

A Guide to Safe and Effective Sanitation

Innovative Spray Products for Food and Pharmaceutical Processing



Spray Control Spray Analysis Spray Fabrication

Spray Sanitation Applications

Automated

Tank Washing

Equipment and Conveyor Cleaning

(((



Conveyor Cleaning and Blow Off

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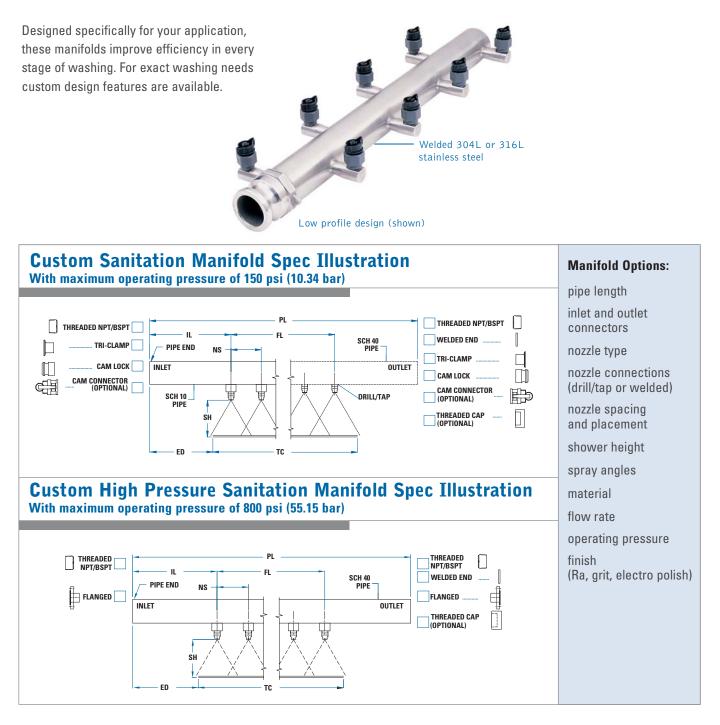
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Headers and Manifolds

for precision washing of conveyors, equipment and product

Spraying Systems Co. manufactures fixed or oscillating spray headers and manifolds for a wide variety of applications. For applications that are out of the ordinary, we offer custom fabrication to meet your exacting needs.



Nozzles

for superior wash performance in fixed manifolds or handheld spraying

48099 Adjustable WashJet[®] Nozzle

- Twisting cap varies spray
- Spray angles: 0° 80°
- Variable spray patterns from a solid stream to a flat fan
- 1/8" and 1/4" NPT or BSPT (F)
- Maximum pressure: 3000 psi (200 bar)
- Material: brass or stainless steel
- Capacity range: .55 to 19.1 gpm (2.0 to 66 l/min)



Solid Stream



Flat (even)

WashJet® Nozzles

- High impact at high pressure
- Spray angles: 0° 80°
- Solid stream or flat even spray pattern
- 1/8" and 1/4" NPT or BSPT (M)
- Pressure range: 300 psi to 4000 psi (20 to 275 bar)
- Material: stainless steel
- Capacity range: .28 to 13.0 gpm (1.0 to 48 l/min)



Solid Stream



Flat (even)

FlatJet® Nozzles

- High impact at low pressure
- Spray angles: 15° 50°
- 1/8", 1/4", 3/8", 1/2" and 3/4" NPT or BSPT (M or F)
- Narrow angle flat fan spray pattern
- Sharply defined spray edges
- Pressure range: 15 psi to 150 psi (1 bar to 10 bar)
- Material: brass or stainless steel
- Capacity range: .40 to 20 gpm at 40 psi (1.8 to 91 l/min at 4 bar)



Flat Spray (deflected type)



Medium impact with even coverage

VeeJet[®] Nozzles

- Spray angles: 0° 110°
- 1/8", 1/4", 3/8" and 1/2" NPT or BSPT (M or F)
- Solid stream or flat spray pattern
- Tapered flat fan spray pattern for even overlap coverage
- Pressure range: 5 psi to 500 psi (.3 bar to 35 bar)
- Material: brass or stainless steel
- Nozzle strainer available
- Capacity range: .012 to 88 gpm (.05 to 335 l/min)



Solid Stream



Flat Spray (tapered)



28500R Tank Washing Nozzles

Features and Benefits

- Multiple orifice configuration combined with a rotating motion provides exceptional performance in low-pressure cleaning and rinsing applications
- · Meets 3A standards for sanitary environments
- Excellent solution for clean-in-place systems no external power source is necessary
- · Tapered interior surfaces are self-draining
- TEFLON[®] fluoropolymer resin construction withstands harsh chemical and corrosive environments
- Maximum operating temperature: 200° F (93° C) Request Bulletin 503B for more information.

