.75	2.00	1.00	113040
.0075/10	0.0039	0.07	1,Ct,T	029010	1.75	2.00	1.00	121820
.0075/10	0.0039	0.07	10,Ct,S	029010	1.75	2.00	1.00	118522
.0075/10	0.0039	0.07	10,Ct,T	029010	1.75	2.00	1.00	1023141
.0075/12	0.0039	0.06	1,Ct,S	029010	2.00	2.25	1.00	713111
.0075/14	0.0039	0.05	1,Ct,S	029010	2.38	2.63	1.00	715590
.0085/10	0.0041	0.07	1,Ct,S	029010	1.75	2.00	1.00	1066228
.01/02	0.0045	0.32	1,Ct,S	029010	0.56	0.81	1.00	221125
.01/02	0.0045	0.32	1,Ct,T	029010	0.56	0.81	1.00	1601266
.01/04	0.0045	0.19	1,7,8,Ct,S	N/A	1.86	2.16	3.00	122387
.01/06	0.0045	0.14	1,Ct,S	029010	0.75	1.19	1.00	713396
.01/08	0.0045	0.11	1,Ct,S	029010	1.38	1.63	1.00	714442
.01/10	0.0045	0.09	1,Ct,S	029010	1.75	2.00	1.00	221130

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.01/12	0.0045	0.07	1,Ct,S	029010	2.00	2.25	1.00	712110
.01/12	0.0447	N/A	1,5,Ct,S	029010	2.00	2.25	1.00	1043951
.01/14	0.0045	N/A	1,5,Ct,S	029010	2.38	2.63	1.00	1037101
.01/15	0.0045	0.06	1,Ct,S	029010	2.38	2.63	1.00	715607
.012/02	0.0049	0.38	1,Ct,S	029010	0.56	0.81	1.00	1605391
.012/14	0.0049	0.08	1,Ct,S	029010	2.38	2.63	1.00	715445
.012/14	0.0049	N/A	1,5,Ct,S	029010	2.38	2.63	1.00	1601265
.012/16	0.0049	0.07	1,Ct,S	029010	2.63	2.88	1.00	715446
.012/18	0.0049	0.06	1,Ct,S	029010	2.88	3.13	1.00	715447
.015/02	0.0055	0.48	1,Ct,S	029010	0.56	0.81	1.00	050000
.015/02	0.0055	0.48	2,15,Ct	029010	0.56	0.81	S	1604373
.015/04	0.0055	0.29	1,7,Ct,S	029010	0.75	1.00	1.00	121824
.015/06	0.0055	0.21	1,Ct,S	029010	0.75	1.00	1.00	1102524
.015/06	0.0055	0.21	1,Ct,S	029010	0.75	1.19	1.00	221126
.015/06	0.0055	0.21	1,Ct,T	029010	0.75	1.19	1.00	121846
.015/08	0.0055	0.16	1,Ct,S	029010	1.38	1.63	1.00	712343
.015/10	0.0055	0.13	1,Ct,S	029010	1.75	2.00	1.00	714869
.015/10	0.0055	0.13	1,Ct,S, Sq	029010	1.75	2.00	1.00	1605694
.015/12	0.0055	0.11	1,Ct,S	029010	1.88	2.13	1.00	1601954
.015/14	0.0055	0.10	1,Ct,S	029010	2.38	2.63	1.00	712202
.015/14	0.0055	N/A	1,5,Ct,S	029010	2.38	2.63	1.00	1099738
.015/16	0.0055	0.08	2,Ct,S	115711	2.63	2.88	1.00	714819
.015/16	0.0055	0.08	1,Ct,T	029010	2.63	2.88	1.00	122512
.015/16	0.0055	N/A	1,5,Ct,S	029010	2.63	2.88	1.00	1094386
.018/02	0.0060	0.58	1,7,Ct,S	029010	0.75	1.00	1.00	122403
.02/02	0.0063	0.64	1,Ct,S	029010	0.56	0.81	1.00	712839
.02/04	0.0063	0.38	1,Ct,S	029010	0.69	1.00	1.00	712716
.02/04	0.0063	N/A	1,Ct,D,S	029010	4.00	6.00	10.00	102407
.02/04	0.0063	0.38	1,7,Ct,S	029010	0.75	1.00	1.00	1108173
.02/04	0.0063	0.38	1,7,8,Ct,S	N/A	1.86	2.16	3.00	1014618
.02/06	0.0063	0.27	1,Ct,S	029010	6.00	8.00	10.00	221135
.02/06	0.0063	N/A	1,5,Ct,S	029010	0.79	1.13	1.00	121761

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.02/10	0.0063	0.18	1,Ct,S	029010	1.75	2.00	1.00	1000170
.02/12	0.0063	0.15	1,Ct,S	029010	12.00	14.00	10.00	713670
.02/12.5	0.0063	0.14	7,10,Ct,S	029010	12.50	13.00	10.00	121838
.02/14	0.0063	0.13	1,Ct,S	029010	2.38	2.63	1.00	1601979
.02/16	0.0063	0.11	1,Ct,S	029010	2.63	2.88	1.00	712819
.02/16	0.0063	0.11	1,Ct,S	029010	2.63	2.88	1.00	1100325
.02/16	0.0063	0.11	2,Ct,S	115711	2.63	2.88	1.00	714817
.02/16	0.0063	0.11	10,Ct,S	029010	2.63	2.88	1.00	121913
.02/16	0.0063	0.11	1,Ct,T	029010	16.00	18.00	10.00	713327
.02/18	0.0063	0.10	1,Ct,S	029010	2.88	3.13	1.00	122402
.02/18	0.0063	N/A	1,5,Ct,S	029010	2.88	3.13	1.00	1607535
.02/20	0.0063	0.09	2,Ct,S	029010	3.38	3.63	1.00	1037597
.02/22	0.0063	0.08	2,Ct,S	029010	3.50	3.69	1.00	1037653
.02/24	0.0063	0.08	2,Ct,S	029010	3.63	3.88	1.00	1037654
.025/02	0.0071	0.80	1,Ct,S	029010	0.56	0.81	1.00	713835
.025/04	0.0071	0.48	1,Ct,S	029010	4.00	6.00	10.00	221136
.025/04	0.0071	0.48	1,7,Ct,S	029012	0.75	1.00	1.00	1600628
.025/04	0.0071	N/A	1,5,Ct,S	029010	0.75	1.00	1.00	121762
.025/06	0.0071	0.34	1,Ct,S	029010	6.00	8.00	10.00	714169
.025/08	0.0071	0.27	1,Ct,S	029010	8.00	10.00	10.00	713958
.025/10	0.0071	0.22	1,Ct,S	029010	1.75	2.00	1.00	1000171
.025/14	0.0071	0.16	1,Ct,S	029010	14.00	16.00	10.00	122461
.025/24	0.0071	N/A	2,5,Ct,T	029010	2.13	2.38	1.00	1604460
.03/02	0.0077	0.96	1,S	029010	0.56	0.81	1.00	711365
.03/02	0.0077	0.96	2,S	115711	0.56	0.81	1.00	121930
.03/02	0.0077	0.96	1,6,S	029010	0.56	0.81	1.00	715800
.03/02	0.0077	0.96	1,Ct,T	029010	0.56	0.81	1.00	100308
.03/02	0.0077	0.96	2,15,Deg,Ct	029010	0.56	0.81	S	1604374
.03/03	0.0077	0.72	1,S	029010	3.00	5.00	10.00	715483
.03/04	0.0077	0.58	1,S	029010	4.00	6.00	10.00	712909
.03/04	0.0077	N/A	1,Ct,D,S	029010	4.00	6.00	10.00	102408
.03/04	0.0077	0.58	1,6,S	029010	0.88	1.00	1.00	715801
.03/04	0.0077	0.58	1,9,Ct	N/A	0.75	1.00	1.00	1040352

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

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 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



## Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.03/04	0.0077	0.58	1,9,Ct,T	029010	0.75	1.00	1.00	1040352
.03/04	0.0077	0.58	10,Ct,S	029010	2.50	2.88	6.00	1604398
.03/06	0.0077	0.41	1,S	029010	6.00	8.00	10.00	711043
.03/06	0.0077	N/A	1,B,S	245992	6.00	8.00	10.00	112436
.03/08	0.0077	0.32	1,S	029010	8.00	10.00	10.00	050004
.03/08	0.0077	0.32	2,S	115711	8.00	10.00	10.00	714853
.03/08	0.0077	N/A	1,C,S	029010	8.00	10.00	10.00	713047
.03/10	0.0077	0.26	1,S	029010	10.00	12.00	10.00	050005
.03/12	0.0077	0.22	1,S	029010	12.00	14.00	10.00	050006
.03/12	0.0077	0.22	2,S	115711	12.00	14.00	10.00	713591
.03/14	0.0077	0.19	1,S	029010	14.00	16.00	10.00	050007
.03/14	0.0077	0.19	1,T	029010	14.00	16.00	10.00	713328
.03/16	0.0077	0.17	1,S	029010	16.00	18.00	10.00	050008
.03/16	0.0077	0.17	2,S	115711	16.00	18.00	10.00	714791
.03/16	0.0077	0.17	10,S	029010	16.00	18.00	10.00	121880
.03/16	0.0077	0.17	1,Ct,S	029010	2.63	2.88	1.00	1600601
.03/20	0.0077	0.14	1,S	029010	20.00	22.00	10.00	712820
.03/20	0.0077	0.14	2,S	115711	20.00	22.00	10.00	714818
.03/20	0.0077	0.14	2,T	029010	20.00	22.00	10.00	1098576
.03/20	0.0077	N/A	1,5,Ct,S	029010	3.13	3.88	1.00	1607536
.03/24	0.0077	0.12	1,S,Ct	029010	24.00	26.00	10.00	1606744
.03/26	0.0077	N/A	2,5,Ct,T	029010	3.88	4.13	1.00	1604461
.035/07	0.0084	0.42	1,Ct,S	029012	1.19	1.31	1.00	1095608
.04/02	0.0089	1.28	1,6,S	029012	0.56	0.81	1.00	715802
.04/02	0.0089	1.28	1,7,S	029012	0.56	0.81	1.00	121794
.04/04	0.0089	0.77	1,S	029012	0.81	0.94	1.00	710890
.04/04	0.0089	0.77	1,6,S	029012	0.88	1.00	1.00	715803
.04/04	0.0089	0.77	2,8,Ct,S	029012	2.69	3.06	6.00	1600633
.04/06	0.0089	0.55	1,S	029012	6.00	8.00	10.00	711354
.04/06	0.0089	N/A	1,B,S	245992	6.00	8.00	10.00	112437
.04/06	0.0089	0.55	1,T	029012	6.00	8.00	10.00	121945

### FOOTNOTES

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7= Dual Orifice (One Tip)  
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### PATTERN DISTRIBUTION

A = 90% - 10%  
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C = 70% - 30%  
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# Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.04/08	0.0089	0.43	1,S	029012	8.00	10.00	10.00	712441
.04/08	0.0089	0.43	1,7,Ct,S,Sq	029012	1.38	1.63	1.00	1051492
.04/08	0.0089	N/A	1,7,T,X	029012	1.63	1.38	1.00	122454
.04/10	0.0089	0.35	1,S	029012	10.00	12.00	10.00	050015
.04/10	0.0089	0.35	1,T	029012	10.00	12.00	10.00	050115
.04/12	0.0089	0.30	1,S	029012	12.00	14.00	10.00	712873
.04/12	0.0089	0.30	2,S	115712	12.00	14.00	10.00	713520
.04/14	0.0089	0.26	1,S	029012	14.00	16.00	10.00	050017
.04/14	0.0089	0.26	2,S	115712	14.00	16.00	10.00	713592
.04/14	0.0089	0.26	1,T	029012	14.00	16.00	10.00	713329
.04/16	0.0089	0.23	1,S	029012	16.00	18.00	10.00	050018
.04/16	0.0089	0.23	2,S	115712	16.00	18.00	10.00	713593
.04/20	0.0089	0.18	1,S	029012	20.00	22.00	10.00	712830
.04/20	0.0089	0.18	1,T	029012	20.00	22.00	10.00	1099694
.04/20	0.0089	0.18	2,S	115712	20.00	22.00	10.00	715612
.04/20	0.0089	N/A	1,5,Ct,T	029012	20.00	22.00	10.00	1607537
.04/20	0.0089	N/A	1,5,13,Ct,T	N/A	20.00	22.00	10.00	1046903
.045/08	0.0095	0.48	1,9,Ct	N/A	1.38	1.63	1.00	1040353
.045/08	0.0095	0.48	1,9,Ct,T	029012	1.38	1.63	1.00	1040353
.045/10	0.0095	0.39	1,Ct,S	029012	10.00	12.00	10.00	1083738
.05/06	0.0100	0.69	1,7,Ct,S	029015	1.00	1.25	1.00	1056081
.05/06	0.0100	0.69	1,7,Ct,S,Sq	029015	1.00	1.25	1.00	1052810
.05/08	0.0100	N/A	1,Ct,D,T	245992	8.00	10.00	10.00	121812
.05/10	0.0100	0.44	1,S	029015	10.00	12.00	10.00	714395
.05/10	0.0100	0.44	1,T	029015	10.00	12.00	10.00	121859
.05/20	0.0100	0.23	1,S	029015	20.00	22.00	10.00	712605
.05/20	0.0100	0.23	1,Ct,T	029015	20.00	22.00	10.00	1086337
.05/24	0.0100	0.19	1,Ct,S	029015	24.00	26.00	10.00	1083900
.06/02	0.0100	1.92	7,10,Ct,S	029015	2.00	4.00	10.00	121857
.06/06	0.0110	0.82	1,S	029015	6.00	8.00	10.00	711355
.06/08	0.0110	0.64	1,S	029015	8.00	10.00	10.00	050025
.06/08	0.0110	N/A	1,Ct,D,T	245992	8.00	9.00	10.00	711705

**FOOTNOTES**

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**PATTERN DISTRIBUTION**

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 C = 70% - 30%  
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 X = Special Pattern Distribution



## Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.06/10	0.0110	0.52	1,S	029015	10.00	12.00	10.00	710233
.06/10	0.0110	N/A	1,8,C,Ct,S	N/A	4.25	4.90	3.00	1009511
.06/12	0.0110	0.44	1,S	029015	12.00	14.00	10.00	050026
.06/12	0.0110	0.44	2,S	115713	12.00	14.00	10.00	713201
.06/12	0.0110	0.44	1,T	029015	12.00	14.00	10.00	050126
.06/14	0.0110	0.38	1,S	029015	14.00	16.00	10.00	710988
.06/14	0.0110	0.38	2,S	115713	14.00	16.00	10.00	713594
.06/16	0.0110	0.34	1, S	029015	16.00	18.00	10.00	050028
.06/16	0.0110	0.34	2,S	115713	16.00	18.00	10.00	713348
.06/16	0.0110	0.34	1,T	029015	16.00	18.00	10.00	715850
.06/20	0.0110	0.27	1,S	029015	20.00	22.00	10.00	221127
.06/20	0.0110	0.27	2,S	115713	20.00	22.00	10.00	714354
.06/20	0.0110	0.27	1,13,T	N/A	20.00	22.00	10.00	122352
.06/20	0.0110	N/A	1,5,Ct,S	029015	20.00	22.00	10.00	1607538
.06/24	0.0110	0.23	1,S	029015	24.00	26.00	10.00	050022
.06/24	0.0110	0.23	2,T	115713	24.00	26.00	10.00	714668
.07/20	0.0118	0.32	1,T	029018	20.00	22.00	10.00	114369
.07/22	0.0118	0.29	1,S	029018	22.00	24.00	10.00	103058
.07/24	0.0118	0.27	1,S	029018	24.00	26.00	10.00	103059
.075/06	0.0122	N/A	1,Ct,D,T	245992	6.00	7.50	10.00	091002
.075/08	0.0122	N/A	1,Ct,D,T	245992	8.00	9.50	10.00	091004
.075/10	0.0122	N/A	1,C,Ct,T	245992	10.00	11.00	10.00	1051092
.075/12	0.0122	0.55	1,T	029018	12.00	14.00	10.00	711206
.075/14	0.0122	0.48	1,T	029018	14.00	16.00	10.00	710014
.09/06	0.0134	N/A	1,Ct,D,T	245992	6.00	8.00	10.00	713610
.09/08	0.0134	0.96	1,S	029018	8.00	10.00	10.00	711357
.09/08	0.0134	N/A	1,Ct,D,T	245992	8.00	9.00	10.00	091010
.09/10	0.0134	0.79	1,T	029018	10.00	12.00	10.00	050135
.09/10	0.0134	0.79	2,T	115714	10.00	12.00	10.00	121773
.09/10	0.0134	N/A	1,C,Ct,T	245992	10.00	11.00	10.00	711706
.09/12	0.0134	0.66	1,T	029018	12.00	14.00	10.00	050136
.09/12	0.0134	0.66	2,T	115714	12.00	14.00	10.00	713349

### FOOTNOTES

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### PATTERN DISTRIBUTION

A = 90% - 10%  
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# Flange Cross-Cut Nozzle List

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REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.09/14	0.0134	0.58	1,T	029018	14.00	16.00	10.00	050137
.09/16	0.0134	0.51	1,T	029018	16.00	18.00	10.00	050138
.09/16	0.0134	0.51	2,T	115714	16.00	18.00	10.00	713350
.09/16	0.0134	0.51	1,13,T	N/A	16.00	18.00	10.00	164114
.09/18	0.0134	0.45	1,T	029018	18.00	20.00	10.00	050139
.09/20	0.0134	0.41	1,T	029018	20.00	22.00	10.00	712606
.09/20	0.0134	0.41	2,T	115714	20.00	22.00	10.00	714409
.09/22	0.0134	0.38	1,T	029018	22.00	24.00	10.00	050131
.09/22	0.0134	0.38	1,13,T	N/A	22.00	24.00	10.00	164113
.09/24	0.0134	0.35	1,T	029018	24.00	26.00	10.00	712607
.09/24	0.0134	0.35	2,T	115714	24.00	26.00	10.00	714492
.09/28	0.0134	0.30	1,T	029018	28.00	30.00	10.00	713057
.10/06	0.0141	1.37	1,T	029018	6.00	8.00	10.00	713495
.10/06	0.0141	1.37	10,Ct,T	029018	6.00	8.00	10.00	121902
.10/20	0.0141	0.46	1,S	029018	20.00	22.00	10.00	714793
.11/06	0.0148	1.51	1,T	029020	6.00	8.00	10.00	713496
.11/08	0.0148	1.17	1,S	029020	8.00	10.00	10.00	714792
.11/12	0.0148	N/A	1,Ct,B,T	245992	12.00	14.00	10.00	711617
.11/20	0.0148	0.50	1,T	029020	20.00	22.00	10.00	713839
.11/20	0.0148	0.50	1,13,T	N/A	20.00	21.00	10.00	132004
.11/22	0.0148	0.46	1,T	029020	22.00	24.00	10.00	714329
.11/24	0.0148	0.42	1,T	029020	24.00	26.00	10.00	713840
.11/24	0.0148	0.42	1,13,T	N/A	24.00	26.00	10.00	132005
.11/24	0.0148	N/A	1,5,13,T	N/A	24.00	26.00	10.00	121978
.12/06	0.0155	1.65	1,T	029020	6.00	8.00	10.00	713497
.12/06	0.0155	N/A	1,Ct,D,T	245992	6.00	8.00	10.00	711707
.12/08	0.0155	N/A	1,Ct,D,T	245992	8.00	10.00	10.00	711461
.12/10	0.0155	1.05	1,T	029020	10.00	12.00	10.00	1607985
.12/10	0.0155	N/A	1,C,Ct,T	245992	10.25	12.00	10.00	091006
.12/12	0.0155	0.89	1,T	029020	12.00	14.00	10.00	713152
.12/14	0.0155	0.77	1,T	029020	14.00	16.00	10.00	713919

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					MIN (IN.)	MAX (IN.)	DISTANCE	
.12/16	0.0155	0.68	1,T	029020	16.00	18.00	10.00	709646
.12/18	0.0155	0.61	1,T	029020	18.00	20.00	10.00	713665
.12/20	0.0155	0.55	1,T	029020	20.00	22.00	10.00	713841
.12/22	0.0155	0.50	1,T	029020	22.00	24.00	10.00	713842
.12/24	0.0155	0.46	1,T	029020	24.00	26.00	10.00	713843
.12/24	0.0155	0.46	1,13,T	N/A	24.00	26.00	10.00	155810
.12/26	0.0155	0.43	1,T	029020	26.00	28.00	10.00	713844
.12/28	0.0155	0.40	1,T	029020	28.00	30.00	10.00	715892
.12/28	0.0155	0.40	1,13,T	N/A	28.00	30.00	10.00	133640
.13/08	0.0161	1.39	1,T	029020	8.00	10.00	10.00	713499
.13/10	0.0161	1.13	1,T	029020	10.00	12.00	10.00	713500
.13/16	0.0161	0.73	1,T	029020	16.00	18.00	10.00	713666
.13/18	0.0161	0.66	1,T	029020	18.00	20.00	10.00	713667
.14/08	0.0167	1.49	1,T	029020	8.00	10.00	10.00	713215
.14/08	0.0167	N/A	1,Ct,D,T	245992	8.00	10.00	10.00	711708
.14/10	0.0167	1.22	1,T	029020	10.00	12.00	10.00	050145
.14/10	0.0167	N/A	1,C,Ct,T	245992	10.00	12.00	10.00	711709
.14/12	0.0167	1.03	1,T	029020	12.00	14.00	10.00	050146
.14/12	0.0167	N/A	1,C,Ct,S	0245992	12.00	14.00	10.00	1604696
.14/12	0.0167	1.03	2,T	115715	12.00	14.00	10.00	715541
.14/14	0.0167	0.90	1,T	029020	14.00	16.00	10.00	050147
.14/16	0.0167	0.79	1,T	029020	16.00	18.00	10.00	050148
.14/18	0.0167	0.71	1,T	029020	18.00	20.00	10.00	050149
.14/18	0.0167	0.71	1,13,T	N/A	18.00	20.00	10.00	132961
.14/20	0.0167	0.64	1,T	029020	20.00	22.00	10.00	710889
.14/22	0.0167	0.58	1,T	029020	22.00	24.00	10.00	708773
.14/24	0.0167	0.54	1,T	029020	24.00	26.00	10.00	050142
.14/24	0.0167	0.54	1,13,T	N/A	24.00	26.00	10.00	144998
.14/28	0.0167	0.46	1,13,T	N/A	28.00	30.00	10.00	132001
.14/28	0.0167	0.46	1,T	029020	28.00	30.00	10.00	712396
.15/07	0.0173	N/A	1,C,Ct,T	245992	7.00	8.00	10.00	121770
.15/09	0.0173	N/A	1,C,Ct,T	245992	9.00	10.00	10.00	711759

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					MIN (IN.)	MAX (IN.)	DISTANCE	
.15/10	0.0173	1.31	1,T	029020	10.00	12.00	10.00	713498
.15/12	0.0173	1.11	1,T	029020	12.00	14.00	10.00	110764
.16/18	0.0179	0.81	1,T	029020	18.00	20.00	10.00	713965
.16/20	0.0179	0.73	1,T	029020	20.00	22.00	10.00	713966
.16/22	0.0179	0.67	1,T	029020	22.00	24.00	10.00	713967
.16/24	0.0179	0.61	1,T	029020	24.00	26.00	10.00	713968
.16/28	0.0179	0.53	1,T	029020	28.00	30.00	10.00	715623
.17/10	0.0184	N/A	1,Ct,D,T	029033	10.00	11.50	10.00	091008
.17/16	0.0184	0.96	1,T	029020	16.00	18.00	10.00	709708
.18/08	0.0190	N/A	1,C,Ct,T	245992	8.00	10.00	10.00	714016
.18/10	0.0190	1.57	1,T	029025	10.00	12.00	10.00	122334
.18/14	0.0190	1.15	1,T	029025	14.00	16.00	10.00	714130
.18/16	0.0190	1.02	1,T	029025	16.00	18.00	10.00	714131
.18/18	0.0190	0.91	1,T	029025	18.00	20.00	10.00	714132
.18/20	0.0190	0.82	1,T	029025	20.00	22.00	10.00	714133
.18/24	0.0190	0.69	1,T	029025	24.00	26.00	10.00	715896
.18/28	0.0190	0.60	1,T	029025	28.00	30.00	10.00	715624
.19/14	0.0195	1.22	1,T	029025	14.00	16.00	10.00	715042
.19/16	0.0195	1.07	1,T	029025	16.00	18.00	10.00	715043
.19/18	0.0195	0.96	1,T	029025	18.00	20.00	10.00	715044
.19/20	0.0195	0.87	1,Ct,T	029025	20.00	22.00	10.00	1023140
.20/08	0.0200	2.13	1,Ct,T	029025	8.00	10.00	10.00	1016224
.20/10	0.0200	N/A	1,B,Ct,T	245992	10.00	12.00	10.00	711710
.20/12	0.0200	1.48	1,T	029025	12.00	14.00	10.00	713692
.20/12	0.0200	N/A	1,B,Ct,T	245992	12.00	14.00	10.00	713211
.20/12	0.0200	N/A	1,C,Ct,T	245992	12.00	14.00	10.00	121848
.20/14	0.0200	1.28	1,T	029025	14.00	16.00	10.00	050157
.20/16	0.0200	1.13	1,T	029025	16.00	18.00	10.00	050158
.20/18	0.0200	1.01	1,T	029025	18.00	20.00	10.00	050159
.20/20	0.0200	0.91	1,T	029025	20.00	22.00	10.00	710893
.20/22	0.0200	0.83	1,T	029025	22.00	24.00	10.00	715080
.20/24	0.0200	0.77	1,T	029025	24.00	26.00	10.00	050152

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



## Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.20/28	0.0200	0.66	1,T	029025	28.00	30.00	10.00	712395
.20/29	0.0200	0.64	1,T	029025	29.00	31.00	10.00	715413
.22/16	0.0210	1.24	1,T	029025	16.00	18.00	10.00	715076
.22/18	0.0210	1.11	1,T	029025	18.00	20.00	10.00	715077
.22/20	0.0210	1.01	1,T	029025	20.00	22.00	10.00	715078
.22/22	0.0210	0.92	1,T	029025	22.00	24.00	10.00	715079
.22/24	0.0210	0.84	1,T	029025	24.00	26.00	10.00	105308
.22/28	0.0210	0.73	1,T	029025	28.00	30.00	10.00	715897
.24/20	0.0219	1.10	1,T	029025	20.00	22.00	10.00	105311
.24/22	0.0219	1.00	1,T	029025	22.00	24.00	10.00	105312
.24/24	0.0219	0.92	1,T	029025	24.00	26.00	10.00	105309
.24/28	0.0219	0.79	1,T	029025	28.00	30.00	10.00	105313
.25/08	0.0224	2.67	1,Ct,T	029025	8.00	10.00	10.00	1016225
.25/14	0.0224	1.60	1,T	029033	14.00	16.00	10.00	713691
.25/16	0.0224	1.41	2,T	115717	16.00	18.00	10.00	122458
.25/26	0.0224	0.89	1,T	029033	26.00	28.00	10.00	121814
.26/20	0.0228	1.19	1,T	029033	20.00	22.00	10.00	105314
.26/22	0.0228	1.09	1,T	029033	22.00	24.00	10.00	105315
.26/24	0.0228	1.00	1,T	029033	24.00	26.00	10.00	105310
.26/28	0.0228	0.86	1,T	029033	28.00	30.00	10.00	105316
.2774/25	0.0236	1.02	2,Ct,T	115717	25.00	27.00	10.00	122476
.28/22	0.0237	1.17	1,T	029033	22.00	24.00	10.00	115672
.28/24	0.0237	1.08	1,T	029033	24.00	26.00	10.00	115673
.30/08	0.0245	3.20	1,Ct,T	029033	8.00	10.00	10.00	1016226
.30/08	0.0245	N/A	1,B,Ct,T	245992	8.00	10.00	10.00	121924
.30/12	0.0245	2.22	1,T	029033	12.00	14.00	10.00	712064
.30/14	0.0245	1.92	1,T	029033	14.00	16.00	10.00	1026980
.30/16	0.0245	1.69	2,S	115717	16.00	18.00	10.00	105497
.30/16	0.0245	1.69	1,T	029033	16.00	18.00	10.00	713277
.30/18	0.0245	1.52	1,T	029033	18.00	20.00	10.00	050169
.30/20	0.0245	1.37	1,T	029033	20.00	22.00	10.00	712524

### FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

### PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution



# Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.30/24	0.0245	1.15	1,T	029033	24.00	26.00	10.00	712204
.35/08	0.0265	3.73	1,Ct,T	029033	8.00	10.00	10.00	1016227
.38/20	0.0276	1.74	1,T	029033	20.00	22.00	10.00	121881
.40/08	0.0283	4.27	1,Ct,T	029040	8.00	10.00	10.00	1016228
.45/08	0.0300	4.80	1,Ct,T	029040	8.00	10.00	10.00	1016229
.45/08	0.0300	N/A	1,B,Ct,T	029040	8.00	10.00	10.00	121925
.45/12	0.0300	3.32	1,T	029040	12.00	14.00	10.00	714795
.45/14	0.0300	2.88	1,T	029040	14.00	16.00	10.00	713174
.45/16	0.0300	2.54	1,T	029040	16.00	18.00	10.00	714796
.45/16	0.0300	2.54	1,7,Ct,T	029040	16.00	18.00	10.00	1001994
.45/18	0.0300	2.27	1,T	029040	18.00	20.00	10.00	713039
.45/20	0.0300	2.06	1,T	029040	20.00	22.00	10.00	714797
.45/22	0.0300	1.88	1,T	029040	22.00	24.00	10.00	709929
.45/24	0.0300	1.73	1,T	029040	24.00	26.00	10.00	713276
.45/26	0.0300	1.60	1,T	029040	26.00	28.00	10.00	712203
.50/08	0.0316	5.33	1,Ct,T	029050	8.00	10.00	10.00	1016490
.50/16	0.0316	2.82	1,7,Ct,T	029050	16.00	18.00	10.00	1001103
.55/08	0.0332	5.87	1,Ct,T	029050	8.00	10.00	10.00	1016491
.55/16	0.0332	3.11	1,7,Ct,T	029050	16.00	18.00	10.00	1001261
.60/08	0.0346	6.40	1,Ct,T	N/A	8.00	10.00	10.00	1016492
.68/12	0.0369	5.02	1,T	029050	12.00	14.00	10.00	714798
.68/14	0.0369	4.35	1,T	029050	14.00	16.00	10.00	714799
.68/16	0.0369	3.84	1,T	029050	16.00	18.00	10.00	714590
.68/18	0.0369	3.44	1,T	029050	18.00	20.00	10.00	714800
.68/20	0.0369	3.11	1,T	029050	20.00	22.00	10.00	714801
.68/26	0.0369	2.42	1,T	029050	26.00	28.00	10.00	712544
.68/29	0.0369	2.18	1,T	029050	29.00	31.00	10.00	121906
.70/08	0.0374	7.47	1,Ct,T	N/A	8.00	10.00	10.00	1016493
.80/26	0.0400	2.84	1,T	N/A	26.00	28.00	10.00	715192
.95/23	0.0436	3.80	2,T	N/A	23.00	24.00	10.00	119423

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Flange Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
1.00/20	0.0447	4.57	1,T	N/A	20.00	22.00	10.00	713744
1.00/26	0.0447	3.56	1,T	N/A	26.00	28.00	10.00	713210
1.20/26	0.0490	4.27	1,T	N/A	26.00	28.00	10.00	121991
1.50/26	0.0548	5.33	1,T	N/A	26.00	28.00	10.00	1044840
2.00/26	0.0632	7.11	1,T	N/A	26.00	28.00	10.00	1044841

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
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 11=Adapter has no tip shields  
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 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



## Section B 2

# Miniature Hex Cross-Cut<sup>®</sup> Nozzles

## Application

Used primarily for inside striping of welded cans. Relatively small in size. Includes an integral swivel nut for easy adjustment of pattern orientation.

## Spray Guns and Adapters

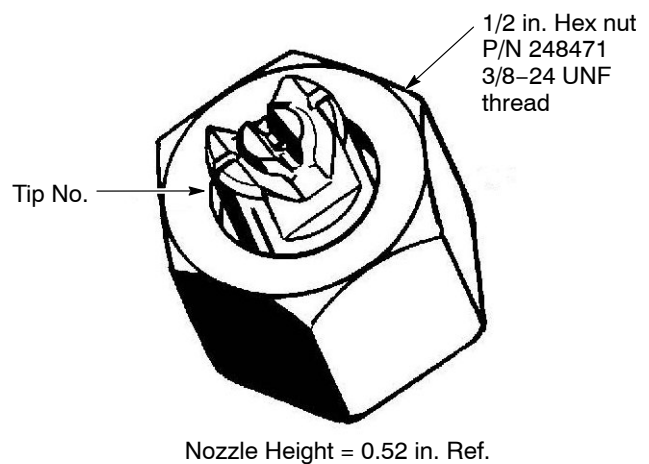
Used with the Nordson A15A, A16A, and MEG<sup>®</sup> Inside Stripe applicators.

## Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths

Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging





# Miniature Hex Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0055/08	0.0033	0.06	1,Ct	N/A	1.38	1.63	1.00	1607829
.0075/02	0.0039	0.24	1,Ct	N/A	0.56	0.81	1.00	1073303
.0075/04	0.0039	0.14	1,Ct	N/A	0.69	1.00	1.00	1073304
.0075/08	0.0039	N/A	1,5,Ct	N/A	1.39	1.63	1.00	1100470
.0075/08	0.0039	0.08	1,Ct	N/A	1.39	1.63	1.00	1600020
.0075/14	0.0039	0.05	1,Ct	N/A	2.38	2.63	1.00	221148
.01/02	0.0045	0.32	1,Ct	N/A	0.56	0.81	1.00	121985
.01/12	0.0045	0.07	1,Ct	N/A	1.88	2.13	1.00	221144
.01/15	0.0045	N/A	1,5,Ct	N/A	2.38	2.63	1.00	119163
.012/17	0.0049	N/A	1,5,Ct	N/A	2.75	2.88	1.00	1601293
.012/18	0.0049	0.06	1,Ct	N/A	2.88	3.13	1.00	1601149
.015/02	0.0055	0.48	1,Ct	N/A	0.56	0.81	1.00	121733
.015/04	0.0055	0.29	1,Ct	N/A	0.69	1.00	1.00	221145
.015/08	0.0055	N/A	1,5,Ct	N/A	1.19	1.38	1.00	121718
.015/08	0.0055	0.16	1,Ct	N/A	1.38	1.63	1.00	1016223
.015/10	0.0055	N/A	1,5,Ct	N/A	1.75	2.00	1.00	121717
.015/14	0.0055	0.10	1,Ct	N/A	2.38	2.63	1.00	221143
.015/16	0.0055	0.08	1,Ct	N/A	2.63	2.88	1.00	1085621
.015/16	0.0055	N/A	1,5,Ct	N/A	2.50	2.75	1.00	119162
.02/02	0.0063	0.64	1,Ct	N/A	0.56	0.81	1.00	121753
.02/04	0.0063	0.38	1,Ct	N/A	0.75	1.00	1.00	121755
.02/07	0.0063	0.24	1,Ct	N/A	7.00	9.00	10.00	1009163
.02/14	0.0063	0.13	1,Ct	N/A	2.38	2.63	1.00	221142
.02/18	0.0063	N/A	1,5,Ct	N/A	2.88	3.13	1.00	119161
.02/20	0.0063	0.09	1,Ct	N/A	3.13	3.38	1.00	114314
.025/02	0.0071	0.80	1,Ct	N/A	0.56	0.81	1.00	121754
.025/04	0.0071	0.48	1,Ct	N/A	0.75	1.00	1.00	121756
.025/18	0.0071	N/A	1,5,Ct	N/A	2.88	3.13	1.00	221141
.025/20	0.0071	0.11	1,Ct	N/A	3.38	3.63	1.00	121741
.025/20	0.0071	N/A	1,5,Ct	N/A	3.38	3.63	1.00	121742
.03/20	0.0077	0.14	1	N/A	3.13	3.38	1.00	114315

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution



# Miniature Hex Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.035/07	0.0084	0.42	1	N/A	7.00	9.00	10.00	122490
.035/20	0.0084	N/A	1,5,Ct	N/A	3.38	3.63	1.00	221140
.04/13	0.0089	0.27	1	N/A	2.23	2.50	1.00	221150
.04/14	0.0089	0.26	1	N/A	2.38	2.63	1.00	221149
.04/20	0.0089	0.18	1	N/A	3.13	3.38	1.00	221151
.04/20	0.0089	N/A	1,5,Ct	N/A	3.13	3.63	1.00	122332
.06/14	0.0110	0.38	1	N/A	2.38	2.63	1.00	122386
.06/20	0.0110	0.27	1	N/A	20.00	22.00	10.00	714768
.06/20	0.0110	N/A	1,5,Ct	N/A	3.13	3.63	1.00	122331
.06/24	0.0110	0.23	1	N/A	24.00	26.00	10.00	714769
.065/12	0.0114	0.48	1	N/A	12.00	14.00	10.00	121908
.09/20	0.0134	0.41	1	N/A	20.00	22.00	10.00	714770
.09/24	0.0134	0.35	1	N/A	24.00	26.00	10.00	714771
.14/20	0.0167	0.64	1	N/A	20.00	22.00	10.00	714772
.14/24	0.0167	0.54	1	N/A	24.00	26.00	10.00	714773
.18/24	0.0190	0.69	1	N/A	24.00	26.00	10.00	121948
.20/20	0.0200	0.91	1	N/A	20.00	22.00	10.00	714774
.20/24	0.0200	0.77	1	N/A	24.00	26.00	10.00	714775
.20/28	0.0200	0.66	1	N/A	28.00	30.00	10.00	118863
.22/24	0.0210	0.84	1	N/A	24.00	26.00	10.00	121947
.30/20	0.0245	1.37	1	N/A	20.00	22.00	10.00	714776
.30/24	0.0245	1.15	1	N/A	24.00	26.00	10.00	714777

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
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**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution





## Section B 3

# Insert Cross-Cut<sup>®</sup> Nozzles

## Application

Used primarily for inside coating of containers, tubes, or cylinders.

## Spray Guns and Adapters

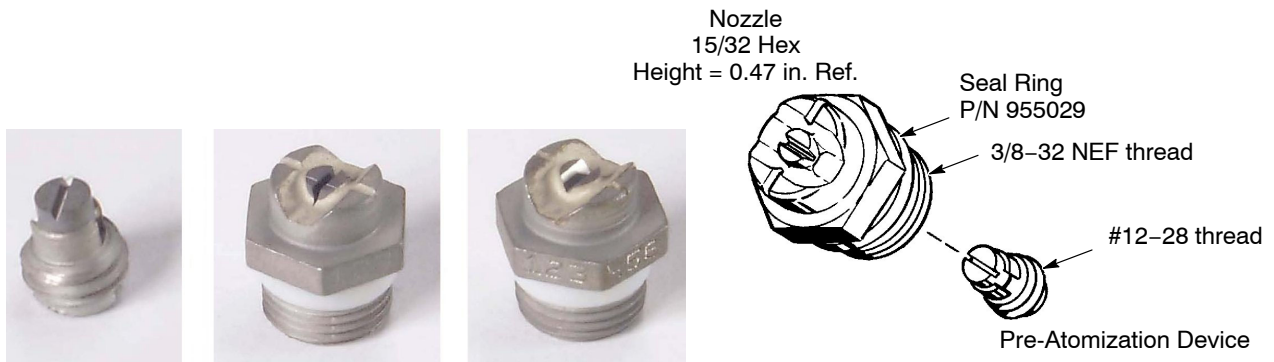
Can be adapted to any spray gun that uses a flanged nozzle with the adapters or dual nozzle extensions listed in Section E.

## Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications

Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging





# Insert Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0075/02	0.0039	0.24	1,Ct	N/A	0.31	0.56	1.00	709676
.0075/08	0.0039	0.08	1,Ct	N/A	1.25	1.50	1.00	711586
.0075/08	0.0039	0.08	1,Ct	N/A	1.38	1.63	1.00	714443
.0075/14	0.0039	0.05	1,Ct	N/A	2.38	2.63	1.00	712593
.0075/14	0.0039	0.05	1,3,Ct	027452	2.38	2.63	1.00	713564
.0085/12	0.0041	0.06	1,Ct	N/A	1.88	2.13	1.00	712595
.01/08	0.0045	0.11	1,Ct	N/A	1.38	1.63	1.00	714444
.01/12	0.0045	0.07	1,Ct	N/A	1.88	2.13	1.00	712596
.01/12	0.0045	0.07	1,Ct	N/A	2.00	2.25	1.00	714303
.01/12	0.0045	N/A	1,3,5,Ct	027452	2.00	2.25	1.00	1048266
.011/14	0.0047	0.07	1,Ct	N/A	2.13	2.38	1.00	715189
.012/14	0.0049	0.08	1,Ct	N/A	2.38	2.63	1.00	711585
.012/14	0.0049	N/A	1,5,Ct	N/A	2.38	2.63	1.00	1608140
.012/16	0.0049	0.07	1,Ct	N/A	2.63	2.88	1.00	715591
.012/18	0.0049	0.06	1,Ct	N/A	2.88	3.13	1.00	715592
.013/20	0.0051	0.06	1,3,Ct	027452	3.13	3.39	1.00	1105381
.015/02	0.0055	0.48	1,Ct	N/A	0.56	0.81	1.00	050200
.015/10	0.0055	0.13	1,Ct	N/A	1.50	1.75	1.00	119979
.015/12	0.0055	0.11	1,Ct	N/A	1.88	2.13	1.00	715749
.015/12	0.0055	N/A	1,3,5,Ct	N/A	12.00	14.00	10.00	1043950
.015/14	0.0055	0.10	1,Ct	N/A	2.38	2.63	1.00	711584
.015/14	0.0055	0.10	1,3,Ct	027452	2.38	2.63	1.00	713294
.015/16	0.0055	0.08	1,Ct	N/A	2.50	2.75	1.00	119980
.015/20	0.0055	0.07	1,3,Ct	27452	3.13	3.39	1.00	1103768
.018/14	0.0060	0.12	1,3,Ct	027452	2.38	2.63	1.00	1003895
.02/12	0.0063	0.15	1,Ct	N/A	12.00	14.00	10.00	221138
.02/14	0.0063	0.13	1,Ct	N/A	2.13	2.50	1.00	119981
.02/16	0.0063	N/A	1,3,5,Ct	027452	2.63	2.88	1.00	713565
.02/18	0.0063	0.10	1,Ct	N/A	2.88	3.13	1.00	119982
.02/20	0.0063	0.09	1,Ct	N/A	1.88	2.13	0.56	713419
.02/20	0.0063	0.09	1,Ct	N/A	3.38	3.63	1.00	714556
.02/22	0.0063	0.08	1,Ct	N/A	3.44	3.69	1.00	115917

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Insert Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.02/22	0.0063	N/A	1,3,5,Ct	027403	3.50	3.61	1.00	1100948
.02/24	0.0063	0.08	1,Ct	N/A	2.19	2.38	0.56	713516
.023/12	0.0068	N/A	1,3,5,Ct	027403	12.00	14.00	10.00	1001575
.023/12	0.0068	N/A	2,3,5,Ct	027403	12.00	14.00	10.00	1076931
.023/14	0.0068	N/A	1,3,5,Ct	027103	14.00	16.00	10.00	1606741
.023/16	0.0068	0.13	1,3,Ct	027452	16.00	18.00	10.00	712835
.023/22	0.0068	N/A	1,3,5,Ct	027403	3.50	3.61	1.00	1100949
.025/10	0.0071	N/A	1,5,Ct	N/A	1.75	2.00	1.00	1009174
.025/12	0.0071	0.18	1,Ct	N/A	12.00	14.00	10.00	121818
.025/14	0.0071	0.16	1,Ct	N/A	14.00	16.00	10.00	121819
.025/20	0.0071	0.11	1,Ct	N/A	1.88	2.13	0.56	713420
.025/24	0.0071	0.10	1,Ct	N/A	2.13	2.38	0.56	713398
.025/26	0.0071	0.09	1,Ct	N/A	2.44	2.63	0.56	713515
.025/26	0.0071	N/A	1,3,5,Ct	027403	2.44	2.63	0.56	1105380
.027/16	0.0073	0.15	1,3,Ct	027403	16.00	18.00	10.00	712836
.027/22	0.0073	0.11	1,3,Ct	027403	3.50	3.60	1.00	1103769
.027/22	0.0073	N/A	1,3,5,Ct	027403	3.50	3.61	1.00	1101270
.027/23	0.0073	0.11	1,3,Ct	027403	3.63	3.81	1.00	1104020
.028/12	0.0075	N/A	1,3,5,Ct	027403	10.00	12.00	10.00	1035690
.03/08	0.0077	0.32	1	N/A	8.00	10.00	10.00	050204
.03/08	0.0077	N/A	1,C	N/A	8.00	10.00	10.00	712493
.03/10	0.0077	N/A	1,B	N/A	10.00	12.00	10.00	712494
.03/12	0.0077	0.22	1	N/A	12.00	14.00	10.00	050206
.03/14	0.0077	0.19	1	N/A	14.00	16.00	10.00	711908
.03/14	0.0077	0.19	1,3	027403	14.00	16.00	10.00	713367
.03/16	0.0077	0.17	1,3	027403	16.00	18.00	10.00	712837
.03/21	0.0077	0.13	1	N/A	1.88	2.13	0.56	713421
.03/23	0.0077	0.12	1	N/A	2.00	2.25	0.56	119548
.03/24	0.0077	0.12	1	N/A	3.63	3.88	1.00	115918
.03/26	0.0077	0.11	1	N/A	2.13	2.50	0.56	119498
.03/26	0.0077	0.11	1	N/A	3.88	4.13	1.00	115919

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Insert Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.03/28	0.0077	0.10	1	N/A	2.50	2.75	0.56	119500
.03/28	0.0077	0.10	1,Ct	N/A	2.69	2.88	0.56	713514
.032/12	0.0080	0.24	1,3,Ct	027403	12.00	14.00	10.00	1035691
.035/08	0.0084	0.37	1,3,Ct	027404	8.00	10.00	10.00	121886
.035/10	0.0084	0.31	1,3,Ct	027404	10.00	12.00	10.00	121887
.035/12	0.0084	0.26	1,3,Ct	027404	12.00	14.00	10.00	121888
.035/16	0.0084	0.20	1,3	027404	2.63	2.88	1.00	715537
.035/16	0.0084	0.20	1,3	027404	16.00	18.00	10.00	713566
.035/16	0.0084	N/A	1,3,5,Ct	027404	16.00	18.00	10.00	1067465
.035/23	0.0084	0.14	1	N/A	2.00	2.25	0.56	119494
.035/26	0.0084	0.12	1	N/A	2.25	2.50	0.56	119495
.035/26	0.0084	0.12	2,3,Ct	027404	2.25	2.50	0.56	122392
.035/28	0.0084	0.12	1	N/A	2.50	2.75	0.56	119547
.0375/26	0.0087	0.13	1,3,Ct	027404	2.25	2.50	0.56	122397
.04/08	0.0089	N/A	1,D	N/A	8.00	10.00	10.00	712495
.04/08	0.0089	0.43	1,3,Ct	027404	8.00	10.00	10.00	121891
.04/10	0.0089	0.35	1	N/A	10.00	12.00	10.00	050215
.04/10	0.0089	N/A	1,D	N/A	10.00	12.00	10.00	712496
.04/12	0.0084	N/A	1,3,5,Ct	027404	12.00	14.00	10.00	1600588
.04/12	0.0089	0.30	1,3,Ct	027404	12.00	14.00	10.00	121892
.04/14	0.0089	0.26	1	N/A	2.38	2.63	1.00	713573
.04/14	0.0089	0.26	1	N/A	14.00	16.00	10.00	711362
.04/16	0.0089	0.23	1,3	027404	16.00	18.00	10.00	713567
.04/16	0.0089	N/A	1,3,5	027404	16.00	18.00	10.00	1067466
.04/21	0.0089	0.17	1	N/A	1.88	2.13	0.56	713422
.04/23	0.0089	0.16	1	N/A	2.00	2.25	0.56	119496
.04/26	0.0089	0.14	1	N/A	2.25	2.50	0.56	119497
.04/26	0.0089	0.14	2,3,Ct	027404	2.25	2.50	0.56	122393
.04/28	0.0089	0.13	1	N/A	2.50	2.75	0.56	119499
.04/28	0.0089	0.13	2,3,Ct	027404	2.50	2.75	0.56	122396
.045/08	0.0095	0.48	1,3,Ct	027404	8.00	10.00	10.00	121889

**FOOTNOTES**

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 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Insert Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.045/10	0.0095	0.39	1,3,Ct	027404	10.00	12.00	10.00	121890
.045/12	0.0095	0.33	1	N/A	12.00	14.00	10.00	121719
.045/12	0.0095	N/A	1,3,5,Ct	027404	12.00	14.00	10.00	1078377
.045/16	0.0095	0.25	1,3	027404	16.00	18.00	10.00	713568
.045/16	0.0095	N/A	1,3,5	027404	16.00	18.00	10.00	1067467
.045/18	0.0095	0.23	1	N/A	1.38	1.63	0.50	714280
.045/20	0.0095	0.21	1,3,Ct	027404	3.13	3.38	1.00	1091128
.045/21	0.0095	0.20	1,3	027404	3.25	3.50	1.00	121956
.045/24	0.0095	0.17	1,3	027404	3.63	3.88	1.00	121957
.045/26	0.0095	0.16	1,3	027404	3.88	4.13	1.00	121958
.045/26	0.0095	0.16	2,3,Ct	027404	2.25	2.50	0.56	122394
.045/28	0.0095	0.15	2,3,Ct	027404	2.50	2.75	0.56	122395
.05/08	0.0100	0.53	1,3,Ct	027404	8.00	10.00	10.00	121893
.05/10	0.0100	0.44	1	N/A	10.00	12.00	10.00	711583
.05/12	0.0100	0.37	1,3,Ct	027404	12.00	14.00	10.00	121894
.05/14	0.0100	0.32	1,3	027404	14.00	16.00	10.00	714780
.05/16	0.0100	0.28	1,3	027404	16.00	18.00	10.00	712838
.05/16	0.0100	N/A	1,3,5	027406	16.00	18.00	10.00	1067468
.05/18	0.0100	0.25	1	N/A	1.38	1.63	0.50	221137
.05/21	0.0100	0.22	1,3	027404	3.25	3.50	1.00	121959
.05/24	0.0100	0.19	1	N/A	2.13	2.38	0.56	711996
.05/26	0.0100	0.18	1,3	027404	2.38	2.50	0.56	713366
.05/26	0.0100	N/A	1,3,5	027406	3.50	3.69	1.00	1101271
.055/08	0.0105	0.59	1,3,Ct	027406	8.00	10.00	10.00	121895
.055/10	0.0105	0.48	1,3,Ct	027406	10.00	12.00	10.00	121896
.055/12	0.0105	0.41	1,3,Ct	027406	12.00	14.00	10.00	121897
.055/16	0.0105	0.31	1,3	027406	16.00	18.00	10.00	713569
.055/16	0.0105	N/A	1,3,5	027406	16.00	18.00	10.00	1067469
.055/24	0.0105	N/A	1,3,5,Ct	027406	3.75	4.00	1.00	1097001
.06/08	0.0110	N/A	1,C	N/A	8.00	10.00	10.00	713338
.06/10	0.0110	N/A	1,B	N/A	10.00	12.00	10.00	713339
.06/12	0.0110	0.44	1	N/A	12.00	14.00	10.00	050226

**FOOTNOTES**

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 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Insert Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.06/14	0.0110	0.38	1,3	027406	14.00	16.00	10.00	121858
.06/16	0.0110	0.34	1,3	027406	16.00	18.00	10.00	713187
.06/16	0.0110	0.34	1,3	027406	16.00	18.00	10.00	1038458
.06/16	0.0110	N/A	1,5,Ct	N/A	16.00	18.00	10.00	1046904
.06/18	0.0110	N/A	1,5,Ct	N/A	18.00	20.00	10.00	1051495
.06/20	0.0110	0.27	1	N/A	20.00	22.00	10.00	714025
.06/24	0.0110	0.23	1	N/A	24.00	26.00	10.00	715697
.07/16	0.0118	0.40	1,3	027406	16.00	18.00	10.00	119269
.07/16	0.0118	N/A	1,3,5,Ct	027406	16.00	18.00	10.00	1048264
.07/20	0.0118	0.32	1,3	027406	20.00	22.00	10.00	119270
.075/14	0.0122	0.48	1,3	027406	14.00	16.00	10.00	715600
.075/16	0.0122	0.42	1,3	027406	16.00	18.00	10.00	715601
.075/18	0.0122	0.38	1,3	027406	18.00	20.00	10.00	715602
.075/18	0.0122	N/A	1,5	027409	18.00	20.00	10.00	1044390
.08/16	0.0126	0.45	1,3	027409	16.00	18.00	10.00	119271
.08/20	0.0126	0.37	1,3	027409	20.00	22.00	10.00	119272
.08/22	0.0126	0.33	1,3,Ct	027409	22.00	24.00	10.00	122465
.08/24	0.0126	0.31	1,3,Ct	027409	24.00	26.00	10.00	122466
.09/08	0.0134	N/A	1,C	N/A	8.00	10.00	10.00	713340
.09/10	0.0134	N/A	1,B	N/A	10.00	12.00	10.00	713341
.09/14	0.0134	0.58	1	N/A	14.00	16.00	10.00	050237
.09/16	0.0134	0.51	1,3	027409	16.00	18.00	10.00	713443
.09/22	0.0134	0.38	1	N/A	22.00	24.00	10.00	714192
.09/24	0.0134	0.35	1,3,Ct	027409	24.00	26.00	10.00	122467
.09/28	0.0134	0.30	1	N/A	28.00	30.00	10.00	121817

**FOOTNOTES**

S= Short adapter  
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 Ct= Close tolerance flow  
 Sq=Square pattern

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 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
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**PATTERN DISTRIBUTION**

A = 90% - 10%  
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 X = Special Pattern Distribution



## Insert Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.10/12	0.0141	0.74	1	N/A	12.00	14.00	10.00	714281
.10/16	0.0141	0.56	1,3	027409	16.00	18.00	10.00	713444
.105/14	0.0145	N/A	1,B	N/A	14.00	16.00	10.00	713109
.11/16	0.0148	0.62	1	N/A	16.00	18.00	10.00	715895
.11/16	0.0148	0.62	1,3	027409	16.00	18.00	10.00	713445
.14/16	0.0167	0.79	1	N/A	16.00	18.00	10.00	050248
.20/18	0.0200	1.01	1	N/A	18.00	20.00	10.00	050259
.20/24	0.0200	0.77	1	N/A	24.00	26.00	10.00	713717

### FOOTNOTES

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
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### PATTERN DISTRIBUTION

A = 90% - 10%  
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 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution





# Section B 4

## Miniature Insert Cross-Cut<sup>®</sup> Nozzles

### Application

Used primarily for inside coating of containers, tubes, channels, or cylinders where space is very limited or where multiple nozzles are required.

### Spray Guns and Adapters

Can be adapted to any spray gun that uses a flanged nozzle using the extensions and adapters listed in Section F . Special adapters can be made by Nordson Corporation to the customer's specifications.

### Features

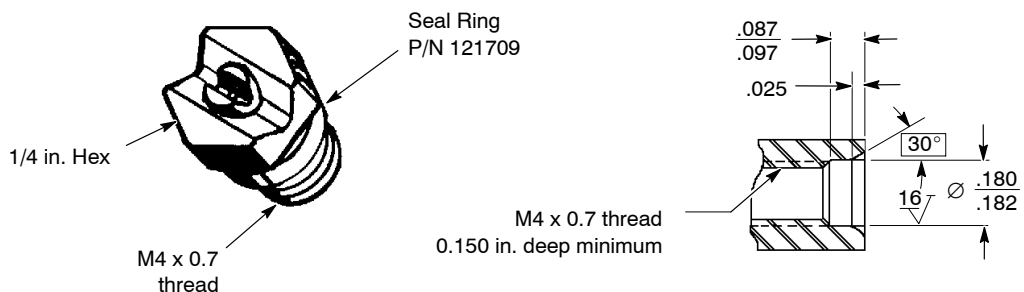
- Custom sizes are available upon request
- Available in standard and close tolerance orifice sizes
- Used where extremely accurate control of fluid flow rates is required
- Small size allows use in unique applications
- Special adapters can be designed for use where space is very limited, or where multiple nozzle adapters are required
- Seals allow fan orientation to be rotated 360 degrees

Cross-cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging



Height = 3/8 in. ref



# Miniature Insert Cross-Cut Nozzles

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0038/08	0.0028	0.04	1,Ct	N/A	1.38	1.63	1.00	1602217
.006/02	0.0035	0.19	1,Ct	N/A	0.56	0.81	1.00	122484
.006/10	0.0035	0.05	1,Ct	N/A	1.75	2.00	1.00	1602321
.01/02	0.0045	0.32	1,Ct	N/A	0.56	0.81	1.00	122444
.01/10	0.0045	0.09	1,Ct	N/A	1.75	2.00	1.00	1606807
.012/09	0.0049	0.12	1,Ct	N/A	1.38	1.63	1.00	122326
.014/14	0.0053	0.09	1,Ct	N/A	2.38	2.63	1.00	1602343
.015/04	0.0055	0.29	1,7,Ct	N/A	0.75	1.00	1.00	1003111
.02/12	0.0063	0.15	1,Ct	N/A	12.00	14.00	10.00	1021828
.02/14	0.0063	0.13	1,Ct	N/A	2.38	2.63	1.00	1602344
.03/20	0.0077	0.14	1,Ct	N/A	3.13	3.38	1.00	114264
.03/23	0.0077	0.12	1,Ct	N/A	3.69	3.94	1.00	118720
.03/24	0.0077	0.12	1,Ct	N/A	3.63	3.88	1.00	1602322
.04/10	0.0089	N/A	1,8,B,Ct	N/A	10.00	12.00	10.00	1602218
.04/13	0.0089	0.27	1	N/A	2.25	2.50	1.00	113755
.04/14	0.0089	0.26	1	N/A	2.38	2.63	1.00	113756
.04/20	0.0089	0.18	1,Ct	N/A	3.13	3.38	1.00	114261
.06/06	0.0110	0.82	1	N/A	6.00	8.00	10.00	121932
.06/24	0.0110	0.23	1,Ct	N/A	24.00	26.00	10.00	114262
.07/18	0.0118	0.35	1,Ct	N/A	18.00	20.00	10.00	1009175
.09/18	0.0134	0.45	1,Ct	N/A	18.00	20.00	10.00	1009518
.09/22	0.0134	0.38	1,Ct	N/A	22.00	24.00	10.00	112139
.09/24	0.0134	0.35	1	N/A	24.00	26.00	10.00	119582
.12/24	0.0155	0.46	1,Ct	N/A	24.00	26.00	10.00	112136
.14/20	0.0167	0.64	1,Ct	N/A	20.00	22.00	10.00	114263
.14/24	0.0167	0.54	1,Ct	N/A	24.00	26.00	10.00	112137
.20/16	0.0200	1.13	1	N/A	16.00	18.00	10.00	1025264
.20/18	0.0200	1.01	1	N/A	18.00	20.00	10.00	122514
.20/24	0.0200	0.77	1,Ct	N/A	24.00	26.00	10.00	112138
.20/28	0.0200	0.66	1	N/A	28.00	30.00	10.00	118864
.25/18	0.0224	1.26	1	N/A	18.00	20.00	10.00	1000172

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution

# Section B 5

## Tube Lining Cross-Cut<sup>®</sup> Nozzles

### Application

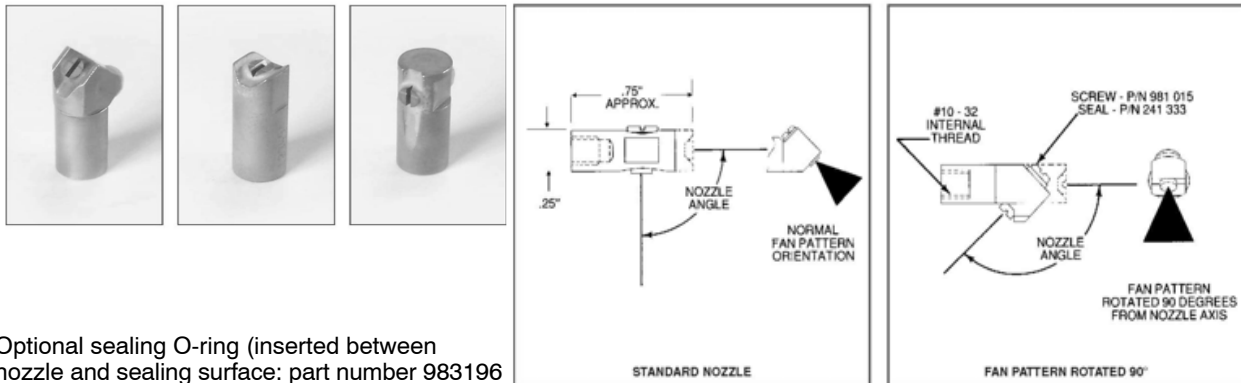
Primarily for the coating of small cans and tubes. Small size makes them ideal for coating areas that cannot be reached with conventional nozzles. Also used on the Nordson CleanSpray<sup>®</sup> II and XT systems.