*TEFLON® is a registered trademark of E.I. DuPont de Nemours and Company

Coverage Type

Threadless design and stainless steel locking pin provide better seal and prevent contamination



Ordering Information

Conforms to 3A

78-01

28500R Nozzle			
28500 E - R -	- 3/4 -	- 23 -	- TEF
 Nozzle Coverage Removeable	Inlet	l Capacity	ا Material
Type Type Spray Head		Size	Code

Spray Angle	180° Down	270° Up	270° Down	360°
Type of Coverage (Direct Impact)	B	С	D	E

Performance Data

				Inlet Conn.		Са	pacity gpm (I/mi	n)	
Nozzle No.	in.	(mm)		in. (Eur)	10 psi (.7 bar)	20 psi (1.5 bar)	30 psi (2 bar)	40 psi 3 (bar)	50 psi (3.5 bar)
28500 (B thru E)-R-	3/4	(20)	-18-TEF		9 (34)	12.7 (50)	15.6 (58)	18 (71)	20.1 (77)
28500 (B thru E)-R-	3/4	(20)	-23-TEF	3/4"	11.5 (44)	16.3 (64)	19.9 (74)	23 (91)	26 (99)
28500 (B thru E)-R-	3/4	(20)	-32-TEF	(D20)	16 (61)	22.6 (89)	27.7 (103)	32 (126)	35.8 (136)
28500 (B thru E)-R-	3/4	(20)	-46-TEF		23 (88)	32.5 (128)	39.8 (148)	46 (181)	51.4 (196)
28500 (B thru E)-R-	1	(25)	-33-TEF		16.5 (63)	23 (92)	29 (106)	33 (131)	37 (141)
28500 (B thru E)-R-	1	(25)	-50-TEF	1"	25 (95)	35.4 (140)	43.3 (161)	50 (197)	55.9 (213)
28500 (B thru E)-R-	1	(25)	-70-TEF	(D25)	35 (133)	49.5 (195)	60.6 (226)	70 (276)	78.3 (298)
28500 (B thru E)-R-	1	(25)	-90-TEF		45 (172)	63.6 (251)	77.9 (290)	90 (355)	100.6 (384)
28500 (B thru E)-R-	1-1/2	(40)	-33-TEF	1-1/2"	27 (101)	37 (148)	46 (171)	53 (209)	59 (226)
28500 (B thru E)-R-	1-1/2	(40)	-50-TEF	(D40)	35 (132)	49 (185)	61 (231)	70 (265)	78 (295)

Dimensions

	Nozzle Inlet ID	Inlet Dia. (mm)	X Dia. (mm)	Y (mm)	Z (mm)
	3/4" (DN20)	.76" (22.2)	2-1/4" (57.2)	2-5/8" (66.6)	3/8" (9.5)
×	1" (DN25)	1.02" (28.2)	2-3/4" (69.8)	2-7/8" (73)	1/2" (12.7)
	1-1/2" (DN40)	1.52" (40.2)	3-5/8" (92)	3-5/8" (92)	3/4" (19)

Compact Rokon Nozzle

Features and Benefits

- Delivers total impact, constant speed, fluid driven tank wash
- Ideal for high-temperature tank cleaning and sanitation
- Meets 3A standards for sanitary environments
- Rotational speed varies with pressure, 2-30 RPM

Specifications

- Maximum tank size diameter: 12' (3.7 m)
- Capacity range: 2.7 to 34 gpm (10 to 128 l/min)
- Recommended pressure range: 30 to 175 psi (2 to 12 bar)
- Maximum pressure: 290 psi (20 bar)
- Maximum operating temperature: 302° F (150° C)
- Tank opening size: 1-1/4" (32 mm)
- Spray coverage: 360° direct impact
- Material: 316L stainless steel