### Spray Guns and Adapters

The valved or unvalved extensions listed in Section F can be used to adapt these nozzles to most airless spray guns that accept flanged nozzles.

### Features

- Custom sizes are available upon request
- Available in a wide range of angles, flow rates, and pattern widths to accommodate most specialized applications
- Controlled pattern distribution nozzles are available for use where a non-symmetrical film build is desired
- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging



Optional sealing O-ring (inserted between nozzle and sealing surface: part number 983196

# Tube Lining Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.0038/02	0.0028	0.12	1,Ct	0	N/A	0.31	0.56	1.00	713959
.0038/02	0.0028	0.12	2,Ct	0	N/A	0.31	0.56	1.00	713632
.0038/04	0.0028	0.07	1,Ct	90	N/A	0.81	1.00	1.00	1104227
.0038/04	0.0028	0.07	2,4,Ct	115	N/A	0.75	1.00	1.00	1017753
.0075/02	0.0039	0.24	1,Ct	90	N/A	0.56	0.75	1.00	1104226
.0075/04	0.0039	0.14	1,4,Ct	90	N/A	0.69	1.00	1.00	113883
.0075/04	0.0039	0.14	2,4,Ct	90	N/A	0.69	1.00	1.00	1000604
.0075/04	0.0039	0.14	1,Ct,D	90	N/A	0.75	1.00	1.00	1035603
.0075/06	0.0039	0.10	1,Ct	45	N/A	0.75	1.19	1.00	712587
.0075/06	0.0039	0.10	1,Ct	60	N/A	0.75	1.19	1.00	713730
.0075/06	0.0039	0.10	1,Ct	80	N/A	0.75	1.19	1.00	713731
.0075/12	0.0039	0.06	1,Ct	0	N/A	2.00	2.25	1.00	713265
.0075/12	0.0039	0.06	1,Ct	45	N/A	2.00	2.25	1.00	712586
.0075/14	0.0039	0.05	1,Ct	0	N/A	2.25	2.50	1.00	1068502
.0075/14	0.0039	0.05	1,4,Ct	45	N/A	2.38	2.63	1.00	116060
.01/01	0.0045	0.48	2,4,Ct	90	N/A	0.38	0.50	1.00	1067825
.01/02	0.0045	0.32	1,Ct	0	N/A	0.56	0.81	1.00	1075783
.01/02	0.0045	0.32	1,4,Ct	90	N/A	0.56	0.81	1.00	715876
.01/02	0.0045	0.32	2,4,Ct	90	N/A	0.56	0.81	1.00	105530
.01/08	0.0045	0.11	1,Ct	0	N/A	1.38	1.63	1.00	714305
.01/08	0.0045	0.11	1,Ct	90	N/A	1.38	1.63	1.00	1040032
.01/10	0.0045	0.09	1,Ct	0	N/A	1.75	2.00	1.00	714304
.01/12	0.0045	N/A	1,5,Ct	0	N/A	2.00	2.25	1.00	1044842
.01/16	0.0045	0.06	1,Ct	90	N/A	2.63	2.88	1.00	1075658
.012/09	0.0049	0.12	1,Ct	0	N/A	1.38	1.63	1.00	714431
.012/14	0.0049	0.08	1,Ct	0	N/A	2.38	2.63	1.00	1087560
.012/18	0.0049	0.06	2,Ct	90	N/A	2.88	3.13	1.00	1075659
.015/02	0.0055	0.48	2,4,Ct	90	N/A	0.56	0.81	1.00	122515
.015/02	0.0055	0.48	1,Ct	0	NA	0.56	0.81	1.00	713502
.015/02	0.0055	0.48	1,Ct	15	N/A	0.56	0.81	1.00	713509
.015/02	0.0055	0.48	1,Ct	90	N/A	0.56	0.81	1.00	715589
.015/02	0.0055	0.48	1,4,7,Ct	90	N/A	0.56	0.81	1.00	715878
.015/04	0.0055	0.29	1,Ct	0	N/A	0.69	1.00	1.00	713503
.015/04	0.0055	0.29	1,Ct	15	N/A	0.69	1.00	1.00	713506
.015/04	0.0055	0.29	1,Ct	45	N/A	0.69	1.00	1.00	713508

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 4= Pattern Rotated 90°  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Tube Lining Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.015/04	0.0055	0.29	1,4,Ct	0	N/A	0.69	1.00	1.00	122333
.015/06	0.0055	0.21	1,Ct	15	N/A	0.75	1.19	1.00	713505
.015/06	0.0055	0.21	1,Ct	45	N/A	0.75	1.19	1.00	713504
.015/06	0.0055	0.21	1,Ct	90	N/A	0.75	1.19	1.00	713473
.015/08	0.0055	0.16	1,Ct	0	N/A	1.38	1.63	1.00	713601
.015/08	0.0055	0.16	1,Ct	45	N/A	1.38	1.63	1.00	713920
.015/08	0.0055	0.16	1,Ct	45	N/A	8.00	10.00	10.00	713501
.015/08	0.0055	0.16	1,Ct	90	N/A	1.38	1.63	1.00	713602
.015/10	0.0055	0.13	1,Ct	45	N/A	1.75	2.00	1.00	712958
.015/14	0.0055	0.10	1,Ct	0	N/A	2.25	2.50	1.00	711998
.015/14	0.0055	0.10	1,Ct	0	N/A	2.38	2.63	1.00	713397
.015/14	0.0055	0.10	1,Ct	15	N/A	2.25	2.50	1.00	712000
.015/14	0.0055	0.10	1,Ct	45	N/A	2.38	2.63	1.00	712585
.015/14	0.0055	0.10	1,Ct	60	N/A	2.38	2.63	1.00	712588
.015/14	0.0055	0.10	1,Ct	90	N/A	2.25	2.50	1.00	712003
.015/14	0.0055	0.10	1,Ct	90	N/A	2.38	2.63	1.00	713441
.015/14	0.0055	0.10	1,4,Ct	90	N/A	2.38	2.63	1.00	713264
.015/18	0.0055	0.07	1,Ct	0	N/A	2.88	3.13	1.00	1600433
.015/18	0.0055	0.08	1,Ct	90	N/A	2.88	3.13	1.00	713041
.02/04	0.0063	0.38	1,4,Ct	115	N/A	0.75	1.00	1.00	122338
.02/08	0.0063	0.21	1,Ct	0	N/A	8.00	10.00	10.00	714015
.02/08	0.0063	0.21	1,Ct	90	N/A	1.38	1.63	1.00	1600019
.02/10	0.0063	0.17	1,Ct	80	N/A	10.00	12.00	10.00	714815
.02/14	0.0063	0.13	1,Ct	0	N/A	2.38	2.63	1.00	713293
.02/14	0.0063	N/A	1,5,Ct	0	N/A	2.38	2.63	1.00	1009951
.03/04	0.0077	N/A	1,C	0	N/A	4.00	6.00	10.00	121219
.03/04	0.0077	0.58	1,4	45	N/A	0.69	1.00	1.00	713262
.03/04	0.0077	0.58	1	90	N/A	4.00	6.00	10.00	122360
.03/04	0.0077	0.58	2,4	90	N/A	4.00	6.00	10.00	113223
.03/04	0.0077	0.58	1,4	135	N/A	4.00	6.00	10.00	121806
.03/04	0.0077	0.58	10,4	90	N/A	4.00	6.00	10.00	121827
.03/06	0.0077	0.41	1	0	N/A	6.00	8.00	10.00	1007723
.03/06	0.0077	0.41	1,Ct	90	N/A	6.00	8.00	10.00	1079531
.03/08	0.0077	0.32	1	0	N/A	8.00	10.00	10.00	712505
.03/08	0.0077	0.32	1	90	N/A	8.00	10.00	10.00	122361

**FOOTNOTES**

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 T= Tall adapter  
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 Sq=Square pattern

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 5= Heavy Center Pattern  
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**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Tube Lining Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.03/10	0.0077	0.26	1	0	N/A	10.00	12.00	10.00	714014
.03/10	0.0077	0.26	1	60	N/A	10.00	12.00	10.00	711811
.03/10	0.0077	0.26	1	80	N/A	10.00	12.00	10.00	714778
.03/12	0.0077	0.22	1	90	N/A	12.00	14.00	10.00	121715
.03/12	0.0077	0.22	1,4	90	N/A	12.00	14.00	10.00	1028471
.03/14	0.0077	0.19	1,Ct	15	N/A	2.38	2.63	1.00	1074764
.03/16	0.0077	0.17	1	0	N/A	16.00	18.00	10.00	711997
.03/16	0.0077	0.17	2	0	N/A	16.00	18.00	10.00	221170
.03/16	0.0077	N/A	1,B	0	N/A	16.00	18.00	10.00	712676
.03/16	0.0077	0.17	1	15	N/A	16.00	18.00	10.00	711999
.03/16	0.0077	0.17	1	45	N/A	16.00	18.00	10.00	712001
.03/16	0.0077	0.17	1,4	45	N/A	16.00	18.00	10.00	713609
.03/16	0.0077	0.17	1	90	N/A	16.00	18.00	10.00	712002
.03/20	0.0077	0.14	1	0	N/A	20.00	22.00	10.00	113805
.04/02	0.0089	1.28	2,4	90	N/A	2.00	4.00	10.00	122356
.04/04	0.0089	0.77	2	0	N/A	4.00	6.00	10.00	121919
.04/04	0.0089	0.77	1,4	70	N/A	4.00	6.00	10.00	120566
.04/04	0.0089	0.77	1	90	N/A	4.00	6.00	10.00	122359
.04/04	0.0089	0.77	1,4	90	N/A	4.00	6.00	10.00	114370
.04/04	0.0089	0.77	2,4	90	N/A	4.00	6.00	10.00	122520
.04/04	0.0089	0.77	10,4	90	N/A	4.00	6.00	10.00	121828
.04/06	0.0089		2,4	90	N/A	6.00	8.00	10.00	113224
.04/08	0.0089 1	0.43	1	0	N/A	8.00	10.00	10.00	712506
.04/08	0.0089	0.43	1	90	N/A	8.00	10.00	10.00	122362
.04/10	0.0089	0.35	2	45	N/A	10.00	12.00	10.00	715632
.04/10	0.0089	0.35	1	80	N/A	10.00	12.00	10.00	713291
.04/12	0.0089	0.30	1	45	N/A	12.00	14.00	10.00	712259
.04/12	0.0089	0.30	1	90	N/A	12.00	14.00	10.00	713114
.04/12	0.0089	0.30	2	90	N/A	12.00	14.00	10.00	1007867
.04/12	0.0089	0.30	1,Ct,Sq	90	N/A	12.00	14.00	10.00	1095607
.04/16	0.0089	0.23	1	0	N/A	16.00	18.00	10.00	713112
.04/16	0.0089	0.23	2	0	N/A	16.00	18.00	10.00	714939
.04/16	0.0089	N/A	1,D	0	N/A	16.00	18.00	10.00	715347
.04/16	0.0089	0.23	1	45	N/A	16.00	18.00	10.00	712522
.04/16	0.0089	0.23	2	45	N/A	16.00	18.00	10.00	714406

**FOOTNOTES**

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 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

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 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Tube Lining Cross-Cut Nozzle List

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REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.04/16	0.0089	0.23	2,Ct	45	N/A	3.38	3.63	1.00	1104026
.04/16	0.0089	0.23	2,Ct	55	N/A	3.38	3.63	1.00	1108176
.04/20	0.0089	0.18	1	0	N/A	20.00	22.00	10.00	712583
.04/20	0.0089	0.18	2,Ct	35	N/A	3.38	3.63	1.00	1105160
.04/20	0.0089	0.18	2,Ct	55	N/A	3.38	3.63	1.00	1105161
.045/06	0.0095	0.62	1	90	N/A	6.00	8.00	10.00	117014
.045/08	0.0095	0.48	1,Ct	90	N/A	8.00	10.00	10.00	1076345
.045/10	0.0095	0.39	1	80	N/A	10.00	12.00	10.00	713542
.05/08	0.0100	0.53	1	90	N/A	8.00	10.00	10.00	714358
.05/10	0.0100	0.44	1	80	N/A	10.00	12.00	10.00	713292
.05/10	0.0100	0.44	2,Ct	90	N/A	10.00	12.00	10.00	1020010
.05/16	0.0100	0.28	1	0	N/A	16.00	18.00	10.00	713432
.05/16	0.0100	0.28	1	90	N/A	16.00	18.00	10.00	715747
.05/26	0.0100	0.18	1	75	N/A	2.25	2.50	0.56	712228
.05/26	0.0100	0.18	1	90	N/A	2.25	2.50	0.56	712227
.06/04	0.0110	1.15	1,4,Ct	90	N/A	4.00	6.00	10.00	122488
.06/06	0.0110	0.82	2	45	N/A	6.00	8.00	10.00	715633
.06/08	0.0110	0.64	1	0	N/A	8.00	10.00	10.00	714794
.06/08	0.0110	0.64	1,Ct	90	N/A	8.00	10.00	10.00	1076346
.06/10	0.0110	0.52	1	0	N/A	10.00	12.00	10.00	712507
.06/10	0.0110	0.52	2	45	N/A	10.00	12.00	10.00	715634
.06/10	0.0110	0.52	1	70	N/A	10.00	12.00	10.00	714356
.06/10	0.0110	0.52	1	75	N/A	10.00	12.00	10.00	714360
.06/10	0.0110	0.52	1	80	N/A	10.00	12.00	10.00	221172
.06/10	0.0110	0.52	2	80	N/A	10.00	12.00	10.00	221171
.06/12	0.0110	0.44	1	45	N/A	12.00	14.00	10.00	712521
.06/12	0.0110	0.44	1	90	N/A	12.00	14.00	10.00	713113
.06/14	0.0110	0.38	1	90	N/A	14.00	16.00	10.00	715587
.06/14	0.0110	0.38	1,Ct	15	N/A	14.00	16.00	10.00	1075785
.06/16	0.0110	0.34	1	0	N/A	16.00	18.00	10.00	713431
.06/16	0.0110	0.34	2	45	N/A	16.00	18.00	10.00	714403
.06/16	0.0110	0.34	1	90	N/A	16.00	18.00	10.00	715588
.06/20	0.0110	0.27	1	0	N/A	20.00	22.00	10.00	714865
.06/20	0.0110	0.27	2	45	N/A	20.00	22.00	10.00	714402
.06/20	0.0110	0.27	1	90	N/A	20.00	22.00	10.00	121722

**FOOTNOTES**

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REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.06/20	0.0110	0.27	1,4	90	N/A	20.00	22.00	10.00	121731
.06/22	0.0110	0.25	1	90	N/A	22.00	24.00	10.00	109245
.06/24	0.0110	0.23	1	0	N/A	24.00	26.00	10.00	715768
.06/24	0.0110	0.23	1	90	N/A	24.00	26.00	10.00	109246
.06/24	0.0110	0.23	1,4	90	N/A	24.00	26.00	10.00	121729
.06/24	0.0110	0.23	2,Ct	45	N/A	24.00	16.00	10.00	1080138
.06/26	0.0110	0.21	1	75	N/A	26.00	28.00	10.00	712581
.06/26	0.0110	0.21	1	90	N/A	26.00	28.00	10.00	109247
.07/10	0.0118	0.61	1	70	N/A	10.00	12.00	10.00	714357
.07/10	0.0118	0.61	1	80	N/A	10.00	12.00	10.00	712784
.07/10	0.0118	0.61	2	80	N/A	10.00	12.00	10.00	714940
.07/10	0.0118	0.61	10	70	N/A	10.00	12.00	10.00	121488
.075/08	0.0122	0.80	1	90	N/A	8.00	10.00	10.00	714359
.075/10	0.0122	0.65	2	45	N/A	10.00	12.00	10.00	715010
.075/10	0.0122	0.65	1,Ct	55	N/A	10.00	12.00	10.00	1106618
.075/12	0.0122	0.55	1	90	N/A	12.00	14.00	10.00	712803
.075/14	0.0122	0.48	2	45	N/A	14.00	16.00	10.00	715011
.075/14	0.0122	0.48	1	90	N/A	2.25	2.50	1.00	712584
.075/16	0.0122	0.42	1	0	N/A	16.00	18.00	10.00	715336
.075/16	0.0122	0.42	1	45	N/A	16.00	18.00	10.00	715337
.075/16	0.0122	0.42	1	90	N/A	16.00	18.00	10.00	712804
.075/20	0.0122	0.34	1	0	N/A	20.00	22.00	10.00	715014
.075/26	0.0122	0.27	1	75	N/A	26.00	28.00	10.00	712582
.09/10	0.0134	0.79	2	45	N/A	10.00	12.00	10.00	715635
.09/12	0.0134	0.66	1,4	45	N/A	12.00	14.00	10.00	714822
.09/12	0.0134	0.66	1	70	N/A	12.00	14.00	10.00	121760
.09/12	0.0134	0.66	1	90	N/A	12.00	14.00	10.00	712805
.09/12	0.0134	0.66	1,4	135	N/A	12.00	14.00	10.00	714823
.09/14	0.0134	0.58	2	45	N/A	14.00	16.00	10.00	715636
.09/14	0.0134	0.58	1,4,Ct	90	N/A	14.00	16.00	10.00	1056211
.09/16	0.0134	0.51	1	0	N/A	16.00	18.00	10.00	715338
.09/16	0.0134	0.51	1	90	N/A	16.00	18.00	10.00	712806
.09/20	0.0134	0.41	1	0	N/A	20.00	22.00	10.00	715015
.09/20	0.0134	0.41	1	90	N/A	20.00	22.00	10.00	715016
.09/20	0.0134	0.41	1,4	90	N/A	20.00	22.00	10.00	121732

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 4= Pattern Rotated 90°  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Tube Lining Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.09/22	0.0134	0.38	1	90	N/A	22.00	24.00	10.00	715017
.09/24	0.0134	0.35	1	0	N/A	24.00	26.00	10.00	121137
.09/24	0.0134	0.35	1	90	N/A	24.00	26.00	10.00	713490
.09/24	0.0134	0.35	1,4	90	N/A	24.00	26.00	10.00	121730
.09/26	0.0134	0.32	1	90	N/A	26.00	28.00	10.00	715018
.09/26	0.0134	0.32	1,4	90	N/A	26.00	28.00	10.00	121825
.09/28	0.0134	0.30	1	90	N/A	28.00	30.00	10.00	715019
.09/28	0.0134	0.30	1,4	90	N/A	28.00	30.00	10.00	121826
.10/08	0.0141	1.07	1	0	N/A	8.00	10.00	10.00	714283
.10/10	0.0141	0.87	1	0	N/A	10.00	12.00	10.00	714282
.11/12	0.0148	0.81	1	90	N/A	12.00	14.00	10.00	715628
.11/16	0.0148	0.62	1	45	N/A	16.00	18.00	10.00	715498
.11/16	0.0148	0.62	1	90	N/A	16.00	18.00	10.00	715496
.12/10	0.0155	1.05	1	0	N/A	10.00	12.00	10.00	115101
.12/10	0.0155	1.05	1	90	N/A	10.00	12.00	10.00	115102
.12/12	0.0155	0.89	1	90	N/A	12.00	14.00	10.00	715629
.12/16	0.0155	0.68	1,4	90	N/A	16.00	18.00	10.00	714779
.12/20	0.0155	0.55	1	90	N/A	20.00	22.00	10.00	715020
.12/22	0.0155	0.50	1	90	N/A	22.00	24.00	10.00	715021
.12/24	0.0155	0.46	1	90	N/A	24.00	26.00	10.00	715022
.12/26	0.0155	0.43	1	90	N/A	26.00	28.00	10.00	715023
.12/28	0.0155	0.40	1	90	N/A	28.00	30.00	10.00	715024
.13/16	0.0161	0.73	1	90	N/A	16.00	18.00	10.00	715497
.14/10	0.0167	1.22	2	45	N/A	10.00	12.00	10.00	715637
.14/16	0.0167	0.79	2	45	N/A	16.00	18.00	10.00	715638
.14/18	0.0167	0.71	1	90	N/A	18.00	20.00	10.00	715520
.14/20	0.0167	0.64	1	0	N/A	20.00	22.00	10.00	715286
.14/20	0.0167	0.64	1	90	N/A	20.00	22.00	10.00	715521
.14/22	0.0167	0.58	1	90	N/A	22.00	24.00	10.00	715522
.14/24	0.0167	0.54	1	0	N/A	24.00	26.00	10.00	113527
.14/24	0.0167	0.54	1	90	N/A	24.00	26.00	10.00	715523
.14/26	0.0167	0.50	1	90	N/A	26.00	28.00	10.00	715524
.14/28	0.0167	0.46	1	0	N/A	28.00	30.00	10.00	121139
.16/18	0.0179	0.81	1	90	N/A	18.00	20.00	10.00	715525
.16/20	0.0179	0.73	1	90	N/A	20.00	22.00	10.00	715526

**FOOTNOTES**

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 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
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 12=Adapter has no notch  
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# Tube Lining Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.16/22	0.0179	0.67	1	90	N/A	22.00	24.00	10.00	715527
.16/24	0.0179	0.61	1	90	N/A	24.00	26.00	10.00	715528
.16/26	0.0179	0.57	1	90	N/A	26.00	28.00	10.00	715529
.20/14	0.0200	1.28	1	90	N/A	14.00	16.00	10.00	121747
.20/14	0.0200	1.28	1,4,Ct	90	N/A	14.00	16.00	10.00	1018251
.20/16	0.0200	1.13	1	90	N/A	16.00	18.00	10.00	121748
.20/18	0.0200	1.01	1	90	N/A	18.00	20.00	10.00	715510
.20/20	0.0200	0.91	1	0	N/A	20.00	22.00	10.00	715278
.20/20	0.0200	0.91	1	90	N/A	20.00	22.00	10.00	715511
.20/22	0.0200	0.83	1	90	N/A	22.00	24.00	10.00	715512
.20/24	0.0200	0.77	1	0	N/A	24.00	26.00	10.00	121140
.20/24	0.0200	0.77	1	90	N/A	24.00	26.00	10.00	715513
.20/26	0.0200	0.71	1	90	N/A	26.00	28.00	10.00	715514
.20/26	0.0200	0.71	1,4	90	N/A	26.00	28.00	10.00	1014690
.20/28	0.0200	0.66	1	0	N/A	28.00	30.00	10.00	117897
.25/10	0.0224	2.18	1	0	N/A	10.00	12.00	10.00	115103
.25/10	0.0224	2.18	1	90	N/A	10.00	12.00	10.00	115104
.25/18	0.0224	1.26	1	90	N/A	18.00	20.00	10.00	715515
.25/20	0.0224	1.14	1	0	N/A	20.00	22.00	10.00	105124
.25/20	0.0224	1.14	1	90	N/A	20.00	22.00	10.00	715516
.25/22	0.0224	1.04	1	90	N/A	22.00	24.00	10.00	715517
.25/24	0.0224	0.96	1	90	N/A	24.00	26.00	10.00	715518
.25/26	0.0224	0.89	1	90	N/A	26.00	28.00	10.00	715519
.25/28	0.0224	0.83	1	90	N/A	28.00	30.00	10.00	121746
.30/20	0.0245	1.37	1	0	N/A	20.00	22.00	10.00	105123
.30/20	0.0245	1.37	1	90	N/A	20.00	22.00	10.00	715506
.30/22	0.0245	1.25	1	90	N/A	22.00	24.00	10.00	715507
.30/24	0.0245	1.15	1	90	N/A	24.00	26.00	10.00	715508
.30/26	0.0245	1.07	1	90	N/A	26.00	28.00	10.00	715509
.35/20	0.0265	1.60	1	0	N/A	20.00	22.00	10.00	105122
.40/20	0.0283	1.83	1	0	N/A	20.00	22.00	10.00	105121
.40/20	0.0283	1.83	1,Ct	90	N/A	20.00	22.00	10.00	1075784
.45/20	0.0300	2.06	1	0	N/A	20.00	22.00	10.00	105120
.45/24	0.0300	1.73	1	0	N/A	24.00	26.00	10.00	109243
.45/26	0.0300	1.60	1	0	N/A	26.00	28.00	10.00	109752

**FOOTNOTES**

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 Sq= Square pattern

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 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10= Type III Carbide  
 11= Adapter has no tip shields  
 12= Adapter has no notch  
 13= Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution

# Tube Lining Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.68/24	0.0369	2.61	1	0	N/A	24.00	26.00	10.00	109244
.68/26	0.0369	2.42	1	0	N/A	26.00	28.00	10.00	109753
1.00/24	0.0447	3.84	1	0	N/A	24.00	26.00	10.00	110586
1.00/26	0.0447	3.56	1	0	N/A	26.00	28.00	10.00	110587

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## Section B 6

# Can Lining Cross-Cut<sup>®</sup> Nozzles

## Application

Used primarily for the inside striping of welded cans.

## Spray Guns and Adapters

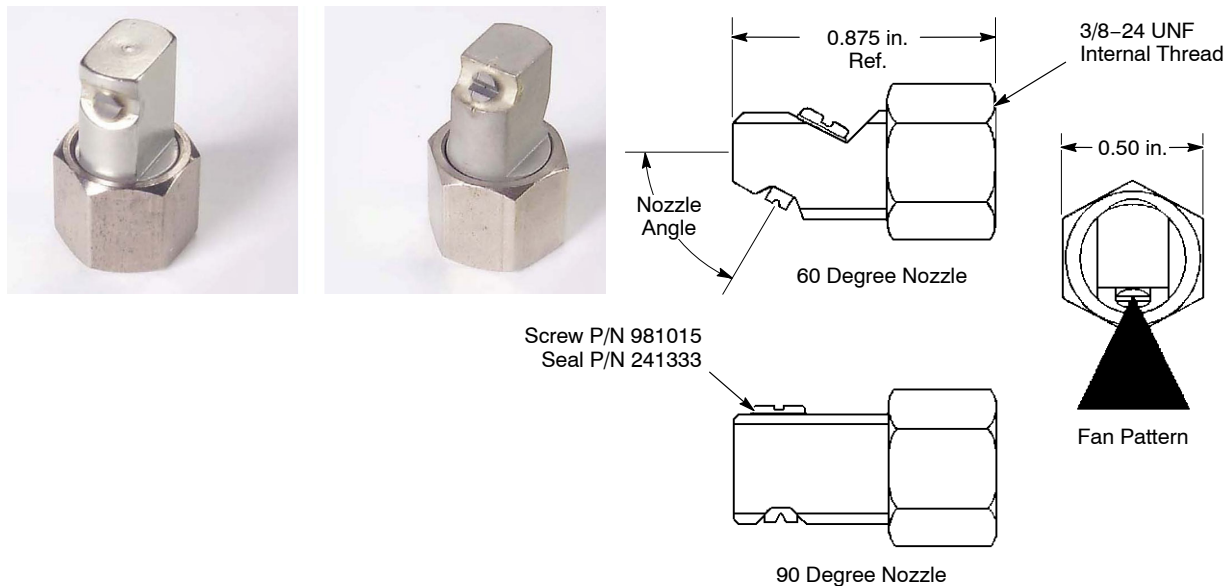
Used on the Nordson Model A9A, A16A, and MEG<sup>®</sup> Inside Stripe Applicators.

## Features

- Custom sizes are available upon request
- Available in a wide range of angles, flow rates, and pattern widths to accommodate most specialized applications

Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging



# Can Lining Cross-Cut Nozzle List

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REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.0038/06	0.0028	0.05	1,4,Ct	60	N/A	0.75	1.19	1.00	715371
.0038/06	0.0028	0.05	1,4,Ct	60	N/A	0.88	1.13	1.00	1064271
.0055/02	0.0033	0.18	1,4,Ct	60	N/A	0.52	0.81	1.00	1108204
.0055/04	0.0033	0.11	1,4,Ct	60	N/A	0.88	0.98	1.00	1108205
.0055/06	0.0033	0.08	1,4,Ct	60	N/A	0.75	1.19	1.00	715372
.0055/10	0.0033	N/A	1,4,5,Ct	60	N/A	1.75	2.00	1.00	1093647
.0065/07	0.0036	0.08	1,4,Ct	60	N/A	1.19	1.30	1.00	1103689
.0075/02	0.0039	0.24	1,4,Ct	60	N/A	0.56	0.81	1.00	221121
.0075/04	0.0039	0.14	1,4,Ct	60	N/A	0.69	1.00	1.00	221146
.0075/04	0.0039	0.14	1,4,Ct	90	N/A	0.47	0.75	1.00	715656
.0075/06	0.0039	0.10	1,4,Ct	60	N/A	0.75	1.19	1.00	713918
.0075/08	0.0039	0.08	1,4,Ct	60	N/A	1.38	1.63	1.00	711653
.0075/08	0.0039	N/A	1,4,5,Ct	60	N/A	1.38	1.63	1.00	715746
.0075/10	0.0039	0.07	1,4,Ct	60	N/A	1.88	2.13	1.00	1072411
.0075/14	0.0039	0.05	1,4,Ct	60	N/A	2.38	2.63	1.00	713304
.0088/08	0.0042	0.09	1,4,Ct	60	N/A	1.38	1.63	1.00	121905
.01/02	0.0045	0.32	1,4,Ct	60	N/A	0.31	0.56	1.00	120120
.01/08	0.0045	0.11	1,4,Ct	60	N/A	1.38	1.63	1.00	711654
.01/10	0.0045	0.09	1,4,Ct	60	N/A	1.88	2.13	1.00	221147
.01/11	0.0045	N/A	1,4,5,Ct	60	N/A	1.63	1.88	1.00	715373
.015/02	0.0055	0.48	1,4,Ct	60	N/A	0.56	0.81	1.00	221122
.015/04	0.0055	0.29	1,4,Ct	60	N/A	0.69	1.00	1.00	221128
.015/04	0.0055	0.29	2,4,Ct	90	N/A	0.69	1.00	1.00	1001032
.015/07	0.0055	0.18	1,4,Ct	60	N/A	1.00	1.25	1.00	711262
.015/14	0.0055	0.10	1,4,Ct	60	N/A	2.38	2.63	1.00	221133
.015/14	0.0055	N/A	1,4,5,Ct	60	N/A	2.13	2.38	1.00	715374
.015/18	0.0055	0.08	1,4,Ct	60	N/A	2.88	3.13	1.00	713303
.02/02	0.0063	0.64	1,4,Ct	60	N/A	0.56	0.81	1.00	221123
.02/02	0.0063	0.64	1,4,Ct	90	N/A	0.56	0.81	1.00	715657
.02/04	0.0063	0.38	1,4,Ct	60	N/A	0.75	1.00	1.00	122312
.02/06	0.0063	0.27	1,4,Ct	60	N/A	1.00	1.25	1.00	711263
.02/08	0.0063	0.21	1,4,Ct	60	N/A	1.13	1.38	1.00	714471
.02/14	0.0063	0.13	1,4,Ct	60	N/A	2.38	2.63	1.00	221132
.02/14	0.0063	N/A	1,4,5,Ct	60	N/A	2.38	2.63	1.00	121815

**FOOTNOTES**

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 Sq=Square pattern

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REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.02/18	0.0063	0.10	1,4,Ct	60	N/A	2.88	3.13	1.00	711573
.02/18	0.0063	N/A	1,4,5,Ct	60	N/A	2.88	3.13	1.00	121816
.02/20	0.0063	0.09	1,4,Ct	60	N/A	3.38	3.63	1.00	713759
.025/04	0.0071	0.48	2,4,Ct	60	N/A	0.69	1.00	1.00	121982
.025/12	0.0071	0.18	1,4,Ct	60	N/A	12.00	13.00	10.00	713656
.025/14	0.0071	0.16	1,4,Ct	60	N/A	2.38	2.63	1.00	713274
.025/14	0.0071	0.16	1,4,Ct	60	N/A	14.00	15.00	10.00	713659
.025/18	0.0071	N/A	1,4,5,Ct	60	N/A	2.88	3.13	1.00	712567
.03/06	0.0077	0.41	2,4,Ct	60	N/A	0.75	1.19	1.00	121983
.03/12	0.0077	0.22	1,4,Ct	60	N/A	12.00	13.00	10.00	713657
.03/14	0.0077	0.19	1,4	60	N/A	2.38	2.63	1.00	712340
.03/14	0.0077	0.19	1,4,Ct	60	N/A	14.00	15.00	10.00	713660
.035/06	0.0084	0.48	1,4,Ct	60	N/A	0.75	1.19	1.00	121984
.035/14	0.0084	0.22	1,4,Ct	60	N/A	14.00	15.00	10.00	713658
.035/20	0.0084	N/A	1,4,5,Ct	60	N/A	3.38	3.63	1.00	221131
.04/14	0.0089	0.26	1,4,Ct	60	N/A	2.31	2.44	1.00	713368
.04/14	0.0089	0.26	1,4,Ct	60	N/A	2.31	2.88	1.00	121836
.04/20	0.0089	0.18	1,4,Ct	60	N/A	1.69	1.81	0.50	713575
.05/14	0.0100	0.32	1,4	60	N/A	2.38	2.63	1.00	713369
.05/14	0.0100	0.32	1,4,Ct	60	N/A	2.38	2.63	1.00	121837
.05/18	0.0100	0.25	1,4,Ct	60	N/A	1.44	1.56	0.50	713576
.055/14	0.0105	0.35	1,4	60	N/A	14.00	16.00	10.00	714781
.06/14	0.0110	0.38	1,4	60	N/A	14.00	16.00	10.00	714782
.075/06	0.0122	1.03	1,4	60	N/A	6.00	8.00	10.00	713775
.09/24	0.0134	0.35	1,4,Ct	60	N/A	24.00	26.00	10.00	121960
.14/24	0.0167	0.54	1,4,Ct	60	N/A	24.00	26.00	10.00	121961

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
4= Pattern Rotated 90°  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution





## Section B 7

# A7AA Air-Assisted Airless Spray Gun Cross-Cut Nozzles

## Application

Used for spraying highly viscous and difficult-to-atomize coatings and adhesives with the air-assisted airless process.

## Spray Guns and Adapters

Used only with the Nordson A7AA air-assisted airless spray guns

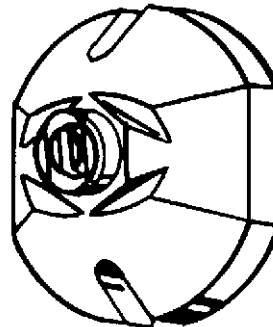
- Part number for add-on to A7AA: 1087754

## Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications

Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging



O-Ring  
P/N 940096

# A7AA Air-Assisted Airless Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0075/10	0.0039	0.07	1,Ct	N/A	1.75	2.00	1.00	122430
.0075/14	0.0039	0.05	1,Ct	N/A	2.38	2.63	1.00	122399
.01/04	0.0045	0.19	1,Ct	N/A	0.75	1.00	1.00	121926
.01/14	0.0045	0.06	1,Ct	N/A	2.38	2.63	1.00	122401
.012/18	0.0049	0.06	1,Ct	N/A	2.88	3.13	1.00	121928
.015/14	0.0055	0.10	1,Ct	N/A	2.38	2.63	1.00	122400
.02/18	0.0063	0.10	1,Ct	N/A	2.88	3.13	1.00	122398
.03/02	0.0077	0.96	1,Ct	N/A	0.56	0.81	1.00	1070640
.03/04	0.0077	0.58	1	N/A	4.00	6.00	10.00	123625
.03/06	0.0077	0.41	1	N/A	6.00	8.00	10.00	122412
.03/08	0.0077	0.32	1	N/A	8.00	10.00	10.00	123601
.03/12	0.0077	0.22	1	N/A	12.00	14.00	10.00	121955
.03/16	0.0077	0.17	1	N/A	16.00	18.00	10.00	123629
.03/20	0.0077	0.14	1	N/A	20.00	22.00	10.00	121929
.04/04	0.0089	0.77	1	N/A	4.00	6.00	10.00	123626
.04/06	0.0089	0.55	1	N/A	6.00	8.00	10.00	122413
.04/10	0.0089	0.35	1	N/A	10.00	12.00	10.00	123602
.04/12	0.0089	0.30	1	N/A	12.00	14.00	10.00	121954
.04/18	0.0089	0.20	1	N/A	2.88	3.13	1.00	121940
.06/04	0.0110	1.15	1	N/A	6.00	8.00	10.00	123627
.06/08	0.0110	0.64	1	N/A	8.00	10.00	10.00	123603
.06/10	0.0110	0.52	1	N/A	10.00	12.00	10.00	123604
.06/12	0.0110	0.44	1	N/A	12.00	14.00	10.00	123605
.06/14	0.0110	0.38	1	N/A	14.00	16.00	10.00	123624
.06/16	0.0110	0.34	1	N/A	16.00	18.00	10.00	123622
.06/18	0.0110	0.30	1	N/A	18.00	20.00	10.00	123606
.06/24	0.0110	0.23	1	N/A	24.00	26.00	10.00	1001996
.075/14	0.0122	0.48	1	N/A	14.00	16.00	10.00	123623
.09/06	0.0134	1.23	1	N/A	6.00	8.00	10.00	123607
.09/08	0.0134	0.96	1	N/A	8.00	10.00	10.00	123608
.09/10	0.0134	0.79	1	N/A	10.00	12.00	10.00	123609
.09/12	0.0134	0.66	1	N/A	12.00	14.00	10.00	123610
.09/14	0.0134	0.58	1	N/A	14.00	16.00	10.00	123611
.09/18	0.0134	0.45	1	N/A	18.00	20.00	10.00	123612
.09/24	0.0134	0.35	1	N/A	24.00	26.00	10.00	1007729

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# A7AA Air-Assisted Airless Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.09/28	0.0134	0.30	1	N/A	28.00	30.00	10.00	122468
.12/28	0.0155	0.40	1	N/A	28.00	30.00	10.00	122469
.14/08	0.0167	1.49	1	N/A	8.00	10.00	10.00	123613
.14/10	0.0167	1.22	1	N/A	10.00	12.00	10.00	123614
.14/12	0.0167	1.03	1	N/A	12.00	14.00	10.00	123615
.14/14	0.0167	0.90	1	N/A	14.00	16.00	10.00	123616
.14/16	0.0167	0.79	1	N/A	16.00	18.00	10.00	123617
.14/24	0.0167	0.54	1	N/A	24.00	26.00	10.00	1020584
.15/14	0.0173	0.96	1	N/A	14.00	16.00	10.00	122493
.19/12	0.0195	N/A	2,A,Ct	N/A	12.00	14.00	10.00	1027672
.20/08	0.0200	2.13	1	N/A	8.00	10.00	10.00	123628
.20/10	0.0200	1.75	1	N/A	10.00	12.00	10.00	123618
.20/12	0.0200	1.48	1	N/A	12.00	14.00	10.00	123619
.20/18	0.0200	1.01	1	N/A	18.00	20.00	10.00	123620
.20/24	0.0200	0.77	2,Ct	N/A	24.00	26.00	10.00	1047551
.22/24	0.0210	0.84	2,Ct	N/A	24.00	26.00	10.00	1048202
.24/24	0.0219	0.92	2,Ct	N/A	24.00	26.00	10.00	1047552
.30/12	0.0245	2.22	1	N/A	12.00	14.00	10.00	121860
.30/14	0.0245	1.92	1	N/A	14.00	16.00	10.00	123621
.30/24	0.0245	N/A	2,5,Ct	N/A	24.00	26.00	10.00	1046925
.45/18	0.0300	2.27	1	N/A	18.00	20.00	10.00	1000441

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



## Section B 8

# Kinetix<sup>®</sup> and Prism<sup>®</sup> Cross-Cut<sup>®</sup> Nozzles

## Application

Used for a wide variety of manual and automatic airless coating applications.

## Spray Guns and Adapters

Used only with the Nordson:

- Kinetix Electrostatic airless and air assisted guns
- Prism non-electrostatic and air assisted guns

**NOTE:** Electrode part number 336384 is required for Kinetix nozzles and must be ordered separately.

## Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications

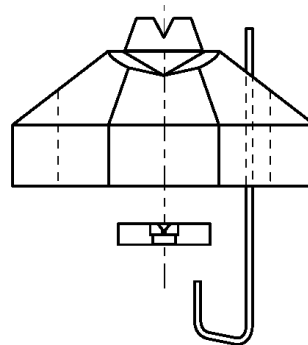
Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles

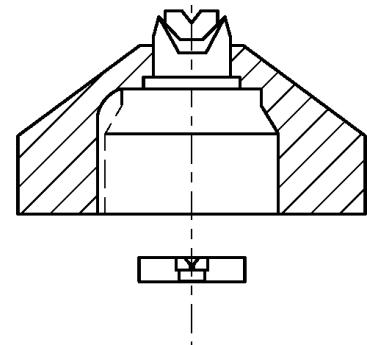


Kinetix

Prism



Kinetix



Prism

# Kinetix and Prism Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0075/08	0.0039	0.08	1,Ct	123050	1.38	1.63	1.00	1020261
.01/08	0.1067	0.11	1,Ct	123050	1.38	1.63	1.00	1020260
.02/08	0.0063	0.21	1,Ct	123050	1.38	1.63	1.00	1020262
.03/08	0.0077	0.32	1	123050	8.00	10.00	10.00	123201
.03/10	0.0077	0.26	1	123050	10.00	12.00	10.00	123202
.03/12	0.0077	0.22	1	123050	12.00	14.00	10.00	123203
.03/14	0.0077	0.19	1	123050	14.00	16.00	10.00	123204
.03/16	0.0077	0.17	1	123050	16.00	18.00	10.00	123205
.04/10	0.0089	0.35	1	123051	10.00	12.00	10.00	123206
.04/12	0.0089	0.30	1	123051	12.00	14.00	10.00	123207
.04/14	0.0089	0.26	1	123051	14.00	16.00	10.00	123208
.04/16	0.0089	0.23	1	123051	16.00	18.00	10.00	123209
.06/08	0.0110	0.64	1	123052	8.00	10.00	10.00	123210
.06/10	0.0110	0.52	1	123052	10.00	12.00	10.00	123211
.06/12	0.0110	0.44	1	123052	12.00	14.00	10.00	123212
.06/14	0.0110	0.38	1	123052	14.00	16.00	10.00	123213
.06/16	0.0110	0.34	1	123052	16.00	18.00	10.00	123214
.06/18	0.0110	0.30	1	123052	18.00	20.00	10.00	123215
.06/20	0.0110	0.27	1	123052	20.00	22.00	10.00	123216
.06/22	0.0110	0.25	1	123052	22.00	24.00	10.00	123217
.06/24	0.0110	0.23	1	123052	24.00	26.00	10.00	123218
.09/08	0.0134	0.96	1	123053	8.00	10.00	10.00	123219
.09/10	0.0134	0.79	1	123053	10.00	12.00	10.00	123220
.09/12	0.0134	0.66	1	123053	12.00	14.00	10.00	123221
.09/14	0.0134	0.58	1	123053	14.00	16.00	10.00	123222
.09/16	0.0134	0.51	1	123053	16.00	18.00	10.00	123223
.09/18	0.0134	0.45	1	123053	18.00	20.00	10.00	123224
.09/20	0.0134	0.41	1	123053	20.00	22.00	10.00	123225
.09/22	0.0134	0.38	1	123053	22.00	24.00	10.00	123226
.09/24	0.0134	0.35	1	123053	24.00	26.00	10.00	123227
.09/26	0.0134	0.32	1	123053	26.00	28.00	10.00	123228
.09/28	0.0134	0.30	1	123053	28.00	30.00	10.00	123229

**NOTE:** Blank nozzle gasket P/N 122481 is available to eliminate the use of a restrictor when desired. See “Filter Screen, Turbulence Plate and Restrictor Selection Chart” in section A.

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution

# Kinetix and Prism Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.12/08	0.0155	1.28	1	123054	8.00	10.00	10.00	1030649
.14/10	0.0167	1.22	1	123054	10.00	12.00	10.00	123230
.14/12	0.0167	1.03	1	123054	12.00	14.00	10.00	123231
.14/14	0.0167	0.90	1	123054	14.00	16.00	10.00	123232
.14/16	0.0167	0.79	1	123054	16.00	18.00	10.00	123233
.14/18	0.0167	0.71	1	123054	18.00	20.00	10.00	123234
.14/20	0.0167	0.64	1	123054	20.00	22.00	10.00	123235
.14/22	0.0167	0.58	1	123054	22.00	24.00	10.00	123236
.14/24	0.0167	0.54	1	123054	24.00	26.00	10.00	123237
.20/08	0.0200	2.13	1	123055	8.00	10.00	10.00	123246
.20/10	0.0200	1.75	1	123055	10.00	12.00	10.00	123272
.20/12	0.0200	1.48	1	123055	12.00	14.00	10.00	123238
.20/14	0.0200	1.28	1	123055	14.00	16.00	10.00	123239
.20/16	0.0200	1.13	1	123055	16.00	18.00	10.00	123240
.20/18	0.0200	1.01	1	123055	18.00	20.00	10.00	123241
.20/20	0.0200	0.91	1	123055	20.00	22.00	10.00	123242
.20/22	0.0200	0.83	1	123055	22.00	24.00	10.00	123243
.20/24	0.0200	0.77	1	123055	24.00	26.00	10.00	123244
.20/26	0.0200	0.71	1	123054	26.00	28.00	10.00	123245
.25/12	0.0224	1.85	1	123056	12.00	14.00	10.00	123273
.25/14	0.0224	1.60	1	123056	14.00	16.00	10.00	123274
.30/12	0.0245	2.22	1	123056	12.00	14.00	10.00	123247
.30/14	0.0245	1.92	1	123056	14.00	16.00	10.00	123248
.30/16	0.0245	1.69	1	123056	16.00	18.00	10.00	123249
.30/18	0.0245	1.52	1	123056	18.00	20.00	10.00	123250
.30/20	0.0245	1.37	1	123056	20.00	22.00	10.00	123251
.30/22	0.0245	1.25	1	123056	22.00	24.00	10.00	123252
.30/24	0.0245	1.15	1	123056	24.00	26.00	10.00	123253
.30/26	0.0245	1.07	1	123056	26.00	28.00	10.00	123254
.30/28	0.0245	0.99	1	123056	28.00	30.00	10.00	123255
.45/14	0.0300	2.88	1	122481	14.00	16.00	10.00	123256
.45/16	0.0300	2.54	1	122481	16.00	18.00	10.00	123257

**NOTE:** Blank nozzle gasket P/N 122481 is available to eliminate the use of a restrictor when desired. See "Filter Screen, Turbulence Plate and Restrictor Selection Chart" in section A.

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution



# Kinetix and Prism Cross-Cut Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.45/18	0.0300	2.27	1	122481	18.00	20.00	10.00	123258
.45/20	0.0300	2.06	1	122481	20.00	22.00	10.00	123259
.45/22	0.0300	1.88	1	122481	22.00	24.00	10.00	123260
.45/24	0.0300	1.73	1	122481	24.00	26.00	10.00	123261
.45/26	0.0300	1.60	1	122481	26.00	28.00	10.00	123262
.45/28	0.0300	1.49	1	122481	28.00	30.00	10.00	123263

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for  
 automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution

## *Section B 9*

# Tapered Close-Tolerance Cross-Cut<sup>®</sup> Nozzles

## Application

Primarily used to apply container inside spray coatings.

## Spray Guns and Adapters

All guns that accept flange mount nozzles including A10A, A14A, A20A, MAG, and MEG<sup>®</sup> spray guns.

## Features

- Custom sizes are available upon request
- Nozzles are designed and tested to provide optimum performance when applying typical container inside spray coatings
- Tapered shape minimizes coating material build-up and enhances the effectiveness of the CleanSpray<sup>®</sup> system

Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles



# Tapered Close-Tolerance Cross-Cut Nozzles

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0075/02	0.0039	0.24	2,Ct,X	N/A	0.56	0.81	1.00	1075520
.0075/02	0.0039	0.24	2,Ct,X	N/A	0.56	0.81	1.00	1079400
.01/02	0.0045	0.32	2,Ct	N/A	0.56	0.81	1.00	1094842
.01/04	0.0045	0.19	1,7,8,Ct	N/A	1.86	2.16	3.00	1050863
.015/02	0.0055	0.48	1,Ct	N/A	0.56	0.81	1.00	1605280
.015/12	0.0055	N/A	1,3,5,Ct	N/A	12.00	14.00	10.00	1052817
.018/02	0.0060	0.58	1,7,Ct	N/A	0.75	1.00	1.00	1060282
.025/07	0.0071	0.30	1,8,Ct	N/A	3.25	4.00	3.00	121847
.03/02	0.0077	0.96	2,3,Ct	N/A	0.56	0.81	1.00	121843
.03/02	0.0077	0.96	2,8,Ct	N/A	1.50	1.75	3.00	122328
.03/03	0.0077	0.72	2,8,Ct	N/A	1.88	2.16	3.00	122370
.03/04	0.0077	0.58	10,Ct	N/A	2.50	2.88	1.00	1606034
.04/26	0.0089	0.14	2,3,Ct	27404	3.63	3.75	10.00	1605692
.06/06	0.0110	0.82	1,8,Ct	N/A	3.50	4.00	3.00	1103332
.06/08	0.0110	0.64	1,8,Ct	N/A	4.25	4.63	3.00	1103333
.06/08	0.0110	N/A	2,3,Ct,D	N/A	8.00	9.00	10.00	121864
.06/28	0.0110	0.20	2,3,Ct	27404	3.94	4.06	10.00	1605693
.07/04	0.0118	1.34	2,8,Ct	N/A	2.47	2.88	3.00	1600649
.07/08	0.0118	0.74	2,8,Ct	N/A	3.75	4.44	3.00	1600650
.075/06	0.0122	N/A	1,8,Ct,D	N/A	3.19	3.69	3.00	122010
.075/08	0.0122	N/A	1,8,B,Ct	N/A	5.00	5.75	3.00	122373
.075/08	0.0122	N/A	1,8,Ct,D	N/A	4.19	4.81	3.00	122011
.09/08	0.0134	N/A	1,8,Ct,D	N/A	4.06	4.69	3.00	122013
.09/10	0.0134	N/A	1,8,C,Ct	N/A	5.13	5.88	3.00	122382
.11/08	0.0148	N/A	1,5,8,Ct,X	N/A	3.75	4.38	3.00	1043952
.11/10	0.0148	N/A	1,5,8,Ct,X	N/A	3.75	4.88	3.00	1045563
.12/10	0.0155	N/A	1,8,Ct,D	N/A	5.00	5.69	3.00	122012

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

## *Section B 10*

# **CleanSpray® Cross-Cut® Nozzles**

## **Application**

When mounted on a CleanSpray gun, the nozzle output is directed toward the coating nozzle to provide a cleaning function.

## **Spray Guns and Adapters**

Designed for use with the Nordson CleanSpray, CleanSpray II, and CleanSpray XT system spray guns.

## **Features**

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications

Cross-Cut nozzles provide:

- Superior performance and wear characteristics
- Wider patterns than are available with equivalent flow rate dome nozzles



# CleanSpray® Cross-Cut® Nozzles

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	NOZZLE ANGLE	PREATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
						MIN (IN.)	MAX (IN.)	DISTANCE	
.01/01	0.0045	0.48	1,4,Ct	60	N/A	0.38	0.50	1.00	1060706
.01/01	0.0045	0.48	1,4,Ct	90	N/A	0.38	0.50	1.00	1060705
.015/04	0.0055	0.29	1,4,Ct	60	N/A	0.75	1.00	1.00	149201
.015/04	0.0055	0.29	1,4,Ct	90	N/A	0.75	1.00	1.00	149197
.015/06	0.0055	0.21	1,4,Ct	60	N/A	0.94	1.19	1.00	149202
.015/06	0.0055	0.21	1,4,Ct	90	N/A	0.94	1.19	1.00	149198
.03/04	0.0055	0.58	1,4,Ct	60	N/A	0.75	1.00	1.00	149203
.03/04	0.0077	0.58	1,4,Ct	90	N/A	0.75	1.00	1.00	149199
.03/06	0.0077	0.41	1,4,Ct	60	N/A	0.94	1.19	1.00	149204
.03/06	0.0077	0.41	1,4,Ct	90	N/A	0.94	1.19	1.00	149200
.03/10	0.0077	0.26	1,4,8,Ct	90	N/A	4.34	4.98	3.00	122485

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 4= Pattern Rotated 90°  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution

# Section C 1

## Kinetix<sup>®</sup> and Prism<sup>®</sup> Dome Nozzles

### Application

Used for a wide variety of manual and automatic airless coating applications.

### Spray Guns and Adapters

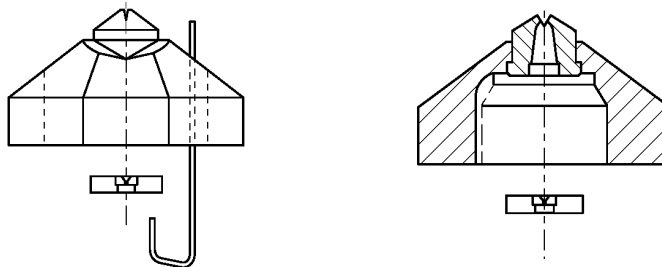
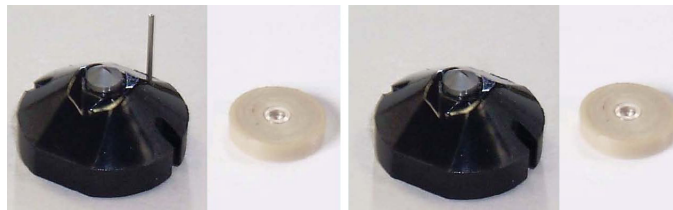
Used exclusively on Nordson:

- Kinetix Electrostatic airless and air assisted spray guns
- Prism non-electrostatic and air assisted spray guns

### Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications

**NOTE:** Electrode P/N 336 384 is required for Kinetix nozzles and must be ordered separately.



# Kinetix and Prism Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.03/02	0.0077	0.96	1	123050	2.00	4.00	10.00	123525
.03/04	0.0077	0.58	1	123050	4.00	6.00	10.00	123526
.03/06	0.0077	0.41	1	123050	6.00	8.00	10.00	123527
.03/08	0.0077	0.32	1	123050	8.00	10.00	10.00	123528
.04/02	0.0089	1.28	1	123051	2.00	4.00	10.00	123529
.04/04	0.0089	0.77	1	123051	4.00	6.00	10.00	123530
.04/06	0.0089	0.55	1	123051	6.00	8.00	10.00	123531
.04/08	0.0089	0.43	1	123051	8.00	10.00	10.00	123532
.04/10	0.0089	0.35	1	123051	10.00	12.00	10.00	123533
.06/02	0.0110	1.92	1	123052	2.00	4.00	10.00	123534
.06/04	0.0110	1.15	1	123052	4.00	6.00	10.00	123535
.06/06	0.0110	0.82	1	123052	6.00	8.00	10.00	123536
.06/08	0.0110	0.64	1	123052	8.00	10.00	10.00	123537
.06/10	0.0110	0.52	1	123052	10.00	12.00	10.00	123538
.06/12	0.0110	0.44	1	123052	12.00	14.00	10.00	123539
.09/02	0.0134	2.88	1	123053	2.00	4.00	10.00	123540
.09/04	0.0134	1.73	1	123053	4.00	6.00	10.00	123541
.09/06	0.0134	1.23	1	123053	6.00	8.00	10.00	123542
.09/08	0.0134	0.96	1	123053	8.00	10.00	10.00	123543
.09/10	0.0134	0.79	1	123053	10.00	12.00	10.00	123544
.09/12	0.0134	0.66	1	123053	12.00	14.00	10.00	123545
.09/14	0.0134	0.58	1	123053	14.00	16.00	10.00	123546
.14/02	0.0167	4.48	1	123054	2.00	4.00	10.00	123547
.14/04	0.0167	2.69	1	123054	4.00	6.00	10.00	123548
.14/06	0.0167	1.92	1	123054	6.00	8.00	10.00	123549
.14/08	0.0167	1.49	1	123054	8.00	10.00	10.00	123550
.14/10	0.0167	1.22	1	123054	10.00	12.00	10.00	123551
.14/12	0.0167	1.03	1	123054	12.00	14.00	10.00	123552
.14/14	0.0167	0.90	1	123054	14.00	16.00	10.00	123553
.14/16	0.0167	0.79	1	123054	16.00	18.00	10.00	123554
.18/16	0.0190	1.02	1	123055	16.00	18.00	10.00	1069420
.20/04	0.0200	3.84	1	123055	4.00	6.00	10.00	123555
.20/06	0.0200	2.74	1	123055	6.00	8.00	10.00	123556
.20/08	0.0200	2.13	1	123055	8.00	10.00	10.00	123557
.20/10	0.0200	1.75	1	123055	10.00	12.00	10.00	123558

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for  
automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Kinetix and Prism Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.20/12	0.0200	1.48	1	123055	12.00	14.00	10.00	123559
.20/14	0.0200	1.28	1	123055	14.00	16.00	10.00	123560
.20/16	0.0200	1.13	1	123055	16.00	18.00	10.00	123561
.20/18	0.0200	1.01	1	123055	18.00	20.00	10.00	123562
.30/06	0.0245	4.11	1	123056	6.00	8.00	10.00	123563
.30/08	0.0245	3.20	1	123056	8.00	10.00	10.00	123564
.30/10	0.0245	2.62	1	123056	10.00	12.00	10.00	123565
.30/12	0.0245	2.22	1	123056	12.00	14.00	10.00	123566
.30/14	0.0245	1.92	1	123056	14.00	16.00	10.00	123567
.30/16	0.0245	1.69	1	123056	16.00	18.00	10.00	123568
.30/18	0.0245	1.52	1	123056	18.00	20.00	10.00	123569
.45/08	0.0300	4.80	1	122481	8.00	10.00	10.00	123570
.45/10	0.0300	3.93	1	122481	10.00	12.00	10.00	123571
.45/12	0.0300	3.32	1	122481	12.00	14.00	10.00	123572
.45/14	0.0300	2.88	1	122481	14.00	16.00	10.00	123573
.45/16	0.0300	2.54	1	122481	16.00	18.00	10.00	123574
.45/18	0.0300	2.27	1	122481	18.00	20.00	10.00	123575
.45/20	0.0300	2.06	1	122481	20.00	22.00	10.00	123576
.45/22	0.0300	1.88	1	122481	22.00	24.00	10.00	123577

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for  
automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution





## Section C 2

# Flange Dome Nozzles

### Application

For general use in a wide variety of manual and automatic airless coating applications. Most common style of nozzle offered, provides the widest variety of flow rates and pattern widths.