Ordering Information

Compact Rokon Rotary Tank Washing Nozzle

D41800E — 3	.9 — 316L -	- 13.6 — 3A
Nozzle	Material	Capacity
Туре	Code	Size

Performance Data

Nozzle Inlet				Capacity gmp (I/min)	
Connections	Capacity Size	20 psi (1.4 bar)	40 psi (3 bar)	100 psi (5 bar)	150 psi (10 bar)	230 psi (16 bar)
	3.2	2.7 (10)	3.5 (14)	5.3 (17)	6.5 (24)	7.9 (30)
3/4"	4.5	3.4 (13)	4.8 (19)	7.5 (24)	9.1 (34)	11.3 (43)
(DN19)	9.9	7.2 (27.3)	10.1 (40)	16.1 (52)	19.7 (73)	24 (93)
-	13.6	9.9 (37.7)	14 (55)	22 (71)	27 (101)	34 (128)

Dimensions and Weights

C	Inlet Connections	A (mm)	B dia. (mm)	C dia. (mm)	Net Weight Ibs (kg)
	3/4" (DN19)	3" (78)	1-3/16" (30)	.13" (3.3)	.26 (0.13)
84 7					



Fixed Spray Balls

Features and Benefits

- · Ideal for rinsing and low-pressure washing
- Suitable for CIP no moving parts
- Low maintenance
- Deliver reliable, consistent performance
- Work well with a wide array of CIP chemicals
- Sanitary design with self-cleaning retaining pin inlet connection

Specifications

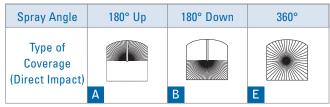
- Maximum tank size diameter: 18' (5.5 m)
- Capacity: 22 to 141 gpm (83 to 534 l/min)
- Recommended pressure range: 15 to 30 psi (1.03 to 2.06 bar)
- Spray coverage: 180° and 360° direct impact
- Materials: 316L stainless steel



Ordering Information

Fixed S	ipray Ba	lls		
6322	5 B -	- 3/4 -	- 22 —	316L
Unit Type	Spray Coverage	Inlet Connection	Capacity Size	Material Code

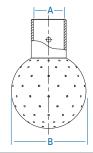
Coverage Type



Performance Data

Ball	Capacity gpm (I/min)			
Type/Size	15 psi (1.03 bar)	22 psi (1.52 bar)	30 psi (2.06 bar)	
63225 - 3/4"	22 (83)	27 (102)	31 (117)	
63225 – 1"	32 (121)	39 (148)	45 (170)	
63225 – 2"	100 (379)	121 (458)	141 (534)	

Dimensions



Inlet Connection	Inlet Size A (mm)	Ball Dia. B (mm)	Net Weight Ibs (kg
3/4"	.78" (19.81)	2" (51)	.24 (.11)
1"	1.03" (26.16)	2-1/2" (64)	.46 (.21)
2"	2.03" (51.56)	3-3/4" (95)	1.42 (.65)

Ultra Clean BCFT and QFT Tank Machines

Features and Benefits

- Delivers high impact fluid driven tank washing
- · Ideal for cleaning tanks in a hygienic environment
- Four nozzle design for faster cleaning cycles
- Rounded shape eliminates deposit traps ensuring tank sterility
- · Suitable for CIP or portable tank cleaning
- Lubricant-free flow through lowers risk of cross contamination
- UCBCFT model is easily modified with short or long nozzles

Specifications

- Capacity: 14 to 168 gpm (53 to 636 l/min)
- Pressure range: 30 to 300 psi (2 to 21 bar)
- Maximum operating temperature: 300° F (149° C)
- Minimum tank opening size: UCBCFT short nozzle: 4.5" (113 mm) UCBCFT long nozzle: 4.9" (125 mm) UCQFT long nozzle: 6.5" (163 mm)
- Spray coverage: 360° direct impact
- Materials: 316 stainless steel with wetted
 components of food-grade material
- Weight: UCBCFT 11 lbs. (5 kg) UCQFT – 15 lbs. (6.81 kg)



UCQFT Tank Machine

UCBCFT Tank Machine

Coverage Type

Ordering Information

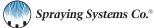


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UCBCF	T-3	L
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Unit	Nozzle Size	Long or
Туре	in mm	Short Nozzle
		(UCBCFT only)