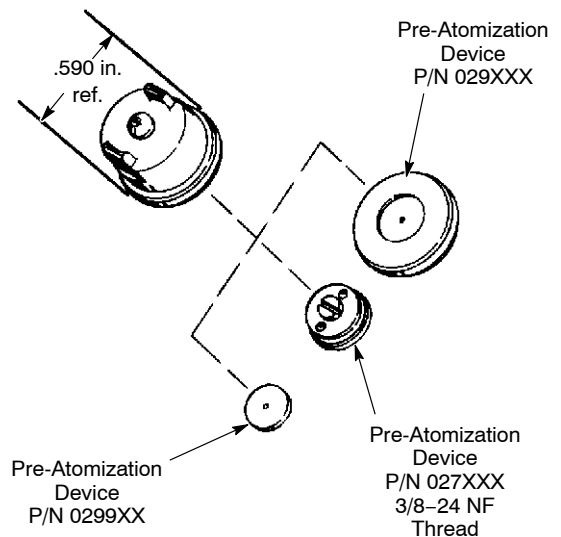
### Spray Guns and Adapters

Used on the following Nordson airless spray guns, and most automatic and manual airless spray guns made by other manufacturers:

A4B, A7A, A10A, A14A, Pipe Lance Gun, A20A, MEG<sup>®</sup>

### Features

- Custom sizes are available upon request
- Standard flow rate tolerance of  $\pm 5\%$



# Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.01/01	0.0045	0.48	2,3,11,Ct	027352	1.00	2.00	10.00	121920
.015/02	0.0055	0.48	1,3,Ct,S	027352	2.00	4.00	10.00	024000
.015/04	0.0055	0.29	1,3,Ct,S	027352	4.00	6.00	10.00	707380
.02/01	0.0063	0.96	2,3,11,Ct	027352	1.00	2.00	10.00	121921
.03/02	0.0077	0.96	1,3,S	027003	8.00	10.00	10.00	000302
.03/02	0.0077	0.96	1,3,Ct,S	027303	2.00	4.00	10.00	024001
.03/03	0.0077	0.72	1,S	029910	3.00	5.00	10.00	109578
.03/03	0.0077	0.72	1,3,S	027003	3.00	5.00	10.00	109580
.03/04	0.0077	0.58	1,3,S	027003	4.00	6.00	10.00	000304
.03/04	0.0077	0.58	1,3,Ct,S	027303	4.00	6.00	10.00	024002
.03/06	0.0077	0.41	1,3,S	027003	6.00	8.00	10.00	000306
.03/06	0.0077	0.41	1,3,Ct,S	027303	6.00	8.00	10.00	024003
.03/06	0.0077	0.41	2,Ct,Sq	027306	2.25	2.50	3.00	1602245
.03/08	0.0077	0.32	1,3,S	027003	8.00	10.00	10.00	000308
.03/08	0.0077	0.32	1,3,Ct,S	027303	8.00	10.00	10.00	024004
.04/02	0.0089	1.28	1,3,S	027004	2.00	4.00	10.00	000402
.04/02	0.0089	1.28	1,Ct,S	029912	2.00	4.00	10.00	121829
.04/02	0.0089	1.28	1,3,Ct,S	027304	2.00	4.00	10.00	024011
.04/03	0.0089	0.96	1,S	029912	3.00	5.00	10.00	109579
.04/03	0.0089	0.96	1,3,S	027004	3.00	5.00	10.00	109581
.04/04	0.0089	0.77	1,3,S	027004	4.00	6.00	10.00	000404
.04/04	0.0089	0.77	1,3,Ct,S	027304	4.00	6.00	10.00	024012
.04/06	0.0089	0.55	1,3,S	027004	6.00	8.00	10.00	000406
.04/06	0.0089	0.55	1,3,Ct,S	027304	6.00	8.00	10.00	024013
.04/08	0.0089	0.43	1,3,S	027004	8.00	10.00	10.00	000408
.04/08	0.0089	0.43	1,3,Ct,S	027304	8.00	10.00	10.00	024014
.04/10	0.0089	0.35	1,3,S	027004	10.00	12.00	10.00	000410
.04/10	0.0089	0.35	1,3,Ct,S	027304	10.00	12.00	10.00	024015
.04/12	0.0089	0.30	1,3,S	027004	12.00	14.00	10.00	706408
.045/02	0.0095	1.44	1,3,Ct,S	027304	2.00	4.00	10.00	113977
.05/06	0.0100	0.69	1,3,S	027006	6.00	8.00	10.00	713572
.055/04	0.0105	1.06	2,8,15,Deg,Ct	N/A	2.47	2.88	3	1604496
.055/08	0.0105	0.59	2,8,10,Deg,Ct	N/A	3.94	4.38	3	1604497
.057/04	0.0107	1.09	2,8,15,Deg,Ct	N/A	2.47	2.88	3	1604498
.057/08	0.0107	0.61	2,8,10,Deg,Ct	N/A	3.94	4.38	3	1604499

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.06/02	0.0110	1.92	1,3,S	027006	2.00	4.00	10.00	000602
.06/02	0.0110	1.92	1,Ct,S	029915	2.00	4.00	10.00	715186
.06/02	0.0110	1.92	1,3,Ct,S	027306	2.00	3.00	10.00	121790
.06/02	0.0110	1.92	1,3,Ct,S	027306	2.00	4.00	10.00	024021
.06/02.5	0.0110	1.65	1,S	029915	2.50	3.50	10.00	715184
.06/04	0.0110	1.15	1,3,S	027006	4.00	6.00	10.00	000604
.06/04	0.0110	1.15	1,3,Ct,S	027306	4.00	6.00	10.00	024022
.06/04	0.0110	1.15	2,8,15,Deg,Ct	N/A	2.47	2.88	3	1600627
.06/06	0.0110	0.82	1,3,S	027006	6.00	8.00	10.00	000606
.06/06	0.0110	0.82	1,3,Ct,S	027306	6.00	8.00	10.00	024023
.06/06	0.0110	0.82	2,3,Ct,Sq	027306	2.25	2.75	3.00	1600740
.06/08	0.0110	0.64	1,3,S	027006	8.00	10.00	10.00	000608
.06/08	0.0110	0.64	1,3,Ct,S	027306	8.00	10.00	10.00	024024
.06/08	0.0110	0.64	2,8,10,Deg,Ct	N/A	3.94	4.38	3	1600626
.06/10	0.0110	0.52	1,3,S	027006	10.00	12.00	10.00	000610
.06/10	0.0110	0.52	1,3,Ct,S	027306	10.00	12.00	10.00	024025
.06/12	0.0110	0.44	1,3,S	027006	12.00	14.00	10.00	000612
.06/12	0.0110	0.44	1,3,Ct,S	027306	12.00	14.00	10.00	024026
.065/08	0.0114	0.69	1,8,Ct,S	N/A	3.63	4.38	3.00	121801
.065/08	0.0114	0.69	2,8,10,Deg,Ct	N/A	3.75	4.38	3	1604181
.07/08	0.0118	0.75	2,8,10,Deg,Ct	N/A	3.75	4.38	3	1604182
.075/02	0.0122	2.40	1,3,Ct,S	027306	2.00	4.00	10.00	113978
.08/06	0.0126	1.10	2,11,Ct	029918	6.00	8.00	10.00	1004706
.09/02	0.0134	2.88	1,3,S	027009	2.00	4.00	10.00	000902
.09/02	0.0134	2.88	1,Ct,S	029918	2.00	4.00	10.00	715187
.09/02.5	0.0134	2.47	1,S	029918	2.50	3.50	10.00	715185
.09/04	0.0134	1.73	1,3,S	027009	4.00	6.00	10.00	000904
.09/04	0.0134	1.73	1,3,Ct,S	027309	4.00	6.00	10.00	024032
.09/06	0.0134	1.23	1,3,S	027009	6.00	8.00	10.00	000906
.09/06	0.0134	1.23	1,3,Ct,S	027309	6.00	8.00	10.00	024033
.09/08	0.0134	0.96	1,3,S	027009	8.00	10.00	10.00	000908
.09/08	0.0134	0.96	1,3,Ct,S	027309	8.00	10.00	10.00	024034
.09/10	0.0134	0.79	1,3,S	027009	10.00	12.00	10.00	000910
.09/10	0.0134	0.79	1,3,Ct,S	027309	10.00	12.00	10.00	024035
.09/12	0.0134	0.66	1,3,S	027009	12.00	14.00	10.00	000912

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.09/12	0.0134	0.66	1,3,Ct,S	027309	12.00	14.00	10.00	024036
.09/14	0.0134	0.58	1,3,S	027009	14.00	16.00	10.00	000914
.09/14	0.0134	0.58	1,3,Ct,S	027309	14.00	16.00	10.00	024037
.11/12	0.0148	0.81	1,3,S	027009	12.00	14.00	10.00	714022
.11/14	0.0148	0.70	1,3,S	027014	14.00	16.00	10.00	713921
.12/03	0.0155	2.88	1,Ct,S	029920	3.00	4.00	10.00	715652
.12/14	0.0155	0.77	2,3,Ct,S	027314	14.00	16.00	10.00	1101950
.14/02	0.0167	4.48	1,S	029920	2.00	4.00	10.00	715722
.14/03	0.0167	3.36	1,S	029920	3.00	5.00	10.00	715653
.14/04	0.0167	2.69	1,3,S	027014	4.00	6.00	10.00	001404
.14/04	0.0167	2.69	1,13,Ct,S	029920	14.00	14.50	10.00	306246
.14/06	0.0167	1.92	1,3,S	027014	6.00	8.00	10.00	001406
.14/06	0.0167	1.92	1,3,Ct,S	027314	6.00	8.00	10.00	024043
.14/08	0.0167	1.49	1,3,S	027014	8.00	10.00	10.00	001408
.14/08	0.0167	1.49	1,3,Ct,S	027314	8.00	10.00	10.00	024044
.14/10	0.0167	1.22	1,3,S	027014	10.00	12.00	10.00	001410
.14/10	0.0167	1.22	1,3,Ct,S	027314	10.00	12.00	10.00	024045
.14/1	0.0167	1.03	1,3,Ct,S	027314	12.00	14.00	10.00	024046
.14/12	0.0167	1.03	1,3,S	027014	12.00	14.00	10.00	001412
.14/12	0.0167	1.03	1,13,Ct,S	029920	12.00	12.50	10.00	122495
.14/14	0.0167	0.90	1,3,S	027014	14.00	16.00	10.00	001414
.14/14	0.0167	0.90	2,3,Ct,S	027314	14.00	16.00	10.00	122407
.14/14	0.0167	0.90	1,3,Ct,S	027314	14.00	16.00	10.00	115369
.14/16	0.0167	0.79	1,3,S	027014	16.00	18.00	10.00	001416
.14/16	0.0167	0.79	1,3,Ct,S	027314	16.00	18.00	10.00	024048
.14/18	0.0167	0.71	1,3,S	027014	18.00	20.00	10.00	121878
.14/20	0.0167	0.64	1,S	027014	20.00	22.00	10.00	1099735
.18/06	0.0190	2.47	1,3,Ct,S	027320	6.00	8.00	10.00	113976
.20/04	0.0200	3.84	1,3,S	027020	4.00	6.00	10.00	002004
.20/04	0.0200	3.84	1,13,Ct,S	029920	5.50	6.00	10.00	306247
.20/06	0.0200	2.74	1,3,S	027020	6.00	8.00	10.00	002006
.20/06	0.0200	2.74	1,13,Ct,S	029920	6.00	6.50	10.00	296249
.20/08	0.0200	2.13	1,3,S	027020	8.00	10.00	10.00	002008
.20/08	0.0200	2.13	1,3,Ct,S	027320	8.00	10.00	10.00	024054
.20/10	0.0200	1.75	1,3,S	027020	10.00	12.00	10.00	002010

## FOOTNOTES

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T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.20/10	0.0200	1.75	1,3,Ct,S	027320	10.00	12.00	10.00	024055
.20/10	0.0200	1.75	1,13,Ct,S	029920	9.50	10.00	10.00	296250
.20/12	0.0200	1.48	1,3,S	027020	12.00	14.00	10.00	002012
.20/12	0.0200	1.48	1,3,Ct,S	027320	12.00	14.00	10.00	024056
.20/14	0.0200	1.28	1,3,S	027020	14.00	16.00	10.00	002014
.20/16	0.0200	1.13	1,3,S	027020	16.00	18.00	10.00	002016
.20/16	0.0200	1.13	1,3,Ct,S	027320	16.00	18.00	10.00	024058
.20/18	0.0200	1.01	1,3,S	027020	18.00	20.00	10.00	002018
.20/18	0.0200	1.01	1,3,Ct,S	027320	18.00	20.00	10.00	024059
.20/20	0.0200	0.91	1,3,S	027020	20.00	22.00	10.00	1099736
.22/20	0.0210	1.01	1,3,Ct,S,Sq	027020	20.00	22.00	10.00	1101355
.23/24	0.0214	0.88	1,Ct,S	029920	24.00	26.00	10.00	122462
.25/08	0.0224	2.67	1,3,S	027030	8.00	10.00	10.00	709767
.25/14	0.0224	1.60	1,3,Ct,S	029033	14.00	16.00	10.00	1105021
.25/20	0.0224	1.14	1,S	027030	20.00	22.00	10.00	1099737
.30/06	0.0245	4.11	1,3,S	029033	6.00	8.00	10.00	003006
.30/06	0.0245	4.11	1,3,Ct,S	029933	6.00	6.50	10.00	296251
.30/08	0.0245	3.20	1,3,T	027030	8.00	10.00	10.00	707684
.30/08	0.0245	3.20	1,3,S	029033	8.00	10.00	10.00	003008
.30/08	0.0245	3.20	1,13,Ct,S	029933	8.00	8.50	10.00	1005510
.30/10	0.0245	2.62	1,3,S	029033	10.00	12.00	10.00	003010
.30/10	0.0245	2.62	1,3,T	027030	10.00	12.00	10.00	702760
.30/10	0.0245	2.62	1,13,Ct,S	029933	10.00	10.50	10.00	296252
.30/12	0.0245	2.22	1,3,S	029033	12.00	14.00	10.00	003012
.30/12.5	0.0245	2.13	1,13,Ct,S	029933	12.50	13.00	10.00	1013184
.30/14	0.0245	1.92	1,3,S	029033	14.00	16.00	10.00	003014
.30/16	0.0245	1.69	1,3,T	029040	16.00	18.00	10.00	703342
.30/16	0.0245	1.69	1,3,S	029033	16.00	18.00	10.00	003016
.30/18	0.0245	1.52	1,3,S	029033	18.00	20.00	10.00	003018
.30/18	0.0245	1.52	1,3,Ct,S	029033	18.00	20.00	10.00	711921
.30/20	0.0245	1.37	1,3,Ct,S	029033	20.00	22.00	10.00	024060
.38/20	0.0276	1.74	1,3,Ct,S	029040	20.00	22.00	10.00	711920
.40/4.75	0.0283	6.68	1,Ct,S	029040	4.75	5.50	10.00	121494
.45/06	0.0300	6.17	1,3,T	027045	6.00	8.00	10.00	704068
.45/06	0.0300	6.17	1,3,S	029040	6.00	8.00	10.00	712210

## FOOTNOTES

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## PATTERN DISTRIBUTION

A = 90% - 10%  
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# Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.45/08	0.0300	4.80	1,3,S	029040	8.00	10.00	10.00	004508
.45/08	0.0300	4.80	1,3,T	027045	8.00	10.00	10.00	707081
.45/10	0.0300	3.93	1,3,T	029040	10.00	12.00	10.00	702686
.45/11.5	0.0300	3.39	1,13,Ct,S	029940	11.50	12.00	10.00	1013185
.45/18	0.0300	2.27	2,Ct	027345	18.00	20.00	10.00	1027571
.45/12	0.0300	3.32	1,3,S	029040	12.00	14.00	10.00	004512
.45/12	0.0300	3.32	1,13,Ct,S	029940	12.00	12.50	10.00	296253
.45/14	0.0300	2.88	1,3,T	027045	14.00	16.00	10.00	702767
.45/14	0.0300	2.88	1,3,S	029040	14.00	16.00	10.00	004514
.45/14	0.0300	2.88	1,13,Ct,S	029940	14.00	14.50	10.00	296254
.45/16	0.0300	2.54	1,3,S	029040	16.00	18.00	10.00	004516
.45/20	0.0300	2.06	1,3,S	029040	20.00	22.00	10.00	004520
.45/22	0.0300	1.88	1,3,S	029040	22.00	24.00	10.00	004522
.68/10	0.0369	5.93	1,3,T	027068	10.00	12.00	10.00	713249
.68/12	0.0369	5.02	1,3,T	027068	12.00	14.00	10.00	006812
.68/12	0.0369	5.02	1,13,Ct,T	029950	12.00	12.50	10.00	296255
.68/12	0.0369	5.02	1,13,Ct,T	029950	12.00	13.00	10.00	1020983
.68/16	0.0369	3.84	1,3,T	027068	16.00	18.00	10.00	006816
.68/16	0.0369	3.84	1,13,Ct,T	029950	16.00	16.50	10.00	296256
.68/20	0.0369	3.11	1,3,T	027068	20.00	22.00	10.00	006820
.68/20	0.0369	3.11	1,13,Ct,T	029950	21.50	22.00	10.00	122433
.68/22	0.0369	2.84	1,3,T	027068	22.00	24.00	10.00	006822
.95/20	0.0436	4.34	1,3,T	027075	20.00	22.00	10.00	119501
1.00/06	0.0447	13.71	1,3,T	027075	6.00	8.00	10.00	709357
1.00/10	0.0447	8.73	1,3,T	027075	10.00	12.00	10.00	713228
1.00/14	0.0447	6.40	1,3,T	027075	14.00	16.00	10.00	713773

## FOOTNOTES

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5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% – 10%  
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C = 70% – 30%  
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X = Special Pattern Distribution

# Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
1.00/18	0.0447	5.05	1,3,T	027075	18.00	20.00	10.00	712053
1.00/22	0.0447	4.17	1,3,T	027075	22.00	24.00	10.00	010022
1.00/24	0.0447	3.84	1,3,T	027075	24.00	26.00	10.00	122388
1.25/10	0.0500	10.91	1,3,T	027080	10.00	12.00	10.00	711065
1.25/20	0.0500	5.71	1,3,T	027080	20.00	22.00	10.00	712054
1.25/24	0.0500	4.80	1,3,T	027080	24.00	26.00	10.00	012524
1.50/18	0.0548	7.58	1,3,T	027085	18.00	20.00	10.00	712021
1.50/24	0.0548	5.76	1,3,T	027085	24.00	26.00	10.00	015024
2.00/16	0.0632	11.29	1,3,T	N/A	16.00	18.00	10.00	709571
2.00/24	0.0632	7.68	1,3,T	N/A	24.00	26.00	10.00	713491

## FOOTNOTES

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## PATTERN DISTRIBUTION

A = 90% - 10%  
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C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution





## Section C 3

# Close-Tolerance Controlled-Pattern Flange Dome Nozzles

## Application

Used in a wide variety of airless coating applications. Most common style of nozzle offered, provides the widest variety of flow rates and pattern widths.

These nozzles are used where a non-symmetrical film build and extremely accurate control of the fluid rate is required. Refer to Section A – *General Information* for a more complete explanation of controlled pattern nozzles.

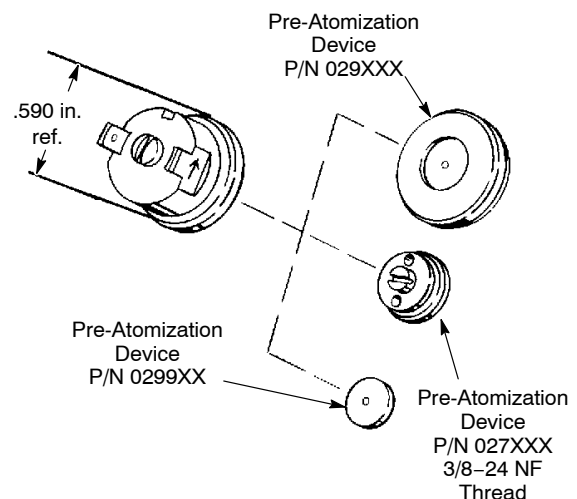
## Spray Guns and Adapters

Used on the following Nordson airless spray guns, and most automatic and manual airless spray guns made by other manufacturers:

A4B, A7A, A10A, A14A, A20A, Pipe Lance Gun, Continuous Coater, MEG®

## Features

- Custom sizes are available upon request
- Standard flow rate tolerance of  $\pm 2\%$
- Controlled pattern distributions of 60/40%, 70/30%, 80/20%, or 90/10%



# Close-Tolerance Controlled-Pattern Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
				MIN (IN.)	MAX (IN.)	DISTANCE	
.03/04	0.0077	1,3,C,Ct	027303	4.00	6.00	10.00	104069
.04/04	0.0089	1,C,Ct	029912	4.00	5.00	10.00	122325
.04/05	0.0089	2,3,8,11,B,Ct	027304	2.20	2.55	3.00	122369
.04/06	0.0089	2,3,8,B,Ct	027306	1.55	2.88	3.00	1002041
.04/06	0.0089	1,3,C,Ct	027304	6.00	8.00	10.00	714630
.04/06	0.0089	1,8,15,Deg,B,Ct	029912	3.39	3.88	3.00	1091021
.04/07	0.0089	2,3,8,B,Ct	027306	2.97	3.41	3.00	1002042
.05/04	0.0100	1,3,B,Ct	027306	4.00	6.00	10.00	121774
.05/04	0.0100	2,3,B,Ct	105375	4.00	6.00	10.00	109414
.05/04	0.0100	2,3,11,B,Ct	027306	4.00	6.00	10.00	121766
.05/05	0.0100	1,3,8,B,Ct	027406	2.20	2.55	3.00	122385
.05/06	0.0100	2,3,B,Ct	105375	6.00	8.00	10.00	109415
.05/06	0.0100	2,3,11,B,Ct	027006	6.00	8.00	10.00	121788
.05/06	0.0100	1,15,Deg,A,Ct	029915	6.00	8.00	10.00	1096802
.05/06	0.0100	1,15,Deg,A,Ct	029915	6.00	9.00	10.00	1097000
.06/02.5	0.0110	2,3,B,Ct	105375	2.50	3.50	10.00	121740
.06/04	0.0110	1,B,Ct	029915	4.00	6.00	10.00	116521
.06/04	0.0110	2,B,Ct	029915	4.00	6.00	10.00	116519
.06/04	0.0110	2,3,B,Ct	027306	4.00	6.00	10.00	1080070
.06/04	0.0110	2,12,B,Ct	029915	4.00	6.00	10.00	1067181
.06/04	0.0110	2,3,12,B,Ct	027306	4.00	6.00	10.00	1066224
.06/05	0.0110	1,B,Ct	029915	5.00	7.00	10.00	116520
.06/05	0.0110	2,B,Ct	029915	5.00	7.00	10.00	116518
.06/05.5	0.0110	1,B,Ct	029915	5.50	6.50	10.00	121811
.06/06	0.0110	1,C,Ct	029915	6.00	7.00	10.00	704803
.06/06	0.0110	1,3,B,Ct	027306	6.00	8.00	10.00	702639
.06/06	0.0110	1,3,C,Ct	027306	6.00	8.00	10.00	121723
.06/06	0.0110	1,3,Ct,X	027306	6.00	8.00	10.00	111698
.06/06	0.0110	1,3,12,A,Ct	027306	6.00	8.00	10.00	1066226
.06/06	0.0110	1,15,Deg,A,Ct	029915	6.00	8.00	10.00	112032
.06/06	0.0110	2,3,B,Ct	105375	6.00	8.00	10.00	109434
.06/06	0.0110	2,3,11,B,Ct	027306	6.00	8.00	10.00	121799
.06/06	0.0110	Deg,A,Ct,X	029915	6.00	8.00	10.00	1066924
.06/08	0.0110	1,8,Ct,X	N/A	3.38	4.13	3.00	121998

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Close-Tolerance Controlled-Pattern Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
				MIN (IN.)	MAX (IN.)	DISTANCE	
.06/08	0.0110	1,8,A,Ct	N/A	3.38	4.13	3.00	121804
.07/06	0.0118	2,3,Ct,X	027309	6.00	8.00	10.00	121738
.07/06	0.0118	2,3,11,Ct,X	027309	6.00	8.00	10.00	121765
.075/02.5	0.0122	1,3,C,Ct	027306	2.50	3.50	10.00	119229
.075/03.5	0.0122	1,3,B,Ct	027309	3.50	4.50	10.00	116522
.075/05.5	0.0122	1,3,B,Ct	027306	5.50	6.50	10.00	116523
.075/04	0.0122	2,B,Ct	029915	4.00	6.00	10.00	1033189
.075/04.5	0.0122	2,11,C,Ct	029918	4.50	5.50	10.00	121855
.075/04	0.0122	2,11,C,Ct	029918	4.00	5.00	10.00	121854
.075/08	0.0122	2,8,A,Ct,X	N/A	4.19	4.81	3.00	122478
.075/08	0.0122	1,B,Ct	029918	8.00	10.00	10.00	121701
.075/10	0.0122	1,B,Ct	029918	10.00	12.00	10.00	121768
.075/10	0.0122	2,8,15,Deg,C,Ct	029918	4.44	4.63	3.00	1604513
.075/4.5	0.0122	2,3,B,Ct	027309	4.50	5.50	10.00	1086521
.08/.06	0.0126	2,8,11,B,Ct	029915	3.49	4.01	3.00	1007390
.09/03.5	0.0134	1,3,C,Ct	027309	3.50	4.50	10.00	110873
.09/04	0.0134	1,3,C,Ct	027309	4.00	6.00	10.00	102162
.09/04	0.0134	2,11,C,Ct	029918	4.00	5.00	10.00	121852
.09/04.5	0.0134	1,3,C,Ct	027309	4.50	5.50	10.00	110874
.09/04.5	0.0134	2,11,C,Ct	029918	4.50	5.50	10.00	121853
.09/05	0.0134	1,B,Ct,X	029918	5.00	7.00	10.00	121796
.09/05.5	0.0134	2,11,B,Ct	029915	5.25	5.75	10.00	1053329
.09/06	0.0134	2,3,B,Ct	105376	6.00	7.50	10.00	118777
.09/06	0.0134	1,C,Ct	029918	6.00	7.00	10.00	121841
.09/06	0.0134	1,3,B,Ct	027309	6.00	7.50	10.00	711990
.09/06	0.0134	2,3,11,B,Ct	027309	6.00	7.50	10.00	121769
.09/07	0.0134	2,Ct,D	029918	7.00	8.00	10.00	121917
.09/08	0.0134	1,3,B,Ct	027309	8.00	10.00	10.00	092089
.09/08	0.0134	1,C,Ct	029918	8.00	10.00	10.00	121764
.09/08	0.0134	2,3,Ct,D,X	027309	8.00	10.00	10.00	1003130
.09/08	0.0134	2,3,Ct,D,X	027309	8.00	10.00	10.00	1033189
.09/08	0.0134	2,3,11,C,Ct,X	027309	8.00	10.00	10.00	1003130
.09/10	0.0134	1,3,B,Ct	027309	10.00	11.00	10.00	110875
.09/10	0.0134	2,11,Ct,D	029918	10.00	12.00	10.00	121937

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Close-Tolerance Controlled-Pattern Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
				MIN (IN.)	MAX (IN.)	DISTANCE	
.09/12	0.0134	1,8,Ct,D	N/A	4.88	5.63	3.00	121863
.09/12	0.0134	1,Ct,X	029918	12.00	14.00	10.00	122518
.09/12	0.0134	1,3,A,Ct	027309	12.00	14.00	10.00	1101956
.09/12	0.0134	2,3,C,Ct	027309	12.00	14.00	10.00	1101951
.09/14	0.0134	1,3,A,Ct	027309	14.00	16.00	10.00	1100944
.10/06	0.0141	1,3,B,Ct	027309	6.00	8.00	10.00	714390
.10/06	0.0141	2,3,11,Ct,X	027309	6.00	8.00	10.00	121839
.11/06	0.0148	2,3,8,11,B,Ct,X	105378	3.75	4.13	5.88	121850
.11/07.5	0.0148	2,11,B,Ct	029920	7.50	8.50	10.00	1053322
.11/08	0.0148	2,11,B,Ct	029918	8.00	10.00	10.00	1056210
.11/10	0.0148	2,3,Ct,D,X	027309	10.00	12.00	10.00	1607539
.12/03.5	0.0155	1,3,B,Ct	027314	3.50	5.50	10.00	116525
.12/04	0.0155	1,C,Ct	029918	4.00	5.00	10.00	713780
.12/04.5	0.0155	1,B,Ct,X	029918	4.50	6.50	10.00	121798
.12/04.5	0.0155	1,3,B,Ct	027309	4.50	5.50	10.00	711989
.12/05	0.0155	1,C,Ct	029918	5.00	6.00	10.00	704521
.12/05	0.0155	1,B,Ct,X	029918	5.00	7.00	10.00	121797
.12/05.5	0.0155	1,3,B,Ct	027314	5.50	6.50	10.00	116527
.12/06	0.0155	1,3,C,Ct	027309	6.00	7.00	10.00	092085
.12/06	0.0155	1,C,Ct,X	029918	6.00	7.00	10.00	121800
.12/06	0.0155	1,3,A,Ct	027309	6.00	8.00	10.00	092070
.12/06	0.0155	1,3,C,Ct	027309	6.00	8.00	10.00	092203
.12/06	0.0155	1,C,Ct	029918	6.00	7.00	10.00	715534
.12/07	0.0155	1,C,Ct	029918	7.00	8.00	10.00	704523
.12/07	0.0155	2,3,11,A,Ct,X	027309	7.00	8.00	10.00	121845
.12/08	0.0155	1,3,C,Ct	027309	8.00	10.00	10.00	092202
.12/08	0.0155	1,3,Ct,D,X	027314	8.00	10.00	10.00	121776
.12/08	0.0155	1,C,Ct	029918	8.00	10.00	10.00	121757
.12/08	0.0155	1,3,A,Ct	027314	8.00	9.00	10.00	119330
.12/08	0.0155	1,B,Ct,X	029918	8.00	9.00	10.00	121810
.12/08	0.0155	1,3,A,Ct	027309	8.00	10.00	10.00	092065
.12/08	0.0155	1,15,Deg,B,Ct	029918	8.00	10.00	10.00	121703
.12/08	0.0155	2,11,A,Ct	029015	8.00	10.00	10.00	122533
.12/10	0.0155	1,A,Ct	029918	10.00	12.00	10.00	121736

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Close-Tolerance Controlled-Pattern Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
				MIN (IN.)	MAX (IN.)	DISTANCE	
.12/10	0.0155	1,A,Ct	N/A	10.00	12.00	10.00	121752
.12/10	0.0155	1,8,A,Ct,X	N/A	3.63	4.38	3.00	121807
.12/10	0.0155	1,3,A,Ct	027309	10.00	12.00	10.00	092064
.12/10	0.0155	1,3,C,Ct	027309	10.00	12.00	10.00	092201
.12/10	0.0155	2,3,12,A,Ct	027309	10.00	12.00	10.00	1073730
.12/11	0.0155	1,C,Ct	029918	11.00	12.00	10.00	706603
.12/12	0.0155	1,3,A,Ct	027309	12.00	14.00	10.00	092090
.12/12	0.0155	1,Ct,D	029918	12.00	14.00	10.00	706056
.12/12	0.0141	1,3,C,Ct	027309	12.00	14.00	10.00	1094389
.12/14	0.0155	1,3,A,Ct	027314	14.00	16.00	10.00	1100945
.12/16	0.0155	1,3,A,Ct	027314	16.00	18.00	10.00	1100946
.13/08	0.0161	1,3,Ct,X	027314	8.00	9.00	10.00	121772
.13/08	0.0161	1,3,11,Ct,X	027314	8.00	9.00	10.00	121767
.13/08	0.0161	2,3,11,B,Ct,X	027314	8.00	9.00	10.00	121784
.13/08	0.0161	2,3,12,B,Ct,X	027314	8.00	9.00	10.00	1066225
.14/06	0.0167	1,3,A,Ct	027314	6.00	8.00	10.00	121720
.14/08	0.0167	1,3,Ct,X	027314	8.00	10.00	10.00	121775
.14/08	0.0167	1,B,Ct	029920	8.00	10.00	10.00	121743
.14/10	0.0167	1,3,C,Ct	027314	10.00	12.00	10.00	707641
.14/10	0.0167	1,3,A,Ct	027314	10.00	12.00	10.00	121737
.14/12	0.0167	1,3,A,Ct,X	027314	12.00	14.00	10.00	121869
.14/14	0.0167	2,3,A,Ct	027314	14.00	16.00	10.00	122406
.14/14	0.0167	1,3,A,Ct	027314	14.00	16.00	10.00	714279
.15/04.5	0.0173	1,C,Ct	029920	4.50	5.50	10.00	710466
.15/05	0.0173	1,C,Ct	029920	5.00	7.00	10.00	115362
.15/05.5	0.0173	1,C,Ct	029920	5.50	6.50	10.00	710467
.15/06	0.0173	1,3,A,Ct	027314	6.00	8.00	10.00	121721
.15/07	0.0173	1,3,C,Ct	027314	7.00	8.00	10.00	092086
.15/07	0.0173	1,C,Ct	029920	7.00	8.00	10.00	714995
.15/07	0.0173	1,B,Ct,X	029920	7.00	8.00	10.00	117131
.15/08	0.0173	1,B,Ct,X	029920	8.00	9.00	10.00	117132
.15/09	0.0173	1,C,Ct	029920	9.00	10.00	10.00	709540
.15/10	0.0173	1,B,Ct	029920	10.00	11.00	10.00	119227
.16/07	0.0179	1,C,Ct	029920	7.00	8.00	10.00	715533

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Close-Tolerance Controlled-Pattern Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
				MIN (IN.)	MAX (IN.)	DISTANCE	
.16/10	0.0179	1,3,C,Ct	027314	10.00	12.00	10.00	092200
.16/10	0.0179	1,3,B,Ct	027314	10.00	12.00	10.00	092062
.16/10	0.0179	1,B,Ct	029920	10.00	11.00	10.00	119228
.16/10	0.0179	1,3,Ct,X	027314	10.00	12.00	10.00	121795
.17/08	0.0184	1,3,C,Ct	027320	8.00	10.00	10.00	121823
.18/10	0.0190	1,C,Ct	029925	10.00	12.00	10.00	121749
.19/07	0.0195	1,C,Ct	029920	7.00	8.00	10.00	713750
.19/09	0.0195	1,C,Ct	029920	9.00	10.00	10.00	715630
.19/12	0.0195	2,3,A,Ct	027320	12.00	14.00	10.00	122367
.19/12	0.0195	1,3,A,Ct	027320	12.00	14.00	10.00	092068
.19/14	0.0195	1,3,A,Ct	027320	14.00	16.00	10.00	121870
.20/09	0.0200	1,C,Ct	029925	9.00	10.00	10.00	715631
.20/10	0.0200	1,C,Ct	029925	10.00	12.00	10.00	121750
.20/10	0.0200	1,B,Ct	029920	10.00	12.00	10.00	710185
.23/07	0.0214	1,C,Ct	029925	7.00	8.00	10.00	713751
.23/09	0.0214	1,C,Ct	029925	9.00	10.00	10.00	713753
.25/08	0.0224	1,3,C,Ct	027314	8.00	10.00	10.00	715233
.25/10	0.0224	1,C,Ct	029925	10.00	12.00	10.00	710184
.25/12	0.0224	1,3,A,Ct	027320	12.00	14.00	10.00	092063
.26/12	0.0228	1,Ct,D	029933	12.00	14.00	10.00	121844
.30/14	0.0245	1,3,A,Ct	027330	14.00	16.00	10.00	121882
.45/10	0.0300	1,3,8,C,Ct	N/A	4.85	5.13	3.00	121885
.45/12	0.0300	1,3,C,Ct	027045	12.00	14.00	10.00	704975
.45/12	0.0300	1,3,Ct,D	027045	12.00	14.00	10.00	121813

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Internally threaded for T-Plate  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
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 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

## Section C 4

# Minimum Cavity Flange Dome Nozzles

## Application

Used in a wide variety of airless coating applications. Most common style of nozzle offered, provides the widest variety of flow rates and pattern widths.