Performance Data

Nozzle		Capacity gpm (I/min) – Maximum Tank Diameter ft (m)						
Type/Size	30 psi (2.1 bar)	50 psi (3.4 bar)	100 psi (6.9 bar)	140 psi (9.7 bar)	200 psi (13.8 bar)	250 psi (17.2 bar)	300 psi (20.7 bar)	
UCBCFT 3mm	14 (53) – 32 (10)	17 (65) – 38 (12)	20 (75) – 43 (13)	25 (95) - 50 (15.5)	28 (107) – 53 (16.5)	30 (113) – 55 (17)	32 (122) – 58 (18)	
UCBCFT 4mm	22 (83) - 34 (10.5)	27 (102) - 40 (12.5)	32 (122) – 46 (14)	37 (140) – 52 (16)	40 (152) – 55 (17)	44 (167) – 59 (18)	46 (175) – 62 (19)	
UCBCFT 5mm	33 (125) – 36 (11)	40 (152) – 42 (13)	46 (175) – 47 (14.5)	55 (208) - 54 (16.5)	58 (220) – 58 (18)	63 (238) - 61 (19)	66 (250) - 64 (19.5)	
UCBCFT 6mm	46 (175) – 38 (12)	55 (208) – 44 (13.5)	64 (242) – 50 (15.5)	76 (287) – 56 (17)	79 (298) – 60 (18.5)	85 (322) – 65 (20)	90 (340) - 67 (20.5)	

Nozzle		Capacity gpm (I/min) – Maximum Tank Diameter ft (m)							
Type/Size	30 psi (2.1 bar)	50 psi (3.4 bar)	100 psi (6.9 bar)	150 psi (10.3 bar)	200 psi (13.8 bar)	250 psi (17.2 bar)	300 psi (20.7 bar)		
UCQFT 6mm	30 (114) – 28 (8.5)	50 (189) – 36 (11)	64 (242) – 47 (14.5)	76 (288) – 56 (17)	86 (326) - 67 (20.5)	95 (360) – 74 (23)	103 (390) – 77 (23.5)		
UCQFT 7mm	38 (144) – 30 (9)	64 (242) - 40 (12.5)	82 (310) – 52 (16)	97 (367) - 61 (19)	110 (416) – 73 (22.5)	122 (462) - 80 (24.5)	132 (500) - 83 (25.5)		
UCQFT 8mm	48 (182) – 34 (10.5)	82 (310) – 42 (13)	106 (401) — 55 (17)	124 (469) – 65 (20)	140 (530) – 76 (23.5)	155 (587) – 82 (25.5)	168 (636) – 88 (27)		



Rotating Keg and Tank Wash Nozzles

To meet your tank cleaning needs, Spraying Systems Co. manufactures a variety of tank washing nozzles. Whether you require a light rinse or a high-impact wash, you can find the right nozzle for your application.

D26984 Rokon

Designed to increase cleaning impact up to 4x higher than conventional rotating nozzles, the Rokon is excellent for cleaning, sanitizing and foaming applications for both containers and equipment.

23240 Tank Wash Nozzle

Available with one, two or three spray orifices, the 23240 nozzle is great for washing kegs and small barrels.

36640 Keg Washing Nozzle

Ideal for rinsing and light cleaning in small containers, the 36640 nozzle features two rotating flat spray tips that deliver cylindrical spray coverage.

Fluid Driven (Constant Speed): 2-30 rpm

21400A Tank Wash Nozzle

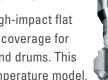
The 21400A nozzle features three high-impact flat sprays that deliver complete orbital coverage for effectively washing barrels and drums. This nozzle is also available in a high temperature model.

D25468 Tank Wash Nozzle

Featuring a self-cleaning sliding bearing, the D25468 nozzle is ideal for rinsing chemical containers and tanks.

18250A Tank Wash Nozzle

The 18250A nozzle features three high-impact flat sprays that deliver complete orbital coverage for effectively washing tanks, barrels and drums. This nozzle is also available in a high temperature model.



Model	Maximum	Inlet	Spray	Spray	Max. Liquid	Maximum	Materials of	Maximum
Type	Tank Dia.	Connection	Angle	Pattern	Pressure	Temp.	Wetted Parts	Flow
D26984 Rokon	13-20 ft (4-6 m)	12", 3/8", 1/2"	36°	Flat Fan	290 psi (20 bar)	160° F (70° C)	303SS, 316SS, PVDF, PE	31.2 gpm (128 l/min)

Fluid Driven (Reactionary Force): Rotate at high speeds. Driven by reaction force of nozzles.