## Spray Guns and Adapters

Used on the following Nordson airless spray guns, and most automatic and manual airless spray guns made by other manufacturers:

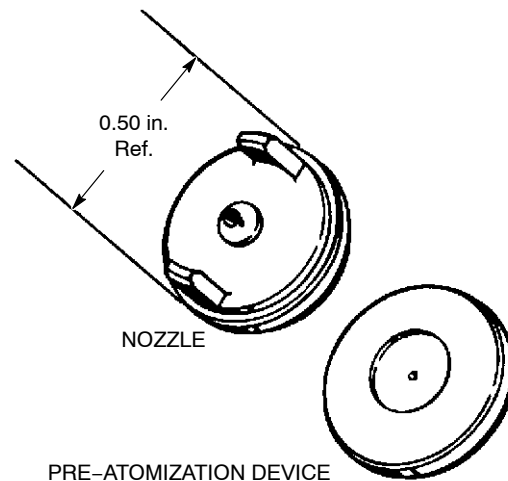
A4B, A7A, A10A, A14A, A20A, Pipe Lance Gun, Continuous Coater, MEG<sup>®</sup>

## Features

- Custom sizes are available upon request
- Standard flow rate tolerance of  $\pm 2\%$
- Controlled pattern distributions versions available



SHORT NOZZLE: 0.15–0.45 FLOW RATES  
TALL NOZZLE: 0.68–1.50 FLOW RATES





# Minimum Cavity Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.0129/06	0.0051	0.18	1,Ct	N/A	0.75	1.19	1.00	1047550
.01/06	0.0045	0.14	1,Ct	029010	0.75	1.12	1.00	1607356
.01/08	0.0045	0.11	2,Ct	029010	0.75	1.12	1.00	1605392
.015/06	0.005477	0.21	1,8,Ct,Sq	029010	2.50	3.00	3.00	1607140
.015/06	0.0055	0.21	1,Ct	029010	0.75	1.19	1.00	1605393
.02/06	0.0063	0.27	1,8,Ct	029010	4.00	4.39	3.00	1601209
.02/06	0.006324	0.27	1,8,Ct,Sq	029010	2.63	3.00	3.00	1607142
.025/10	0.00707	0.22	1,Ct,Sq	029010	1.63	1.63	1.00	1606943
.03/02	0.0077	0.96	1	029010	2.00	4.00	10.00	016001
.03/02	0.0077	N/A	1,8,B,Ct	N/A	0.95	1.11	3.00	1043302
.03/02.5	0.0077	0.82	1	029010	2.50	3.50	10.00	121840
.03/04	0.0077	0.58	1	029010	4.00	6.00	10.00	016002
.03/04	0.0077	N/A	1,8,B,Ct	N/A	1.50	1.75	3.00	121803
.03/04	0.0077	0.58	1,8,Ct	N/A	2.80	3.22	3.00	122443
.03/06	0.0077	0.41	1	029010	6.00	8.00	10.00	016003
.03/06	0.0077	0.41	1,8,C,Ct	029012	4.00	4.38	3.00	1601210
.03/06	0.00775	0.41	1,8,Ct,Sq	029012	2.62	3.00	3.00	1607143
.03/08	0.0077	0.32	1	029010	8.00	10.00	10.00	016004
.03/08	0.0077	0.32	1,Ct	029010	8.00	10.00	10.00	115370
.03/10	0.00775	0.26	1,8,Ct,Sq	029012	5.00	5.50	3.00	1607144
.0375/01.5	0.0087	1.44	1,8,Ct	N/A	0.75	0.88	3.00	122342
.04/02	0.0089	1.28	2	115712	2.00	4.00	10.00	122366
.04/02	0.0089	1.28	1	029012	2.00	4.00	10.00	016011
.04/02	0.0089	1.28	2,8,Ct,Sq	029012	2.25	2.50	3.00	1606065
.04/03	0.0089	0.96	1	029012	3.00	5.00	10.00	715535
.04/03	0.0089	0.96	1,Ct	029012	2.63	3.38	10.00	121875
.04/03	0.0089	0.96	2,8,Ct,Sq	029012	2.56	2.81	3.00	1606066
.04/04	0.0089	N/A	1,8,Ct,D	N/A	1.97	2.28	3.00	122440
.04/04	0.0089	0.77	1	029012	4.00	6.00	10.00	016012
.04/04	0.0089	N/A	1,8,C,Ct	N/A	2.16	2.47	3.00	122439
.04/06	0.0089	0.55	1	029012	6.00	8.00	10.00	016013
.04/06	0.0089	N/A	1,8,C,Ct	N/A	2.41	2.78	3.00	122441
.04/06	0.0089	N/A	1,8,Ct,D	N/A	2.39	2.75	3.00	122442
.04/08	0.0089	0.43	1	029012	8.00	10.00	10.00	016014
.04/10	0.0089	0.35	1	029012	10.00	12.00	10.00	016015

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Minimum Cavity Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.04/12	0.0089	0.30	1	029012	12.00	14.00	10.00	707353
.05/01.5	0.0100	1.92	2,8,Ct,Sq	029015	1.44	1.88	3.00	1604894
.05/04	0.0100	0.96	1	029015	4.00	6.00	10.00	122307
.05/06	0.0100	0.69	1	029015	6.00	8.00	10.00	121949
.06/02	0.0110	1.92	1	029015	2.00	4.00	10.00	016021
.06/03	0.0110	1.44	1	029015	2.50	3.50	10.00	710891
.06/04	0.0110	1.15	1	029015	4.00	6.00	10.00	016022
.06/06	0.0110	0.82	1	029015	6.00	8.00	10.00	016023
.06/06	0.0110	N/A	1,8,C,Ct	N/A	3.31	3.81	3.00	122509
.06/08	0.0110	0.64	1	029015	8.00	10.00	10.00	016024
.06/08	0.0110	N/A	2,8,C,Ct	N/A	4.00	4.53	3.00	1035601
.06/08	0.0110	N/A	2,8,Ct,D	N/A	4.00	4.53	3.00	1035602
.06/10	0.0110	0.52	1	029015	10.00	12.00	10.00	016025
.06/12	0.0110	0.44	2	115713	12.00	14.00	10.00	122384
.06/12	0.0110	0.44	1	029015	12.00	14.00	10.00	016026
.075/04	0.0122	1.44	2,8,Ct	N/A	2.75	3.19	3.00	1001260
.075/08	0.0122	N/A	1,8,C,Ct	N/A	3.84	4.41	3.00	122357
.075/08	0.0122	N/A	2,8,Ct,X	N/A	4.19	4.81	3.00	122487
.09/02	0.0134	2.88	1	029018	2.00	4.00	10.00	016031
.09/03	0.0134	2.16	1	029018	2.50	3.50	10.00	710892
.09/04	0.0134	1.73	1	029018	4.00	6.00	10.00	016032
.09/05	0.0134	1.44	1	029018	5.00	7.00	10.00	121734
.09/06	0.0134	1.23	1	029018	6.00	8.00	10.00	016033
.09/08	0.0134	0.96	2	115714	8.00	10.00	10.00	122327
.09/08	0.0134	N/A	1,8,B,Ct	N/A	4.00	4.53	3.00	122323
.09/08	0.0134	0.96	1	029018	8.00	10.00	10.00	016034
.09/10	0.0134	0.79	1	029018	10.00	12.00	10.00	016035
.09/12	0.0134	0.66	1	029018	12.00	14.00	10.00	016036
.09/12	0.0134	N/A	1,8,Ct,D	N/A	4.88	5.63	3.00	122510
.09/14	0.0134	0.58	1	029018	14.00	16.00	10.00	016037
.11/08	0.0148	1.17	1	029018	8.00	10.00	10.00	706298
.115/10	0.0152	N/A	1,A,Ct	029020	10.00	12.00	10.00	115100
.12/04	0.0155	2.30	1	029020	4.00	6.00	10.00	121735
.13/08	0.0161	N/A	2,8,C,Ct	N/A	4.00	4.53	3.00	1018714
.14/02	0.0167	4.48	1	029020	2.00	4.00	10.00	016041

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Minimum Cavity Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.14/04	0.0167	2.69	1	029020	4.00	6.00	10.00	016042
.14/06	0.0167	1.92	1	029020	6.00	8.00	10.00	016043
.14/08	0.0167	1.49	1	029020	8.00	10.00	10.00	016044
.14/10	0.0167	1.22	1	029020	10.00	12.00	10.00	016045
.14/12	0.0167	1.03	1	029020	12.00	14.00	10.00	016046
.14/14	0.0167	0.90	1	029020	14.00	16.00	10.00	016047
.14/16	0.0167	0.79	1	029020	16.00	18.00	10.00	016048
.14/18	0.0167	0.71	1	029020	18.00	20.00	10.00	016049
.16/10	0.0179	N/A	1,B	029020	10.00	12.00	10.00	707233
.20/04	0.0200	3.84	1	029025	4.00	6.00	10.00	016052
.20/06	0.0200	2.74	1	029025	6.00	8.00	10.00	016053
.20/08	0.0200	2.13	1	029025	8.00	10.00	10.00	016054
.20/10	0.0200	1.75	1	029025	10.00	12.00	10.00	016055
.20/12	0.0200	1.48	1	029025	12.00	14.00	10.00	016056
.20/14	0.0200	1.28	1	029025	14.00	16.00	10.00	016057
.20/16	0.0200	1.13	1	029025	16.00	18.00	10.00	016058
.20/18	0.0200	1.01	1	029025	18.00	20.00	10.00	016059
.25/12	0.0224	1.85	1	029033	12.00	14.00	10.00	707554
.25/14	0.0224	1.60	1	029033	14.00	15.00	10.00	707713
.25/16	0.0224	1.41	1	029033	16.00	18.00	10.00	707714
.25/18	0.0224	1.26	1	029033	18.00	20.00	10.00	710067
.25/20	0.0224	1.14	1	029033	20.00	22.00	10.00	710474
.30/06	0.0245	4.11	1	029033	6.00	8.00	10.00	016063
.30/08	0.0245	3.20	1	029033	8.00	10.00	10.00	016064
.30/10	0.0245	2.62	1	029033	10.00	12.00	10.00	016065
.30/12	0.0245	2.22	1	029033	12.00	14.00	10.00	016066
.30/14	0.0245	1.92	1	029033	14.00	16.00	10.00	016067
.30/16	0.0245	1.69	1	029033	16.00	18.00	10.00	016068
.30/18	0.0245	1.52	1	029033	18.00	20.00	10.00	016069
.30/22	0.0245	1.25	1	029033	22.00	24.00	10.00	710359
.45/06	0.0300	6.17	1	029040	6.00	8.00	10.00	016073
.45/08	0.0300	4.80	1	029040	8.00	10.00	10.00	016074
.45/10	0.0300	3.93	1	029040	10.00	12.00	10.00	016075
.45/12	0.0300	3.32	1	029040	12.00	14.00	10.00	016076
.45/14	0.0300	2.88	1	029040	14.00	16.00	10.00	016077

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Minimum Cavity Flange Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.45/16	0.0300	2.54	1	029040	16.00	18.00	10.00	016078
.45/18	0.0300	2.27	1	029040	18.00	20.00	10.00	016079
.45/24	0.0300	1.73	1	029040	24.00	26.00	10.00	714857
.55/26	0.0332	1.96	1,Ct	N/A	26.00	27.00	10.00	122532
.68/10	0.0369	5.93	1	029050	10.00	12.00	10.00	016085
.68/16	0.0369	3.84	1	029050	16.00	18.00	10.00	016088
.68/18	0.0369	3.44	1	029050	18.00	20.00	10.00	016089
.68/20	0.0369	3.11	1	029050	20.00	22.00	10.00	016080
1.50/20	0.0548	6.86	1	N/A	20.00	22.00	10.00	708020
1.50/24	0.0548	5.76	1	N/A	24.00	26.00	10.00	708206
1.65/24	0.0574	6.34	1	N/A	24.00	26.00	10.00	1009176

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for  
automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% – 10%  
B = 80% – 20%  
C = 70% – 30%  
D = 60% – 40%  
X = Special Pattern Distribution



## Section C 5

# Close-Tolerance Insert Dome Nozzles

## Application

Used where extremely accurate control of the fluid flow rate is required for the inside coating of containers, tubes, channels, or cylinders.

## Spray Guns and Adapters

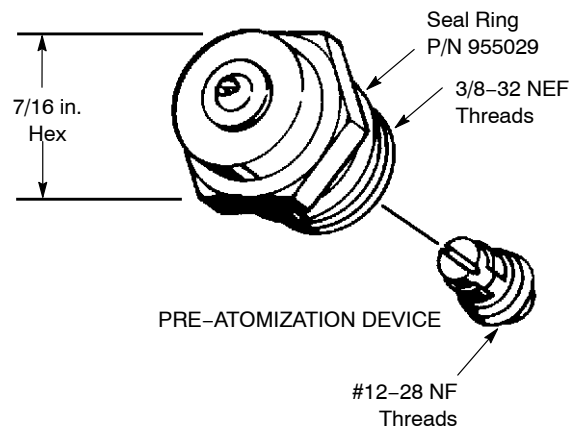
Can be adapted to any spray gun that uses a flanged nozzle with one of the adapters or dual nozzle extensions listed in Section F.

## Features

- Custom sizes are available upon request
- Standard flow rate tolerance of  $\pm 2\%$
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications



Nozzle Height = 0.425 in.



NOTE: Pre-Atomization Device must be ordered separately.

# Close-Tolerance Insert Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.015/02	0.0055	0.48	1,3,Ct	027452	2.00	4.00	10.00	026100
.03/02	0.0077	0.96	1,3,Ct	027403	2.00	4.00	10.00	026101
.03/04	0.0077	0.58	1,3,Ct	027403	4.00	6.00	10.00	026102
.03/06	0.0077	0.41	1,3,Ct	027403	6.00	8.00	10.00	026103
.03/08	0.0077	0.32	1,3,Ct	027403	8.00	10.00	10.00	026104
.035/08	0.0084	0.37	1,3,Ct	027404	8.00	10.00	10.00	121778
.04/02	0.0089	1.28	1,3,Ct	027404	2.00	4.00	10.00	026111
.04/04	0.0089	0.77	1,3,Ct	027404	4.00	6.00	10.00	715222
.04/04	0.0089	N/A	2,3,C,Ct	027404	4.00	5.00	10.00	1601783
.04/06	0.0089	0.55	1,3,Ct	027404	6.00	8.00	10.00	026113
.04/08	0.0089	0.43	1,3,Ct	027404	8.00	10.00	10.00	026114
.04/10	0.0089	0.35	1,3,Ct	027404	10.00	12.00	10.00	026115
.045/10	0.0095	0.39	1,3,Ct	027406	10.00	12.00	10.00	121830
.045/12	0.0095	0.33	1,3,Ct	027406	12.00	14.00	10.00	121831
.05/10	0.0100	0.44	1,3,Ct	027406	10.00	12.00	10.00	121832
.05/10	0.0100	0.44	1,3,Ct	027406	1.75	2.00	1.00	121779
.05/12	0.0100	0.37	1,3,Ct	027406	12.00	14.00	10.00	121833
.06/02	0.0110	1.92	1,3,Ct	027406	2.00	4.00	10.00	715354
.06/04	0.0110	1.15	1,3,Ct	027406	4.00	6.00	10.00	026122
.06/06	0.0110	0.82	1,3,Ct	027406	6.00	8.00	10.00	026123
.06/08	0.0110	0.64	1,3,Ct	027406	8.00	10.00	10.00	026124
.06/10	0.0110	0.52	1,3,Ct	027406	10.00	12.00	10.00	026125
.06/12	0.0110	0.44	1,3,Ct	027406	12.00	14.00	10.00	026126
.08/14	0.0126	0.51	1,3,Ct	027409	14.00	15.00	10.00	707522
.09/02	0.0134	2.88	1,3,Ct	027409	2.00	4.00	10.00	026131
.09/04	0.0134	1.73	1,3,Ct	027409	4.00	6.00	10.00	026132
.09/06	0.0134	1.23	1,3,Ct	027409	6.00	8.00	10.00	026133
.09/06	0.0134	N/A	1,3,C,Ct	027409	6.00	7.00	10.00	706952
.09/08	0.0134	0.96	1,3,Ct	027409	8.00	10.00	10.00	026134
.09/08	0.0134	N/A	1,3,C,Ct	027409	8.00	9.00	10.00	706450
.09/10	0.0134	0.79	1,3,Ct	027409	10.00	12.00	10.00	026135
.09/12	0.0134	N/A	1,3,B,Ct	027409	12.00	14.00	10.00	713353
.09/12	0.0134	0.66	1,3,Ct	027409	12.00	14.00	10.00	026136
.09/14	0.0134	0.58	1,3,Ct	027409	14.00	16.00	10.00	026137
.108/14	0.0147	0.69	1,3,Ct	027409	14.00	16.00	10.00	092080

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

# Close-Tolerance Insert Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.12/06	0.0155	N/A	1,3,C,Ct	027409	6.00	8.00	10.00	707305
.12/08	0.0155	N/A	1,3,C,Ct	027409	8.00	10.00	10.00	706449
.12/08	0.0155	N/A	1,3,A,Ct	027409	8.00	10.00	10.00	092075
.12/10	0.0155	N/A	1,3,B,Ct	027409	10.00	12.00	10.00	708755
.12/10	0.0155	N/A	1,3,C,Ct	027409	10.00	12.00	10.00	706448
.14/08	0.0167	1.49	1,3,Ct	027414	8.00	10.00	10.00	026144
.14/10	0.0167	1.22	1,3,Ct	027414	10.00	12.00	10.00	026145
.14/12	0.0167	1.03	1,3,Ct	027414	12.00	14.00	10.00	026146
.14/14	0.0167	0.90	1,3,Ct	027414	14.00	16.00	10.00	026147
.14/16	0.0167	0.79	1,3,Ct	027414	16.00	18.00	10.00	026148
.16/10	0.0179	N/A	1,3,B,Ct	027414	10.00	12.00	10.00	092074
.17/10	0.0184	1.48	1,3,Ct	027420	10.00	12.00	10.00	092072
.20/08	0.0200	2.13	1,3,Ct	027420	8.00	10.00	10.00	026154
.20/10	0.0200	1.75	1,3,Ct	027420	10.00	12.00	10.00	026155
.20/12	0.0200	1.48	1,3,Ct	027420	12.00	14.00	10.00	026156
.20/14	0.0200	1.28	1,3,Ct	027420	14.00	16.00	10.00	026157
.20/16	0.0200	1.13	1,3,Ct	027420	16.00	18.00	10.00	026158
.20/18	0.0200	1.01	1,3,Ct	027420	18.00	20.00	10.00	026159
.30/10	0.0245	2.62	1,3,Ct	027430	10.00	12.00	10.00	026165
.30/16	0.0245	1.69	1,3,Ct	027430	16.00	18.00	10.00	026168
.30/18	0.0245	1.52	1,3,Ct	027430	18.00	20.00	10.00	026169

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
3= Internally threaded for T-Plate  
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11=Adapter has no tip shields  
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13=Flats machined into holder for automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution





## Section C 6

# Miniature Insert Dome Nozzles

## Application

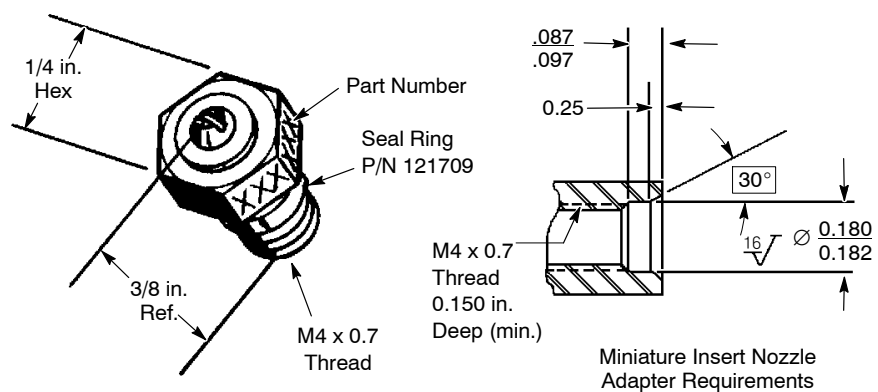
Inside coating of containers, tubes, channels, or cylinders. Used primarily where space is very limited, or where multiple nozzles are required.

## Spray Guns and Adapters

Can be adapted to any spray gun that uses a flanged nozzle. Refer to Section E for available adapters. Special adapters can be made by Nordson to the customers specifications, or the customer can make their own adapter.

## Features

- Custom sizes are available upon request
- Available in standard orifice sizes; specialized sizes can be produced upon request
- Available for applications where a non-symmetrical film build is required
- Small size allows use in unique applications
- Special adapters can be designed for use with difficult-to-coat parts, where space is very limited, or where multiple nozzle adapters are required
- Seals allow fan pattern orientation to be rotated 360 degrees



# Miniature Insert Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.02/02	0.0063	0.64	1,8,Ct	N/A	0.86	1.02	3.00	121986
.02/04	0.0063	0.38	1,Ct	N/A	4.00	6.00	10.00	122314
.03/02	0.0077	0.96	1	N/A	2.00	4.00	10.00	121710
.03/06	0.0077	0.41	1	N/A	6.00	8.00	10.00	121714
.04/01	0.0089	1.92	1,8,Ct	N/A	0.78	0.88	3.00	121993
.04/02	0.0089	1.28	1	N/A	2.00	4.00	10.00	121711
.04/04	0.0089	0.77	1	N/A	4.00	6.00	10.00	121712
.04/06	0.0089	0.55	1,8,Ct	N/A	3.25	3.94	3.00	121884
.06/04	0.0110	1.15	1,8,Ct	N/A	1.88	2.16	3.00	121941
.06/06	0.0110	0.82	1,8,Ct	N/A	2.75	3.25	3.00	121950
.08/01	0.0127	3.84	2,Ct	N/A	1.00	2.00	10.00	1607039
.08/06	0.0126	1.10	1,8,Ct	N/A	2.75	3.25	3.00	121835
.09/02	0.0134	2.88	1	N/A	2.00	4.00	10.00	121713
.10/01	0.0141	4.80	2,Ct	N/A	1.00	2.00	10.00	1605518
.10/02	0.0141	3.20	1,Ct	N/A	2.00	3.00	6.00	1605519
.12/01	0.0155	5.76	1,Ct	N/A	1.00	2.00	6.00	1605520
.12/02	0.0155	3.84	1,Ct	N/A	2.00	3.00	10.00	1605521
.12/04	0.0155	2.30	1,Ct,Sq	N/A	4.00	5.00	10.00	1602909
.12/10	0.0155	N/A	1,A,Ct	N/A	10.00	12.00	10.00	121728
.14/01	0.0167	N/A	1,Ct	N/A	1.00	2.00	10.00	1605522
.14/02	0.0167	4.48	1,Ct	N/A	2.00	3.00	10.00	1605523
.15/08	0.0173	N/A	1,B,Ct,X	N/A	8.00	9.00	10.00	121725
.15/09	0.0173	N/A	1,C,Ct	N/A	9.00	10.00	10.00	121726
.16/01	0.0179	7.68	1,Ct	N/A	1.00	2.00	10.00	1605524
.16/02	0.0179	5.12	1,Ct	N/A	2.00	3.00	10.00	1605525
.16/10	0.0179	N/A	1,B,Ct	N/A	10.00	12.00	10.00	121727
.18/01	0.0190	8.64	1,Ct	N/A	1.00	2.00	10.00	1605526
.18/02	0.0190	5.76	1,Ct	N/A	2.00	3.00	10.00	1605527
.20/01	0.0200	9.60	1,Ct	N/A	1.00	2.00	10.00	1605528
.20/02	0.0200	6.40	1,Ct	N/A	2.00	3.00	10.00	1605529

## FOOTNOTES

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Sq=Square pattern

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11=Adapter has no tip shields  
12=Adapter has no notch  
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## PATTERN DISTRIBUTION

A = 90% – 10%  
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X = Special Pattern Distribution

## Section C 7

# Container Close-Tolerance Tapered Dome Nozzles

## Application

Primarily used to apply container inside spray coatings.

## Spray Guns and Adapters

All guns that accept flange mount nozzles including A10A, A14A, A20A, MAG, and MEG<sup>®</sup> spray guns.