Model Type	Maximum Tank Dia.	Inlet Connection	Spray Angle	Spray Pattern	Max. Liquid Pressure	Maximum Temp.	Materials of Wetted Parts	Maximum Flow
23240	3 ft (.9 m)	1/2"	240° 360°	Flat Fan	200 psi (14 bar)	180° F (82° C)	316SS, HSS, PFTE	22 gpm (79 l/min)
36640	3 ft (.9 m)	1/4"	120°	Flat Fan	100 psi (7 bar)	200° F (93° C)	316SS, HSS, PFTE	2.2 gpm (79 l/min)
21400A	5 ft (1.5 m)	3/4"	360°	Flat Fan	100 psi (7 bar)	200° F (93° C)	316SS, HSS PFTE	22 gpm (82 l/min)
D25468	6.5 ft (2 m)	1/2"	240°	Flat Fan	70 psi (4 bar)	160° F (70° C)	DELRIN® 303SS	9.2 gpm (36 l/min)
18250A	8 ft (2.4 m)	3/4"	360°	Flat Fan	100 psi (7 bar)	200° F (93° C)	316SS, HSS PFTE	55 gpm (205 l/min)

Note: Ratings are approximate. Actual coverage and performance will vary due to pressure and cleaning requirements. DELRIN® is a registered trademark of E.I. DuPont de Nemours and Company.





Stationary Keg and Tank Wash Nozzles

15498 Keg Wash Nozzle

A low capacity nozzle designed to pass through standard keg bungs and to fit on automatic keg washers. It is perfect for cleaning the interior of small distribution or process kegs.

3150 Drum Wash Nozzle

A low capacity nozzle designed for optimal cleaning performance in harsh operating conditions. It is excellent for cleaning the interior of small distribution or process drums.

VSM Wash Nozzle

The VSM nozzle features a durable, corrosion-resistant design and is efficient for rinsing small containers.



6353 Wash Nozzle

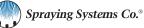
A high capacity nozzle for thorough cleaning of tanks and vessels. It features numerous spray patterns and coverages, and is available in a Maximum Free Passage version.



Fixed Stationary

Model Type	Maximum Tank Dia.	Inlet Connection	Spray Angle	Spray Pattern	Max. Liquid Pressure	Maximum Temp.	Materials of Wetted Parts	Maximum Flow
15498	2 ft (.6 m)	1"	270° 360°	Full Cone	150 psi (10 bar)	212° F 100° C	Brass, 303SS 316SS	11.7 gpm (43 l/min)
3150	3 ft (.9 m)	1"	270° 360°	Full Cone	150 psi (10 bar)	212° F 100° C	Brass 303SS	26 gpm (91 l/min)
VSM	5 ft (1.6 m)	1/2" 3/4"	240°	Solid Stream	140 psi (10 bar)	200° F 93° C	NYL 303SS	63 gpm (269 l/min)
6353	10 ft (3 m)	1-1/2"	360°	Full Cone	60 psi (4 bar)	212° F 100° C	Brass, 303SS 316SS	80 gpm (300 l/min)

Note: Ratings are approximate. Actual coverage and performance will vary due to pressure and cleaning requirements.



Custom Sanitation Lances

for complete tank wash assemblies

Spraying Systems Co. manufactures tank wash lances in a wide variety of configurations such as quick-release or bolt-on options, adapters, cooling jackets, ceramic linings, purge tubes, protective tubes and more. For specialized applications that are out of the ordinary, we offer custom fabrication to meet your exacting needs.

Male NPT **Tri-Clover Connector** Lance Diameter Lance Length Pin 0 0

Stainless Steel

Custom Options

- Lance Diameter
- Lance Thickness
- Bolt Circle Diameter
- Bolt Diameter
- Lance Length
- Connectors
- Nozzle
- Material: Stainless Steel
 Teflon
 Polypropylene

Kynar

Nozzle

TEFLON® is a registered trademark of E.I. DuPont de Nemours and Company

Spray Guns | Manual Clean Up

CU150A and 60-21580

Low Pressure Spray Guns for Cleaning and Sanitation

CU150A Features and Benefits

- Designed to reduce operator fatigue
- Color bands for easy identification of gun's spray capacity
- Interchangeable orifice caps between 10, 16, and 22 gpm capacities at 100 psi (7bar)
- Spray angles: 0° to 50°
- · Adjustable spray pattern from hollow cone to solid stream
- Capacity range: 10 to 22 gpm (38 to 83 l/min)
- Pressure: 150 psi (10 bar)
- Temperature: 200° F (93° C)
- 1/2" NPT or BSPT (F)
- Brass or lightweight aluminum valve body construction with stainless steel trigger
- Corrosion-resistant
- White or black cover available