## Features

- Custom sizes are available upon request
- These nozzles are designed and tested to provide optimum performance in applying typical container inside spray coating
- The tapered shape minimizes coating material build-up and enhances the effectiveness of the CleanSpray<sup>®</sup> system

Dome nozzles provide:

- Superior performance and wear characteristics
- Wider fan patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging



# Container Close-Tolerance Tapered Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.015/01	0.0055	0.48	2,8,Ct	N/A	0.70	0.83	3.00	1604401
.015/02	0.0055	0.48	2,8,Ct	N/A	1.31	1.41	3.00	1070649
.015/04	0.0055	N/A	2,8,B,Ct	N/A	2.20	2.55	3.00	122500
.015/06	0.0055	0.21	2,Ct	N/A	0.75	1.19	1.00	1606088
.02/01	0.0063	0.96	2,8,Ct	N/A	0.70	0.83	3.00	122340
.02/01.5	0.0063	0.77	2,8,Ct	N/A	1.59	1.88	3.00	1600543
.02/02	0.0063	0.64	2,8,Ct	N/A	1.31	1.41	3.00	1602635
.02/03	0.0063	0.48	2,8,Ct	N/A	1.80	2.08	3.00	1602636
.02/04	0.0063	0.38	2,8,Ct	N/A	2.50	2.88	3.00	122404
.02/04	0.0063	0.38	2,8,Ct,X	N/A	2.50	2.88	3.00	1075522
.02/04	0.0063	N/A	2,8,B,Ct	N/A	2.22	2.55	3.00	122492
.02/04	0.0063	N/A	2,8,A,Ct	N/A	2.50	2.88	3.00	1021571
.02/06	0.0063	0.27	2,Ct	N/A	0.75	1.19	1.00	1606089
.02/06	0.0063	0.27	2,8,Ct,Sq	N/A	1.19	1.38	3.00	1095400
.025/01.5	0.0071	0.96	2,8,Ct	N/A	1.59	1.88	3.00	1080134
.027/04	0.0073	0.52	2,8,Ct	N/A	2.44	2.81	3.00	122434
.03/01	0.0077	1.44	1,8,Ct	N/A	0.64	0.75	3.00	1051090
.03/02	0.0077	0.58	2,8,Ct	N/A	1.63	1.88	3.00	121944
.03/04	0.0077	0.58	2,8,Ct	N/A	2.50	2.88	3.00	122319
.03/04	0.0077	0.58	2,8,Ct,X	N/A	2.50	2.88	3.00	1082482
.0365/01.25	0.0085	1.56	2,8,Ct	N/A	0.39	0.75	3.00	1085620
.0365/03.25	0.0085	0.82	2,8,Ct	N/A	1.19	1.38	3.00	121951
.0375/04	0.0087	N/A	2,8,Ct,D	N/A	1.97	2.31	3.00	122313
.0375/04	0.0087	N/A	2,8,Ct,D	N/A	3.75	4.50	3.00	1608134
.0375/04	0.0087	N/A	2,8,Ct,X	N/A	2.09	2.47	3.00	1000908
.04/01	0.0089	1.92	2,8,Ct	N/A	0.70	0.83	3.00	1073042
.04/01.5	0.0089	0.96	2,8,Ct	N/A	1.19	1.38	3.00	122374
.04/02	0.0089	1.28	2,8,Ct	N/A	1.69	1.94	3.00	122003
.04/03	0.0089	0.96	2,8,Ct	N/A	2.22	2.55	3.00	122499
.04/03	0.0894	0.96	2,8,Ct	N/A	1.19	1.50	3.00	1606942
.04/04	0.0089	0.77	2,8,Ct	N/A	2.69	3.06	3.00	122004
.04/06	0.0089	0.55	2,8,Ct	N/A	3.72	4.28	3.00	122536
.04/06	0.0089	N/A	2,3,8,B,Ct	121936	3.06	3.56	3.00	1086504
.04/10	0.0089	0.35	2,8,Ct,Sq	N/A	4.88	5.07	3.00	1606090
.05/04	0.0100	0.96	1,8,Ct	N/A	2.46	2.88	3.00	1037096

**FOOTNOTES**

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D = 60% - 40%  
X = Special Pattern Distribution

# Container Close-Tolerance Tapered Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.05/01.5	0.0100	1.92	1,8,Ct,Sq	N/A	1.44	1.88	3.00	1607950
.05/01.5	0.0100	1.92	2,8,Ct,Sq	N/A	1.44	1.88	3.00	1604893
.05/03	0.0100	1.20	2,8,Ct	N/A	1.83	2.38	3.00	1602263
.05/06	0.0100	N/A	2,3,8,B,Ct	121936	3.13	3.31	3.00	1090893
.055/03	0.0105	1.32	2,8,Ct	N/A	1.83	2.38	3.00	1602201
.055/04	0.0105	1.06	2,8,Ct	N/A	2.47	2.88	3.00	1602202
.055/08	0.0105	0.59	2,8,Ct	N/A	3.75	4.38	3.00	1602199
.055/08	0.0105	N/A	2,8,Ct,D	N/A	4.00	4.53	3.00	1602200
.06/01.5	0.0110	2.30	2,8,Ct	N/A	1.19	1.38	3.00	122336
.06/02	0.0110	1.92	2,8,Ct	N/A	1.69	1.94	3.00	1096800
.06/02	0.0110	N/A	2,8,C,Ct	N/A	1.688	1.938	3.00	1601192
.06/02	0.0110	N/A	2,8,Ct,D	N/A	1.688	1.938	3.00	1601193
.06/03	0.0110	N/A	2,5,8,Ct	N/A	1.81	2.69	3.00	122303
.06/04	0.0110	1.15	2,8,Ct	N/A	2.47	2.88	3.00	122316
.06/04	0.0110	1.15	2,8,Ct	N/A	2.58	2.70	3.00	1069765
.06/04	0.0110	1.15	2,8,Ct,Sq	N/A	2.47	2.88	3.00	1095096
.06/04	0.0110	N/A	2,3,8,B,Ct	121936	2.25	2.50	3.00	121934
.06/04	0.0110	N/A	2,8,A,Ct	N/A	2.38	2.63	3.00	1600038
.06/04	0.0110	N/A	2,8,C,Ct	N/A	2.50	2.625	3.00	1601190
.06/04	0.0110	N/A	2,8,Ct,D	N/A	2.50	2.75	3.00	1601191
.06/04	0.0110	N/A	2,8,C,Ct	N/A	2.375	2.625	3.00	1601407
.06/04	0.0110	N/A	2,8,B,Ct	N/A	2.375	2.625	3.00	1601408
.06/05	0.0110	N/A	2,8,C,Ct	N/A	2.688	3.00	3.00	1601897
.06/06	0.0110	0.82	2,8,Ct	N/A	2.94	3.38	3.00	123700
.06/06	0.0110	0.82	2,3,8,A,Ct	27406	3.53	4.06	3.00	122391
.06/06	0.0110	N/A	2,3,8,B,Ct	27406	3.25	3.75	3.00	122330
.06/06	0.0110	N/A	2,3,8,B,Ct	121936	2.75	3.00	3.00	1090892
.06/06	0.0110	N/A	2,3,8,B,Ct	121990	3.25	3.75	3.00	1016080
.06/06	0.0110	N/A	2,8,A,Ct	N/A	3.03	3.48	3.00	1060707
.06/06	0.0110	N/A	2,8,C,Ct	N/A	2.391	2.797	3.00	1604698
.06/06	0.0110	N/A	2,8,Ct,X	N/A	3.66	4.25	3.00	122317
.06/06	0.0110	N/A	2,8,C,Ct	N/A	3.66	4.25	3.00	122944
.06/08	0.0110	0.64	2,8,Ct	N/A	3.75	4.38	3.00	122005
.06/08	0.0110	0.64	2,8,Ct,Sq	N/A	4.00	4.39	3.00	1073309
.06/08	0.0110	N/A	2,8,A,Ct	N/A	3.38	4.13	3.00	121999

## FOOTNOTES

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# Container Close-Tolerance Tapered Dome Nozzle List

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REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.06/10	0.0110	0.52	2,8,Ct	N/A	5.81	6.69	3.00	122006
.06/10	0.0110	N/A	2,8,A,Ct	N/A	4.19	4.81	3.00	121904
.065/04.5	0.0114	N/A	2,8,A,Ct	N/A	1.88	2.14	3.00	1010357
.065/08	0.0114	N/A	2,8,A,X,Ct	N/A	4.19	4.81	3.00	122414
.07/06	0.0118	N/A	2,8,B,Ct	N/A	3.47	4.00	3.00	1040350
.07/07	0.0118	0.84	2,8,Ct	N/A	4.00	4.25	2.00	1101356
.07/10	0.0118	N/A	2,8,A,Ct	N/A	3.75	4.38	3.00	1065620
.07/10	0.0118	N/A	2,8,Ct,X	N/A	3.75	4.38	3.00	121915
.075/03.5	0.0122	N/A	1,3,B,Ct	27409	3.50	4.50	10.00	1048268
.075/03.5	0.0122	N/A	2,3,Ct,X	27409	3.50	4.00	10.00	122375
.075/04	0.0122	1.44	2,8,Ct	N/A	32.57	2.88	3.00	1064273
.075/04.5	0.0122	N/A	2,3,B,Ct	27309	4.50	5.50	10.00	1086521
.075/04.5	0.0122	N/A	2,8,A,Ct	N/A	2.33	2.67	3.00	122376
.075/05.5	0.0122	N/A	2,3,B,Ct	27409	5.50	6.50	10.00	121865
.075/06	0.0122	1.03	2,8,Ct	N/A	3.14	3.63	3.00	122344
.075/07	0.0122	0.90	2,8,Ct	N/A	4.00	4.25	2.00	1099191
.075/07	0.0122	N/A	2,8,A,Ct	N/A	3.47	4.04	3.00	122480
.075/08	0.0122	N/A	2,8,A,Ct	N/A	3.88	4.50	3.00	122015
.075/08	0.0122	N/A	2,8,Ct,D	N/A	3.75	4.50	3.00	121969
.075/08	0.0122	0.80	2,8,Ct	N/A	3.63	4.13	3.00	121976
.075/08	0.0122	N/A	2,8,Ct,X	N/A	4.19	4.81	3.00	122415
.075/08	0.0122	N/A	2,8,B,Ct	N/A	3.88	4.50	3.00	122308
.075/09	0.0122	0.72	2,8,Ct	N/A	4.13	4.78	3.00	1009147
.08/06	0.0126	N/A	2,8,11,B,Ct	29915	3.49	4.01	3.00	1007390
.08/07	0.0126	N/A	2,8,C,Ct	N/A	3.14	3.61	3.00	1059521
.08/08	0.0126	N/A	2,8,A,Ct,X	N/A	4.19	4.81	3.00	122405
.08/10	0.0126	0.70	2,8,Ct,Sq	N/A	4.31	4.94	3.00	1606832
.085/09	0.0130	0.82	2,8,Ct	N/A	3.95	4.53	3.00	122320
.085/10	0.0130	0.74	2,8,Ct	N/A	4.47	5.19	3.00	122306
.085/10	0.0130	0.74	2,8,Ct,Sq	N/A	4.31	4.94	3.00	1606833
.085/10	0.0130	N/A	2,8,A,Ct	N/A	4.36	5.02	3.00	122383
.09/04	0.0134	1.73	2,8,Ct	N/A	2.16	2.47	3.00	122014
.09/04	0.0134	N/A	2,8,Ct,X	N/A	1.94	2.28	3.00	122304
.09/05	0.0134	N/A	2,8,A,Ct	N/A	3.063	3.438	3.00	1606512

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# Container Close-Tolerance Tapered Dome Nozzle List

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					MIN (IN.)	MAX (IN.)	DISTANCE	
.09/06	0.0134	1.23	2,8,Ct	N/A	3.06	3.50	3.00	122001
.09/06	0.0134	1.23	2,8,Ct,Sq	N/A	3.06	3.50	3.00	1094368
.09/06	0.0134	1.08	2,8,Ct	N/A	4.00	4.25	3.00	1603983
.09/06	0.0134	N/A	1,3,A,Ct	121862	6.00	7.00	10.00	1108175
.09/06	0.0134	N/A	1,8,B,Ct	N/A	3.468	4.00	3.00	1604397
.09/06	0.0134	N/A	2,3,8,B,Ct,X	121867	2.94	3.36	3.00	122322
.09/06	0.0134	N/A	2,8,A,Ct	N/A	3.47	4.00	3.00	121981
.09/06	0.0134	N/A	2,8,A,Ct,X	N/A	3.468	4.00	3.00	1602375
.09/06	0.0134	N/A	2,8,C,Ct	N/A	2.938	3.250	3.00	1604699
.09/07	0.0134	N/A	2,8,C,Ct	N/A	3.72	4.28	3.00	122335
.09/07	0.0134	N/A	2,8,A,Ct	N/A	3.47	4.03	3.00	121997
.09/07	0.0134	N/A	2,8,C,Ct	N/A	3.14	3.61	3.00	1063064
.09/08	0.0134	0.96	2,8,Ct	N/A	3.75	4.38	3.00	122000
.09/08	0.0134	0.96	2,8,Ct,Sq	N/A	4.00	4.38	3.00	1094845
.09/08	0.0134	N/A	2,8,A,Ct,X	N/A	3.75	4.25	3.00	1084700
.09/08	0.0134	N/A	2,8,B,Ct	N/A	4.06	4.69	3.00	121973
.09/08	0.0134	N/A	2,8,A,Ct	N/A	3.75	4.25	3.00	122009
.09/08	0.0134	N/A	2,8,A,Ct,X	N/A	4.19	4.81	3.00	1011232
.09/08	0.0134	N/A	2,8,Ct,D	N/A	3.75	4.50	3.00	1094843
.09/09	0.0134	0.86	2,8,Ct	N/A	4.13	4.78	3.00	122305
.09/10	0.0134	0.79	2,8,Ct	N/A	4.31	4.94	3.00	122002
.09/10	0.0134	0.79	2,8,Ct,Sq	N/A	4.31	4.94	3.00	1094380
.09/10	0.0134	N/A	2,3,8,B,Ct	N/A	5.00	5.875	3.00	1604464
.09/10	0.0134	N/A	2,8,A,Ct,X	N/A	3.75	4.38	3.00	1088301
.09/10	0.0134	N/A	2,8,C,Ct	N/A	5.25	5.50	3.00	1094388
.09/10	0.0134	N/A	2,8,Ct,D	N/A	4.34	5.16	3.00	122324
.09/10	0.0134	N/A	2,8,Ct,D	N/A	4.344	5.156	3.00	1606450
.09/11	0.0134	N/A	2,8,A,Ct,X	N/A	4.53	5.23	3.00	122329
.09/12	0.0134	0.66	2,8,Ct	N/A	6.25	7.13	3.00	122459
.09/12	0.0134	0.66	2,8,Ct,Sq	N/A	6.25	6.45	3.00	1091129
.10/04	0.0141	N/A	2,8,B,Ct,X	N/A	3.84	4.41	5.88	122358
.10/06	0.0141	N/A	2,8,C,Ct	N/A	2.938	3.25	3.00	1606829
.10/07	0.0141	N/A	1,3,A,Ct	121862	7.00	8.00	10.00	1102896
.10/07	0.0141	N/A	2,8,A,Ct	N/A	4.00	4.25	3.00	1603312

## FOOTNOTES

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for  
 automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution



# Container Close-Tolerance Tapered Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.10/08	0.0141	N/A	2,8,B,Ct	N/A	4.188	4.813	3.00	1606035
.10/10	0.0141	0.87	2,8,Ct	N/A	4.31	4.94	3.00	1023911
.10/12	0.0141	0.74	2,8,Ct	N/A	7.44	8.56	3.00	122435
.105/06	0.0145	N/A	2,8,A,Ct,X	N/A	3.468	4.00	3.00	1601250
.105/10	0.0145	N/A	2,8,A,Ct,X	N/A	3.63	4.38	3.00	1008025
.11/06	0.0148	N/A	2,8,B,Ct	N/A	3.14	3.61	3.00	122535
.11/07	0.0148	N/A	2,8,A,Ct	N/A	4.00	4.25	3.00	1603313
.11/08	0.0148	1.17	2,8,Ct	N/A	3.75	4.31	3.00	121916
.11/08	0.0148	N/A	2,8,B,Ct	N/A	4.38	5.00	3.00	1042340
.11/10	0.0148	0.96	2,8,Ct	N/A	4.44	5.06	3.00	122315
.11/10	0.0148	0.96	2,8,Ct,Sq	N/A	4.44	5.06	3.00	1097007
.12/04	0.0155	N/A	2,3,C,Ct	27414	4.00	5.00	10.00	121842
.12/04	0.0155	N/A	2,3,8,B,Ct	27420	1.86	2.14	3.00	122321
.12/04.5	0.0155	N/A	2,8,B,Ct	N/A	2.20	2.55	3.00	122379
.12/05	0.0155	N/A	2,3,B,Ct,X	121862	5.00	7.00	10.00	122380
.12/06	0.0155	N/A	2,3,8,A,Ct,X	27409	4.25	4.89	5.91	122371
.12/06	0.0155	N/A	2,3,8,C,Ct	121936	4.13	4.38	3.00	121933
.12/06	0.0155	N/A	2,8,A,Ct	N/A	3.47	4.00	3.00	1104296
.12/06	0.0155	N/A	2,8,A,Ct,X	N/A	3.468	4.00	3.00	1601251
.12/06.5	0.0155	N/A	1,3,8,A,Ct	121936	4.06	4.63	3.00	1102897
.12/07	0.0155	N/A	2,8,A,Ct	N/A	3.25	3.75	3.00	121939
.12/08	0.0155	1.28	2,8,Ct	N/A	3.75	4.38	3.00	1108170
.12/08	0.0155	N/A	1,3,8,A,Ct	27414	3.44	3.95	3.00	122341
.12/08	0.0155	N/A	1,8,C,Ct	N/A	3.75	4.25	3.00	1605053
.12/08	0.0155	N/A	2,8,B,Ct	N/A	3.75	4.25	3.00	1600774
.12/08	0.0155	N/A	2,8,B,Ct,X	N/A	3.06	3.52	3.00	1000909
.12/08	0.0155	N/A	2,8,A,Ct,X	N/A	3.25	3.75	3.00	121938
.12/08	0.0155	N/A	2,8,A,Ct	N/A	3.75	4.25	3.00	122008
.12/08	0.0155	N/A	2,8,A,Ct,X	N/A	4.19	4.81	3.00	1001100
.12/08	0.0155	N/A	2,8,Ct,D	N/A	3.75	4.25	3.00	1606451
.12/10	0.0155	1.05	2,8,Ct	N/A	4.44	5.00	3.00	122537
.12/10	0.0155	N/A	2,3,8,A,Ct	27414	5.00	5.75	3.00	123690
.12/10	0.0155	N/A	2,8,Ct	N/A	3.63	4.38	3.00	122498
.12/10	0.0155	N/A	2,8,A,Ct	N/A	4.38	5.00	3.00	122007
.12/13	0.0155	0.82	2,8,Ct	N/A	5.31	6.19	3.00	121996

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

# Container Close-Tolerance Tapered Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.13/04	0.0161	N/A	2,3,C,Ct	29915	4.00	5.00	10.00	121876
.13/06	0.0161	N/A	2,8,C,Ct	N/A	2.86	3.25	3.00	1059210
.14/04	0.0167	N/A	2,3,C,Ct	29915	4.00	5.00	10.00	121952
.14/05.25	0.0167	N/A	2,3,8,C,Ct	27420	2.91	3.34	3.00	1000602
.14/08	0.0167	1.49	2,8,Ct	N/A	3.75	4.38	3.00	1108171
.14/08	0.0167	1.49	2,8,Ct,Sq	N/A	2.81	3.13	3.00	1604462
.14/08	0.0167	N/A	2,3,8,B,Ct	27420	3.38	3.79	3.00	122446
.14/08	0.0167	N/A	2,3,A,Ct	N/A	3.75	4.25	3.00	1606466
.14/08	0.0167	N/A	2,8,D,Ct	N/A	3.75	3.00	3.00	1108172
.14/10	0.0167	1.22	2,8,Ct,Sq	N/A	3.38	3.88	3.00	1604463
.14/10	0.0167	N/A	2,8,Ct,D	N/A	4.75	5.25	3.00	1600037
.14/11.5	0.0167	1.08	2,8,Ct,Sq	N/A	4.52	5.20	3.00	1090123
.15/06.5	0.0173	N/A	2,3,8,B,Ct,X	121862	5.47	6.28	5.88	122408
.15/06.5	0.0173	N/A	2,3,8,C,Ct,X	121862	5.47	6.28	5.88	122364
.15/07	0.0173	N/A	2,3,C,Ct	27414	7.00	8.00	10.00	121868
.15/08	0.0173	N/A	2,3,B,X	29920	8.00	9.00	10.00	121866
.15/08	0.0173	N/A	2,3,8,A,Ct	27420	3.49	4.01	3.00	1016081
.15/09	0.0173	N/A	2,3,8,C,Ct	121990	4.75	5.47	3.00	122339
.16/07	0.0179	N/A	1,8,C,Ct	N/A	2.975	3.375	3.00	1604332
.16/10	0.0179	N/A	2,3,B,Ct	27414	10.00	12.00	10.00	121974
.17/06	0.0184	N/A	2,B,Ct,X	N/A	4.19	4.81	5.91	1073043
.18/06	0.0190	N/A	1,3,B,Ct	27420	6.00	8.00	10.00	121971
.18/11.5	0.0190	1.38	1,8,Ct,Sq	N/A	4.52	5.20	3.00	1092382
.19/06	0.0195	N/A	1,3,B,Ct	27420	6.00	8.00	10.00	121972
.20/06	0.0200	N/A	2,3,8,B,Ct,X	27020	4.38	4.63	5.88	122363

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for  
automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution



## Section C 8

# CleanSpray® Dome Nozzles

## Application

When mounted on a CleanSpray® gun, the nozzle output is directed toward the coating nozzle to provide a cleaning function.

## Spray Guns and Adapters

Designed for use with the Nordson CleanSpray system spray gun

## Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications

CleanSpray dome nozzles provide

- Superior performance and wear characteristics
- Wider fan patterns than are available with equivalent flow rate dome nozzles
- Reduced orifice plugging



# CleanSpray Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	ANGLE ADAPTER	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.03/09	0.0077	N/A	2,4,8,A,Ct,X	90	4.09	4.70	3.00	1099695
.035/07	0.0084	N/A	2,4,A,Ct,X	90	3.56	3.94	3.00	1077756
.035/09	0.0084	N/A	2,4,A,Ct,X	90	4.09	4.70	3.00	1070687
.04/02	0.0089	1.28	2,8,Ct,Sq	30	2.25	2.50	3.00	1602093
.04/03	0.0089	0.96	2,8,Ct,Sq	30	2.56	2.81	3.00	1602094
.04/04	0.0089	0.77	2,Ct,Sq	30	4.00	5.00	3.00	1601898
.04/04	0.0089	N/A	2,8,C,Ct	30	4.00	5.00	3.00	1604459
.04/06	0.0089	0.01	2,Ct,Sq	30	2.94	3.38	3.00	1601784
.045/09	0.0095	N/A	1,4,8,A,Ct,X	90	4.09	4.70	3.00	1068570
.05/06	0.0100	0.69	1,4,8,Ct	N/A	2.75	3.25	3.00	121977
.06/04	0.0110	1.15	2,8,Ct	90	2.48	2.88	3.00	1600584
.06/04	0.0110	1.15	2,8,Ct,Sq	90	2.48	2.88	3.00	1600585
.06/06	0.0100	0.82	1,4,8,Ct	N/A	2.75	3.25	3.00	121931
.06/06	0.0100	0.82	2,8,Ct	90	2.94	3.38	3.00	1600586
.06/06	0.0100	0.82	2,8,Ct,Sq	90	2.94	3.38	3.00	1600587
.06/06	0.0100	N/A	1,4,8,A,X,Ct	N/A	2.75	3.25	3.00	122411
.06/09	0.0100	N/A	1,4,8,A,X,Ct	N/A	4.09	4.70	3.00	122477
.06/10	0.0100	N/A	1,4,8,A,X,Ct	N/A	4.88	5.55	3.00	122450

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% – 10%  
 B = 80% – 20%  
 C = 70% – 30%  
 D = 60% – 40%  
 X = Special Pattern Distribution

## *Section C 9*

# **A7AA Air-Assisted Airless Dome Nozzles**

## **Application**

Used for spraying highly viscous and difficult-to-atomize coatings and adhesives with the air-assisted airless process.

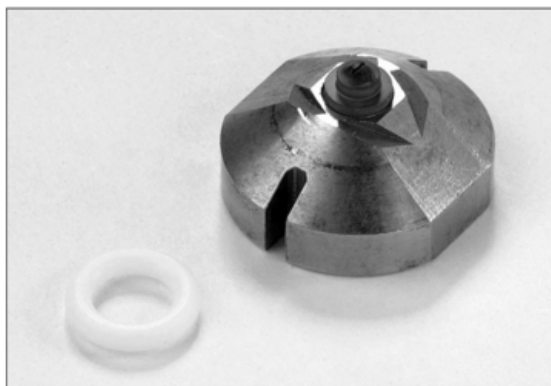
## **Spray Guns and Adapters**

Used only with the Nordson model A7AA air-assisted airless spray guns

- Part number for add-on to A7AA: 1087754

## **Features**

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths to accommodate most specialized applications



# A7AA Air-Assisted Airless Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.015/04	0.0055	0.29	1,Ct,Sq	N/A	0.75	1.09	1.00	1605282
.025/08	0.0071	0.27	1,Ct,Sq	N/A	1.37	1.50	1.00	1605281
.09/10	0.0134	0.79	1	N/A	10.00	12.00	10.00	1008794
.09/15	0.0134	N/A	1,8,C,Ct	N/A	6.05	6.95	3.00	1008797
.11/12	0.0148	0.81	1	N/A	12.00	14.00	10.00	1008795
.14/12	0.0167	1.03	1	N/A	12.00	14.00	10.00	1020015
.14/14	0.0167	0.90	1	N/A	14.00	16.00	10.00	1008796
.25/12	0.0224	N/A	1,Ct,X	N/A	12.00	14.00	10.00	1037100

### FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for  
automotive Pro-Flo gun

### PATTERN DISTRIBUTION

A = 90% – 10%  
B = 80% – 20%  
C = 70% – 30%  
D = 60% – 40%  
X = Special Pattern Distribution

## *Section C 10*

# Dual Dome Nozzles

## Application

Used primarily on inside spray applications for total coverage.

## Spray Guns and Adapters

Useable on any Nordson spray gun with flange nozzle mounting capability

## Features

- Custom sizes are available upon request
- Variable configurations of the two nozzles can be made depending on application requirements
- Available with a 10-degree or 15-degree angular offset between nozzles
- Commonly used with one nozzle tip rotated 3 degrees for better coverage





# Dual Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/PATTERN WIDTH		TIP A & TIP B FLOW TOTAL GPM	EQUIVALENT DIAMETER (IN.)		FOOT NOTES	PRE-ATOMIZATION DEVICE (P/N)	PATTERN TEST		SPRAY DISTANCE (IN.)	PART NUMBER	TIP B OFFSET ANGLE (DEGREES)	TIP B ADAPTER ANGLE (DEGREES)
TIP A	TIP B		TIP A	TIP B			MIN (IN.)	MAX (IN.)				
.04/06	.04/02	0.08	0.0089	0.0089	2,6,8,Ct	N/A	4.20	4.75	3	1077635		27.5
.06/06	.04/02	0.10	0.0109	0.0089	2,6,8,Ct	N/A	4.38	4.90	3	1023916		27.5
.08/06	.02/02	0.10	0.0126	0.0063	2,6,8,Ct	N/A	4.18	4.81	3	1091317	3	27.5
.08/06	.03/02	0.11	0.0126	0.0077	2,6,8,Ct	N/A	4.18	4.81	3	1091316	3	27.5
.08/06	.04/02	0.12	0.0126	0.0089	2,6,8,Ct	N/A	4.18	4.81	3	121975	3	27.5
.06/06	.06/02	0.12	0.0109	0.0109	2,6,8,Ct	N/A	4.56	4.81	3	1076932		27.5
.06/06	.08/02	0.14	0.0109	0.0126	2,6,8,Ct	N/A	4.56	5.00	3	1076933	3	27.5
.10/06	.05/02	0.15	0.0141	0.0100	2,6,8,Ct	N/A	4.56	5.31	3	121942		27.5
.12/06	.06/02	0.18	0.0155	0.0109	2,6,8,Ct	N/A	4.56	5.31	3	121946		27.5

**FOOTNOTES**

S= Short adapter  
 T= Tall adapter  
 Ct= Close tolerance flow  
 Sq=Square pattern

1= Type 1 Carbide  
 2= Type 2 Carbide  
 5= Heavy Center Pattern  
 6= Dual Tip  
 7= Dual Orifice (One Tip)  
 8= Container Nozzle Test Spec.  
 9= Tri Orifice (One Tip)  
 10=Type III Carbide  
 11=Adapter has no tip shields  
 12=Adapter has no notch  
 13=Flats machined into holder for automotive Pro-Flo gun

**PATTERN DISTRIBUTION**

A = 90% - 10%  
 B = 80% - 20%  
 C = 70% - 30%  
 D = 60% - 40%  
 X = Special Pattern Distribution

## *Section C 11*

# Hex Dome Nozzles

## Application

Used for coating the inside seams of welded cans.

## Spray Guns and Adapters

- A15A MEG<sup>®</sup> Inside Stripe

## Features

- Custom sizes are available upon request
- Available in a wide range of flow rates and pattern widths
- Superior performance and wear characteristics
- Small in size



# Hex Dome Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	RELATIVE FILM BUILD	FOOT NOTES	PRE- ATOMIZATION DEVICE (P/N)	PATTERN TEST			PART NUMBER
					MIN (IN.)	MAX (IN.)	DISTANCE	
.03/02	0.0077	0.96	1	N/A	2.00	4.00	10.00	122426
.0375/04	0.0087	N/A	1,8,Ct,X	N/A	2.09	2.41	3.00	179378
.06/02	0.0110	1.92	1,Ct	N/A	2.00	4.00	10.00	122530
.09/04	0.0134	1.73	1,Ct	N/A	4.00	6.00	10.00	122531
.12/06	0.0155	N/A	1,C,Ct	N/A	6.00	7.00	10.00	122425
.15/06	0.0173	N/A	1,A,Ct	N/A	6.00	8.00	10.00	122494
.15/07	0.0173	N/A	1,C,Ct,X	N/A	7.00	8.00	10.00	122410
.15/09	0.0173	N/A	1,C,Ct	N/A	9.00	11.00	10.00	122529
.19/09	0.0195	N/A	1,C,Ct	N/A	9.00	11.00	10.00	122432

## FOOTNOTES

S= Short adapter  
T= Tall adapter  
Ct= Close tolerance flow  
Sq=Square pattern

1= Type 1 Carbide  
2= Type 2 Carbide  
5= Heavy Center Pattern  
6= Dual Tip  
7= Dual Orifice (One Tip)  
8= Container Nozzle Test Spec.  
9= Tri Orifice (One Tip)  
10=Type III Carbide  
11=Adapter has no tip shields  
12=Adapter has no notch  
13=Flats machined into holder for  
automotive Pro-Flo gun

## PATTERN DISTRIBUTION

A = 90% - 10%  
B = 80% - 20%  
C = 70% - 30%  
D = 60% - 40%  
X = Special Pattern Distribution

## Section D 1

# Flange Conical Nozzles

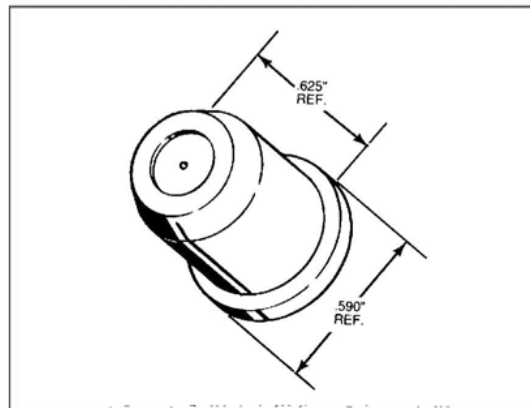
## Application

Used where a round pattern is desired, usually due to the configuration of the parts to be coated. Available in both solid and hollow patterns.

## Spray Guns and Adapters

Can be used with the following Nordson airless spray guns as well as most automatic and manual airless spray guns made by other manufacturers:

- A4B
- A10A
- A4A
- A7A
- A20A
- Pipe Lance Gun
- MEG<sup>®</sup>



# Flange Conical Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PART NUMBER
.04/06	0.0089	1,SOLID	022004
.04/09	0.0089	1,HOLLOW	020004
.06/09	0.0110	1,SOLID	022006
.06/12	0.0110	1,HOLLOW	020006
.09/09	0.0134	1,SOLID	022009
.09/11	0.0134	1,HOLLOW	020009
.11/08	0.0148	1,SOLID	022014
.11/14	0.0148	1,HOLLOW	020014
.20/07	0.0200	1,SOLID	022020
.20/08	0.0200	1,HOLLOW	020020
.30/10	0.0245	1,SOLID	022030
.30/14	0.0245	1,HOLLOW	020030
.45/14	0.0300	1,SOLID	022045
.45/17	0.0300	1,HOLLOW	020045
.68/17	0.0369	1,SOLID	022068
.68/20	0.0369	1,HOLLOW	020068
1.00/19	0.0447	1,SOLID	022100
1.00/20	0.0447	1,HOLLOW	020100

## FOOTNOTES

1= Type 1 Carbide  
 2= Type 2 Carbide  
 SOLID= Solid Pattern  
 HOLLOW=Hollow Pattern

## Section D 2

# Miniature Conical Nozzles

### Application

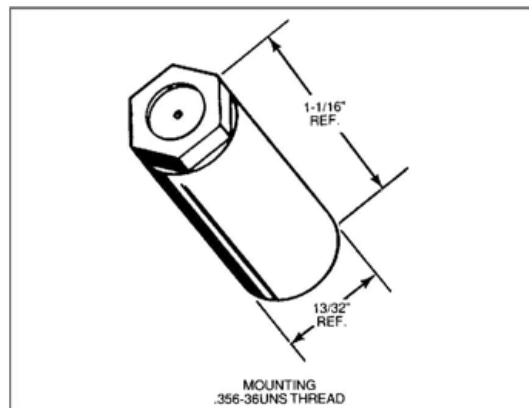
Used where a round pattern is desired, usually due to the configuration of the parts to be coated. Available in both solid and hollow patterns.

### Spray Guns and Adapters

Can be adapted for use on any spray gun that uses a flanged nozzle by using the unvalved or valved extensions listed in Section F.

### Features

Small size allows mounting on an extension for internal coating of tubes and containers.



## Miniature Conical Nozzle List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	FOOT NOTES	PART NUMBER
.04/08	0.0089	1,SOLID	023004
.04/08	0.0089	1,HOLLOW	021004
.06/11	0.0110	1,SOLID	023006
.06/13	0.0110	1,HOLLOW	021006
.09/11	0.0134	1,SOLID	023009
.09/11	0.0134	1,HOLLOW	021009
.11/10	0.0148	1,SOLID	023014
.11/12	0.0148	1,HOLLOW	021014
.20/08	0.0200	1,SOLID	023020
.20/11	0.0200	1,HOLLOW	021020
.30/10	0.0245	1,SOLID	023030
.30/13	0.0245	1,HOLLOW	021030
.45/15	0.0300	1,SOLID	023045
.45/18	0.0300	1,HOLLOW	021045
.68/18	0.0369	1,SOLID	023068
.68/21	0.0369	1,HOLLOW	021068
1.00/19	0.0447	1,SOLID	023100
1.00/21	0.0447	1,HOLLOW	021100

### FOOTNOTES

1= Type 1 Carbide  
 2= Type 2 Carbide  
 SOLID= Solid Pattern  
 HOLLOW=Hollow Pattern

## Section E 1

# CO Plates

### Application

CO plates are used in conjunction with the Can Works and Flow Sentry systems. They are placed in the fluid passage of an A14A, A15A, A20A, iTRAX, MEG II, or E201 spray gun to produce a calibrated pressure drop, which the system monitors.

### Spray Guns and Adapters

CO plates are used with the following Nordson spray gun models:

Synthetic Type	Carbide Type
MEG	A14A
E201	A15A
	A20A





# CO Plate List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	CO PLATE TYPE	FOOT NOTES	DESIGNATION NUMBER	PART NUMBER
.0038	0.0028	Carbide	2,Ct	N/A	100848
.0050	0.0032	Carbide	1,Ct	N/A	111742
.0075	0.0039	Carbide	2,Ct	N/A	100849
.0100	0.0045	Carbide	2,Ct	N/A	100850
.0100	0.0045	Carbide	3,Ct	N/A	122389
.0150	0.0055	Carbide	1,Ct	N/A	111743
.0180	0.0060	Synthetic	Ct	N/A	1608048
.0200	0.0063	Carbide	1,Ct	N/A	111744
.0245	0.0070	Synthetic	Ct	N/A	1608049
.0310	0.0079	Carbide	1,Ct	015	247707
.0310	0.0079	Carbide	2,Ct	N 01	714923
.0310	0.0079	Carbide	3,Ct	N/A	118523
.0320	0.0080	Synthetic	Ct	015	337987
.0390	0.0088	Carbide	1	02	247708
.0390	0.0088	Carbide	3,Ct	N/A	121962
.0390	0.0088	Carbide	2,Ct	N 02	714924
.0405	0.0090	Synthetic	Ct	020	337988
.0480	0.0098	Carbide	1	025	247709
.0480	0.0098	Carbide	2	N 02	714925
.0480	0.0098	Carbide	3,Ct	N/A	121745
.0500	0.0100	Synthetic	Ct	025	337989
.0605	0.0110	Synthetic	Ct	030	337990
.0630	0.0112	Carbide	1	03	247710
.0630	0.0112	Carbide	3,Ct	N/A	121744
.0910	0.0135	Carbide	1	04	247711
.0910	0.0135	Carbide	2	N 04	714927
.0910	0.0135	Synthetic	Ct	040	337991
.0910	0.0135	Carbide	3,Ct	N/A	119657
.1180	0.0154	Carbide	1	05	247712
.1180	0.0154	Carbide	2	N 05	714928
.1186	0.0155	Synthetic	Ct	050	337992
.1200	0.0155	Carbide	3,Ct	N/A	121787
.1420	0.0169	Carbide	1	06	247713
.1420	0.0169	Carbide	2	N 06	714929
.1420	0.0169	Carbide	3,Ct	N/A	118524
.1445	0.0170	Synthetic	Ct	060	337993
.1930	0.0198	Carbide	1	075	247714
.1960	0.0198	Carbide	2	N 07	714930
.1960	0.0198	Carbide	3,Ct	N/A	121963
.2000	0.0200	Synthetic	Ct	075	337994

## FOOTNOTES

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Type 3 Carbide  
 Ct= Close Tolerance

## CO PLATE TYPE

Synthetic  
 Carbide

# CO Plate List

Refer to *Reading the Nozzle Charts* on page A 1-26 for explanations of the data in each column.

REFERENCE SIZE FLOW/ PATTERN WIDTH	EQUIVALENT DIAMETER (IN.)	CO PLATE TYPE	FOOT NOTES	DESIGNATION NUMBER	PART NUMBER
.2400	0.0219	Carbide	1	09	247715
.2400	0.0219	Carbide	2	N 09	714931
.2400	0.0219	Carbide	3,Ct	N/A	121964
.2420	0.0220	Synthetic	Ct	090	337995
.2880	0.0240	Carbide	1	105	247716
.2880	0.0240	Synthetic	Ct	105	337996
.2880	0.0240	Carbide	3,Ct	N/A	121872
.3350	0.0259	Carbide	1	12	247717
.3350	0.0259	Carbide	2	N 12	714933
.3350	0.0259	Carbide	3,Ct	N/A	121873
.3380	0.0260	Synthetic	Ct	120	337997
.3930	0.0280	Carbide	1	14	247718
.3930	0.0280	Carbide	2	N 14	714934
.3930	0.0280	Synthetic	Ct	140	337998
.3930	0.0280	Carbide	3,Ct	N/A	121965
.4805	0.0310	Synthetic	Ct	160	337999
.4850	0.0311	Carbide	1	16	247719
.4850	0.0311	Carbide	2	N 16	714935
.5000	0.0316	Carbide	3,Ct	N/A	121786
.6000	0.0346	Carbide	1	20	247720
.6000	0.0346	Carbide	2	N 20	714936
.6000	0.0346	Carbide	3,Ct	N/A	121966
.6128	0.0350	Synthetic	Ct	200	338000
.7880	0.0397	Carbide	1	25	247721
.7880	0.0397	Carbide	2	N 25	714937
.7880	0.0397	Carbide	3,Ct	N/A	121967
.8000	0.0400	Synthetic	Ct	250	338001
.9670	0.0440	Carbide	1	30	247722
.9670	0.0440	Carbide	2	N 30	714938
.9670	0.0440	Synthetic	Ct	300	338002
.9670	0.0440	Carbide	3,Ct	N/A	121968

## FOOTNOTES

1= Type 1 Carbide  
 2= Type 2 Carbide  
 3= Type 3 Carbide  
 Ct= Close Tolerance

## CO PLATE TYPE

Synthetic  
 Carbide



# Section F 1

## Accessories

### Unvalved Extensions

#### *Unvalved Flange Mount Nozzle Extensions*

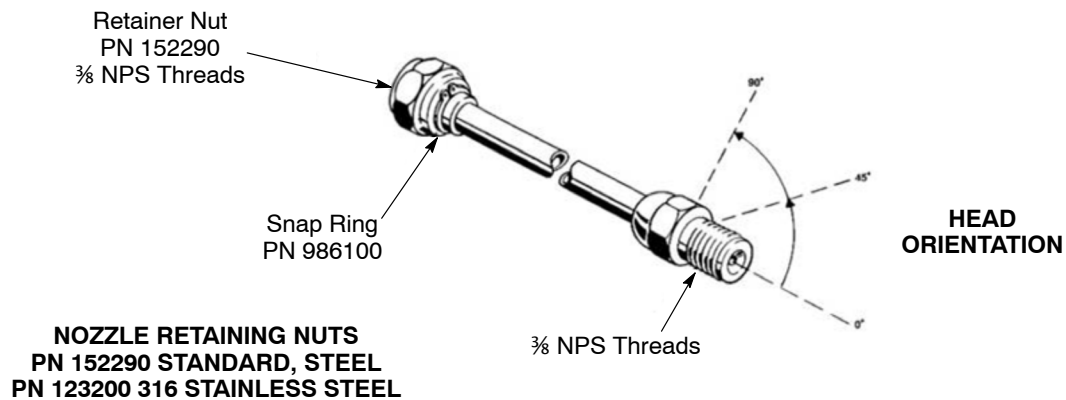


Figure F 1-10 Unvalved Flange Mount Nozzle Extensions

Part Number	Description
040 004	Extension, 0°, 4" (102 mm)
040 006	Extension, 0°, 6" (152 mm)
040 012	Extension, 0°, 12" (305 mm)
040 024	Extension, 0°, 24" (610 mm)
040 306	Extension, 45°, 6" (152 mm)
040 318	Extension, 45°, 18" (457 mm)
040 603	Extension, 90°, 3" (76 mm)
040 606	Extension, 90°, 6" (152 mm)
040 612	Extension, 90°, 12" (305 mm)

## Unvalved Miniature Conical Nozzle Extensions

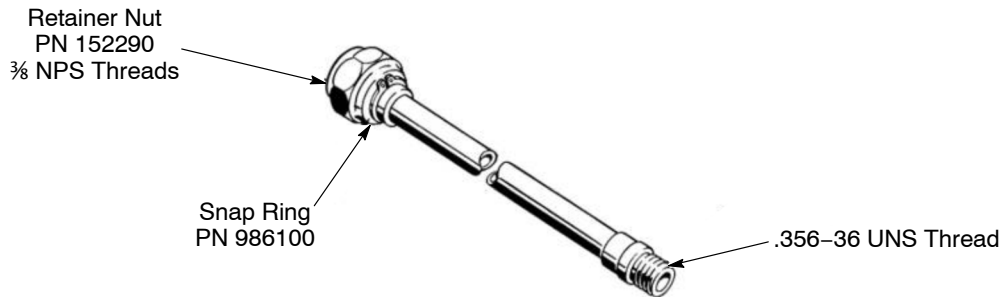


Figure F 1-11 Unvalved Miniature Conical Nozzle Extension

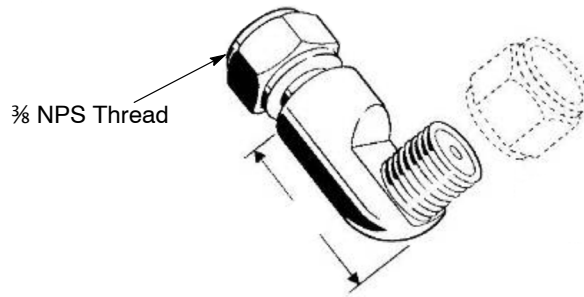
Part Number	Description
042 006	Extension, Min. Cone, 6" (152 mm)

## Nozzle Adapters

### Flange Mount Nozzle 90-Degree Adapter

This adapter can be used with any of the flange mount nozzles shown in sections B3, B11, B12, C4, C5, C6, C7, C10, C11, or D1.

ADAPTER PN 043 010



**USE NOZZLE RETAINING NUT  
PN 152290 STANDARD OR  
PN 123200 STAINLESS STEEL  
-ORDER SEPARATELY-**

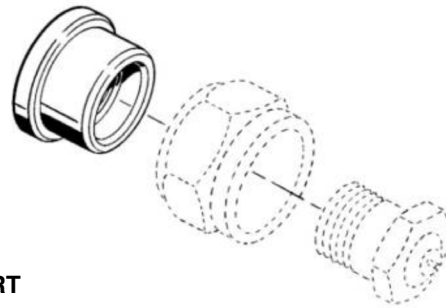
Figure F 1-12 90° Flange Mount Nozzle Adapter

## Flange Mount Adapter for Insert Nozzles

This adapter can be used with any of the insert nozzles show in sections B5 or C8.

ADAPTER PN 028 076

ADAPTER THREADED FOR INSERT  
NOZZLE –  $\frac{3}{8}$ -32 NEF THREAD



USE NOZZLE RETAINING NUT  
PN 152290 STANDARD OR  
PN 123200 STAINLESS STEEL  
-ORDER SEPARATELY-

Figure F 1-13 Insert-to-Flange Mount Adapter

## Angle Adapter for Insert Nozzles

This adapter is used to adapt the insert nozzles in sections B5 and C8 for use on flange mount spray guns. It is available in the angles shown below.

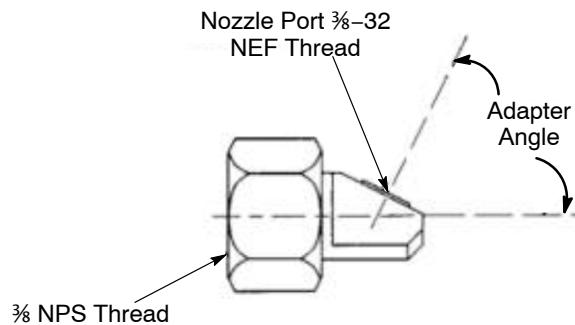
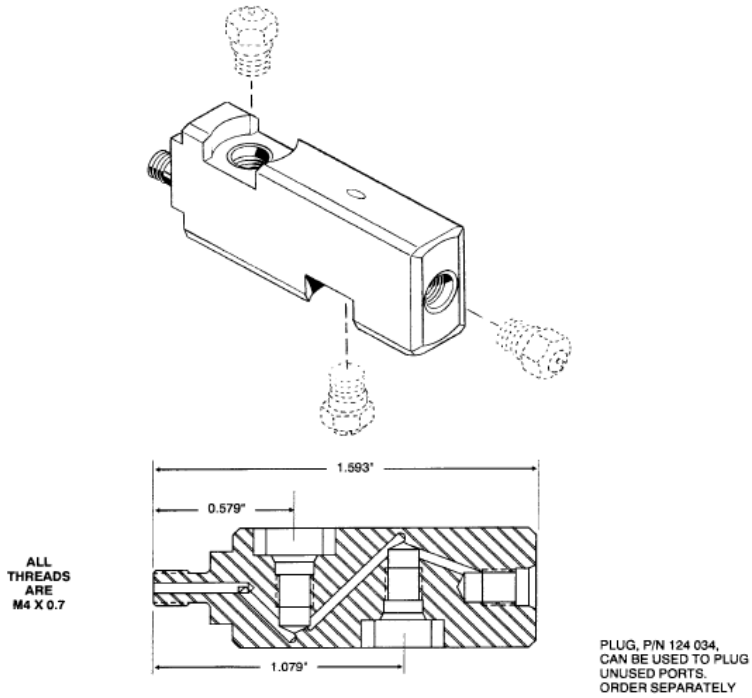


Figure F 1-14 Angle Adapters for Insert Type Nozzles (60° Adapter Shown)

Part Number	Description
092 000	Adapter, Nozzle, 90°, 1" (25.4 mm) Long
092 005	Adapter, Nozzle, 80°, 1" (25.4 mm) Long
092 043	Adapter, Nozzle, 60°, 1" (25.4 mm) Long
092 022	Adapter, Nozzle, 30°, 19/32" (15 mm) Long
092 055	Adapter, Nozzle, 15°, 21/32" (16.6 mm) Long

### 3-Port Miniature Insert Nozzle Adapter

This adapter can hold three miniature insert nozzles (sections B6 and C9) and is used with the *Unvalved 6-inch Miniature Insert Nozzle Extension* on page F3.

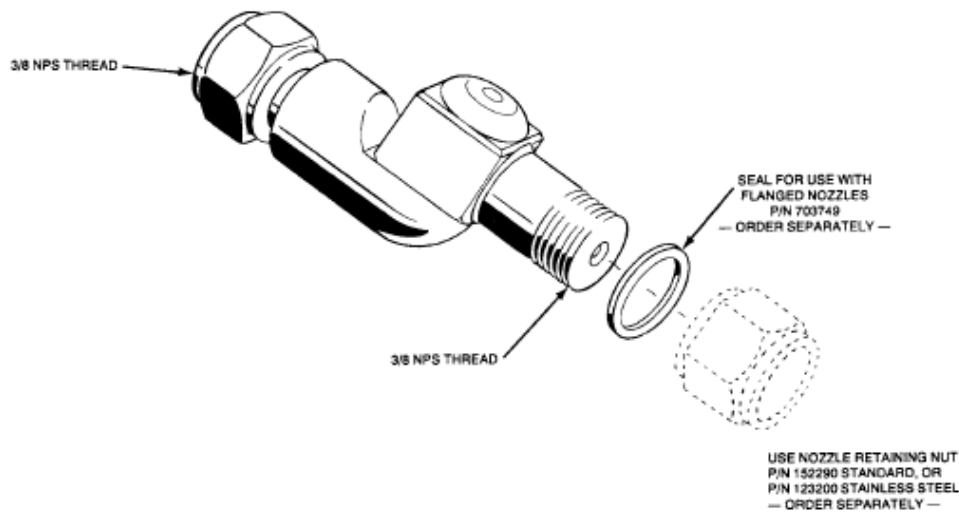


Part Number	Description
123 927	Adapter, Mini Insert, 3-port, Met.

## Swivel Heads – Flange Mount Nozzles

Swivel heads can be used on any airless automatic spray guns that use flange mount nozzles. With a swivel head attached to a spray gun, spraying can be done at various angles to the center line of the spray gun. Swivel heads are available with detents to ensure the set angle is held during spraying operations.

The nozzle is secured to the swivel head with either a standard or a stainless, anti-fouling retainer nut. An optional seal ring is also available.



Part Number	Description
043 000	Swivel Head
704 995	Swivel Head with Detent
713 270	Swivel Head, Short, with 15° Detents



# Nozzle Cleaning Tools and Procedures

## Tools

Nozzle brushes, broaches, and probes are available for cleaning nozzles, restrictors, and T-plates. Refer to the parts list on page F 1-7.

- Nozzle cleaning brush: a soft-bristle brush with a wooden handle
- Broaches: machined steel available in vials of 10 in 2 sizes:
  - a. 0.003" for use with 0.3 to 0.9 flow rate nozzles
  - b. 0.008" for use with .14 and above flow rate nozzles
- Probes: thin wire probes used with a pin vise. Available in four sizes:
  - a. 0.003" for 0.3 and 0.4 flow rate nozzles
  - b. 0.007" for 0.6 and .30 flow rate nozzles
  - c. 0.011" for .45 and above flow rate nozzles
  - d. 0.014" for large flow rate nozzles used with sealers, mastics, glue, etc.

The probes are sold in vials of 25, and a kit is available which includes a pin vise and 0.003", 0.007", and 0.011" probes.

An ultrasonic cleaner should be used along with broaches and pins to clean airless nozzles.

## Cleaning Procedures

1. Remove the nozzle and T-plate or restrictor from the spray gun and separate. Soak the nozzle and T-plate or restrictor in solvent. Use an ultrasonic cleaner to loosen cured material.
2. Use a nozzle cleaning brush to clean the nozzle and T-plate or restrictor.  
**NOTE: DO NOT** use a brush with metallic bristles, as the carbide tip may be damaged.
3. Examine the nozzle orifice with a magnifying glass. If material remains, use a broach or probe to remove. Carefully insert the broach or probe into the orifice against the direction of fluid flow.  
**NOTE: DO NOT** twist the broach or probe or try to clean the orifice with a sawing motion.
4. Using an OSHA-approved blow gun, remove loosened contaminants by blowing air through the orifice, against the direction of fluid flow.



Figure F 1-15 Nozzle Cleaning Kit, P/N 901934

## Probes

Part	Description
901924	PROBE, Vial (0.0014")
901934	KIT, nozzle cleaning
901916	<ul style="list-style-type: none"> <li>• VISE, pin</li> </ul>
901935	<ul style="list-style-type: none"> <li>• PROBE, vial (0.003")</li> </ul>
901922	<ul style="list-style-type: none"> <li>• PROBE, vial (0.007")</li> </ul>
901923	<ul style="list-style-type: none"> <li>• PROBE, vial (0.011")</li> </ul>

## Broaches

Part	Description
094000	BROACH, nozzle (0.003")
094002	BROACH, nozzle (0.008")

## Nozzle Brush

Part	Description
901905	BRUSH, nozzle

## Nozzle Retaining Nuts

Nozzle retaining nuts are used with flange mount nozzles. Threads are  $\frac{3}{8}$  NPS. The stainless steel nut has a thinner retaining flange that allows nozzles with short adapters to project slightly farther from the nut, preventing paint from collecting on the nut and dripping off onto the work piece.

There is a metal-to-metal seal between flanged nozzles and the spray gun. The sealing surfaces must be kept clean and free of dents and burrs. A maximum torque of 20–25 ft-lb should be adequate to provide a good seal. Do not over tighten; this can result in distortion of the nozzle nut.

Part	Description
152290	NUT, retaining
123200	NUT, nozzle, thin flange, anti-fouling
1607645	NUT, nozzle, anti-foul, stainless steel, close tolerance

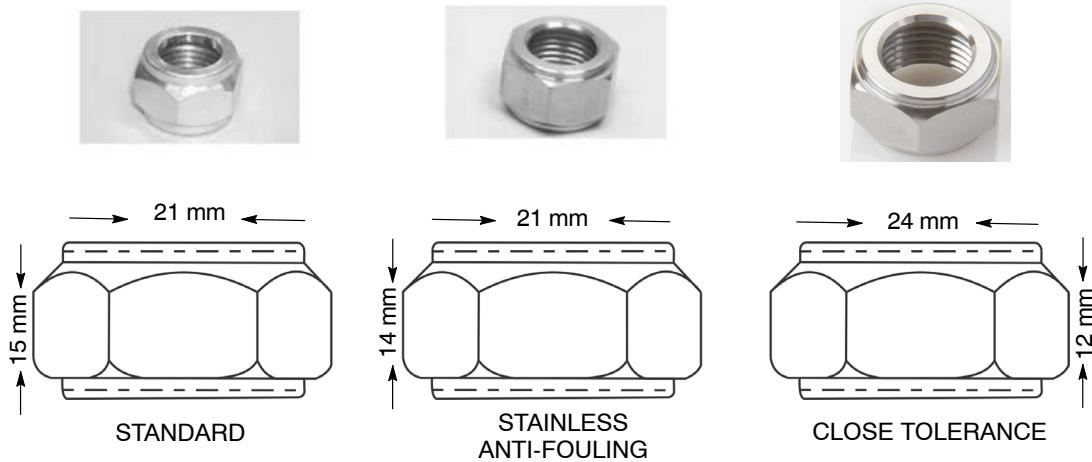


Figure F 1-16 Nozzle Retaining Nuts

## Nozzle Disc Filters

Nozzle disc filters are intended to be used as a secondary filter directly behind flange-type nozzles in applications where particles are causing the nozzles to plug. They are available in several mesh sizes. The filters are packaged in containers of 10 pieces.



Figure F 1-17 Nozzle Disc Filters

Part	Description
112193	FILTER, disc, .002"
165630	FILTER, disc, .006"
165632	FILTER, disc, .009"

## Container Nozzle Wrench

### Nozzle Wrench



### Multipurpose Nozzle Wrench

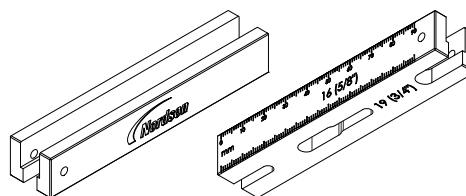


Figure F 1-18 Container Nozzle Wrench

Part	Description	Note
163945	WRENCH, nozzle	A
1618632	KIT, wrench, nozzle, multipurpose	B
<p>NOTE A: Used specifically for tapered container nozzles and CleanSpray nozzles.</p> <p>B: Used for the following nozzles: tapered, cross-cut, minimum cavity, CleanSpray, and short press-in. Additional features include 16 mm (5/8-in) width and 19 mm (3/4-in) width for checking nozzle to can cut edge distance. Ruler markings included in mm scale to help with additional can dimension setup.</p>		



# Section G1

## Appendix

### Viscosity Conversion Chart

Legend for Viscosity Measuring Devices			
<b>A</b>	Zahn #2		<b>H</b> DuPont Parlin #7
<b>B</b>	Zahn #3		<b>J</b> DuPont Parlin #10
<b>C</b>	Zahn #4		<b>K</b> Fisher #1
<b>D</b>	Zahn #5		<b>L</b> Fisher #2
<b>E</b>	Ford Cup #3		<b>M</b> Gardner-Holdt Bubble
<b>F</b>	Ford Cup #4		<b>N</b> Krebs Units KU
<b>G</b>	Sears Craftsman		<b>O</b> Seibolt Universal SSU

Poise	Centi-poise	A	B	C	D	E	F	G	H	J	K	L	M	N	O
0.1	10	16					5		27	11	20		A-4		60
0.15	15	17					8		30	12	25		A-3		80
0.2	20	18				12	10		32	13	30	15			100
0.25	25	19				15	12		37	14	35	17	A-2		130
0.3	30	20				19	14		43	15	39	18	A-1		160
0.4	40	22				25	18	19	50	16	50	21	A		210
0.5	50	24				29	22	20	57	17		24		30	260
0.6	60	27				33	25	21	64	18		29	B	33	320
0.7	70	30				36	28	23		20		33		35	370
0.8	80	34				41	31	24		22		39	C	37	430
0.9	90	37	10			45	32	26		23		44		38	480
1.0	100	41	12	10		50	34	27		25		50	D	40	530
1.2	120	49	14	11		58	41	31		30		62	E	43	580
1.4	140	58	16	13		66	45	34		32			F	46	690
1.6	160	66	18	14			50	38		37			G	48	790
1.8	180	74	20	16			54	40		41				50	900
2.0	200	82	23	17	10		58	44		45			H	52	1000
2.2	220		25	18	11		62						I	54	1100
2.4	240		27	20	12		65						J	56	1200
2.6	260		30	21	13		68							58	1280
2.8	280		32	22	14		70						K	59	1380
3.0	300		34	24	15		74						L	60	1475
3.2	320		36	25	16								M		1530
3.4	340		39	26	17								N		1630

*continued...*

**G1-2** Appendix

Poise	Centi-poise	A	B	C	D	E	F	G	H	J	K	L	M	N	O
3.6	360		41	28	18								O	62	1730
3.8	380		43	29	19										1850
4.0	400		46	30	20		107						P	64	1950
4.2	420		48	32	21										2050
4.4	440		50	33	22								Q		2160
4.6	460		52	34	23								R	66	2270
4.8	480		54	36	24									67	2380
5.0	500		57	37	25		133						S	68	2480
5.5	550		63	40	27								T	69	2660
6.0	600		68	44	30								U	71	2900
7.0	700			51	35									74	3375
8.0	800			58	40									77	3880
9.0	900			64	45		199						V	81	4300
10.0	1000				49								W	85	4600
11.0	1100				55									88	5200
12.0	1200			69										92	5620
13.0	1300				64		375						X	95	6100
14.0	1400													96	6480
15.0	1500													98	7000
16.0	1600													100	7500
17.0	1700													101	8000
18.0	1800												Y		8500
19.0	1900														9000
20.0	2000													103	9400
21.0	2100														9850
22.0	2200														10300
23.0	2300												Z	105	10750
24.0	2400													109	11200
25.0	2500												Z-1	114	11600
30.0	3000														

Water = 1 centipoise; Filter/latex/vinyls = 80–140 centipoise; Wash primers = 10–15 centipoise;  
Oil SAE 30 = 190 centipoise; Sealers/primers = 20–25 centipoise; Oil trans SAE 90 = 550 centipoise;  
Lacquers (thinned/enamels/varnishes) = 30–70 centipoise; Lacquer (unthinned) = 1100 centipoise

# Conversion Factors

## Volume

From	To	Multiply by:
<b>Cubic Centimeters</b>	Gallons	0.0002642
	Cubic Inches	0.06102
	Liters	0.001
<b>Gallons</b>	Cubic Centimeters	3785.6
	Cubic Inches	231.0
	Liters	3.785
<b>Liters</b>	Cubic Centimeters	1000.0
	Gallons	0.2642
	Cubic Inches	61.03

## Flow

From	To	Multiply by:
<b>Gallons/min.</b>	ml/sec.	63.098
	ml/min.	3785.3
	Liters/min.	3.785
	Gallons/hr.	60.0
<b>ml/min.</b>	ml/sec.	0.01667
	Liters/min.	0.001
	Gallons/min.	0.0002642
	Gallons/hr.	0.01585
<b>Gallons/hr.</b>	ml/sec.	1.0515
	ml/min.	63.088
	Liters/min.	0.0631
	Gallons/min.	0.01667
<b>ml/sec.</b>	Gallons/min.	0.01585
	ml/min.	60.0
	Liters/min.	0.06
	Gallons/hr.	0.9511
<b>Liter/min.</b>	ml/sec.	16.667
	ml/min.	1000.0
	Gallons/min.	0.2642
	Gallons/hr.	15.851



## Pressure

From	To	Multiply by:
<b>Lbs/Sq. In. (PSI)</b>	Bars	0.06895
	Inches of Water	27.681
	Atmospheres	0.06805
	Kg/cm <sup>2</sup>	0.07031
	kPa	6.895
<b>kPa</b>	Lbs/Sq. In. (PSI)	0.1450
	Bar	0.01
	Atmospheres	0.00987
	Kg/cm <sup>2</sup>	0.01020
	Inches of Water	4.0147
<b>Bars</b>	Lbs/Sq. In. (PSI)	14.504
	Inches of Water	401.47
	Atmospheres	0.9869
	Kg/cm <sup>2</sup>	1.0197
	kPa	100.0
<b>Atmospheres</b>	Lbs/Sq. In. (PSI)	14.696
	Kg/cm <sup>2</sup>	1.0332
	Bar	1.0132
	Inches of Water	406.79
	kPa	101.32
<b>Kg/cm<sup>2</sup></b>	Lbs./Sq. In. (PSI)	14.223
	Inches of Water	393.71
	Atmospheres	0.9678
	Bar	0.9807
	kPa	98.07
<b>Inches of Water</b>	Lbs./Sq. In. (PSI)	0.03613
	Kg/cm <sup>2</sup>	0.002540
	Atmospheres	0.002458
	Bar	0.002491
	kPa	0.2491

## Length

From	To	Multiply by:
<b>Inches</b>	Millimeters	25.4
	Centimeters	2.54
<b>Millimeters</b>	Inches	0.0394
<b>Centimeters</b>	Inches	0.3937

**Temperature Conversion**

Fahrenheit to Centigrade:  $T_C = \frac{5}{9}(T_F - 32)$

Centigrade to Fahrenheit:  $T_F = \frac{9}{5}T_C + 32$

**Decimal Equivalents**

Fraction	Decimal Equiv.	Fraction	Decimal Equiv.
1/32	.0312	1/2	.5000
1/16	.0625	9/16	.5625
1/8	.1250	5/8	.6250
3/16	.1875	11/16	.6875
1/4	.2500	3/4	.7500
5/16	.3125	13/16	.8125
3/8	.3750	7/8	.8750
7/16	.4375	15/16	.9375

**Screen Mesh-Inch-Micron Equivalents**

Screen Mesh	Inches	Microns
400	0.0015	35
300	0.002	51
200	0.003	77
140	0.004	100
120	0.005	125
80	0.007	175
60	0.010	280
50	0.014	350
40	0.017	420
30	0.020	550