60-21580 Features and Benefits

- Heavy-duty construction
- Adjustable spray pattern from hollow cone to solid stream
- Capacity range: 16 gpm (60 l/min)
- Pressure: 250 psi (17 bar)
- Temperature: 300° F (150° C)
- 3/8" NPT or BSPT (F)
- Front hose connection keeps grip cool

Connectors



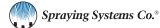
Ordering Information

CU150A and 60-2158	30 Spray Guns
C U 1 5 0 A	— A L — 2 2
l GunJet Type	 Material Capacity Code
Type	

	Swivel Connectors for CU150A	Outlet Conn. NPT (M) \ [BSPT (M)]	Inlet Conn Fore Hose I.D.	Thread Connection
36466 63090	63090	1/2" (1/2")	3/4" (20 mm)	-
	36466-500	1/2" (1/2")	1/2" (12 mm)	-
36466L	36466-675	1/2" (1/2")	5/8" (16 mm)	-
	36466-797	1/2" (1/2")	3/4" (20 mm)	-
	36466L-797	1/2" (1/2")	3/4" (20 mm)	-
36467	36467	1/2"	-	3/4" Garden Hose Thread

Dimensions and Weights

Spray Gun Type	Length (cm)	Width (cm)	Height (cm)	Net Weight
CU150A	6-1/2" (16.5)	2-1/4" (5.7)	6-1/2" (16.5)	36 oz Brass, 22 oz Aluminum (1 kg62 kg)
60-21580	9-1/16" (22.86)	1-7/16" (3.65)	6-1/2" (16.51)	1.2 lbs. (.55 kg)



WindJet® Air Knife Drying Packages

N

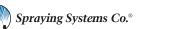
A completely customizable package comprised of WindJet Air Knives and a low maintenance regenerative blower system.

Features and Benefits

- A complete package, fully customized for sanitary dry-off applications
- Uniquely designed WindJet Air Knives produce a uniform, high volume, constant air stream
- High-performance air knives eliminate spotting and blotching
- Air knife's leading edge improves setup with added visual reference
- Corrosion-resistant finish and leak-proof end caps on the air knives
- Low-maintenance, direct-drive blower
- Clean, heated air
- Energy-efficient air source
- Low operating noise, requiring no need of a sound closure
- · Easy to install and maintain

Figure 1: Conveyor Wash and Blow Off





CIP Conveyor | Blow Off

WindJet Air Knife Drying Package Specifications:*

WindJet Air Knives

Knife Lengths:

6", 12", 18", 24", 30" and 36" Custom lengths are also available

Air slot sizes: .040" and .060"

Material: Aluminum, 316 stainless steel

Gast[®] Regenerative Blower Assemblies Available in 5, 10, 15 and 30 HP

Assembly Components:

Pressure relief valve Pressure gauge Air inlet filter Fittings Convenient mounting adapter for flexible or rigid tubing

Package Accessories

- Mounting brackets Muffler Flexible and/or rigid tubing Elbows Motor starter Couplings Clamps Manifolds Air cannons
- * The number and length of knives, air slot choice, blower size and necessary accessories vary depending on the application. Packages are differentiated by the horsepower size of the included Gast[®] blower.

WindJet Nozzles

Very low noise air control nozzles that convert a low-pressure volume of compressed air into a targeted, high-velocity concentrated single or flat fan air stream

Features and Benefits

- Dependable, repeatable performance
- · Delivers uniform distribution and spray pattern integrity
- · Recessed orifices protect against external damage
- Effectively dries hard-to-reach recesses
- Mounting hole ensures correct positioning on headers and manifolds

AA727

- Flat fan spray with 16 precision orifices
- Mounting hole: 3/16" (4.8 mm) diameter
- 1/4" NPT or BSPT inlet connections
- Capacity range: 5.0 to 43.4 scfm (142 to 1198 NI/min)
- Pressure range: 10 psi to 90 psi (.7 bar to 6 bar)
- Material: 316 stainless steel

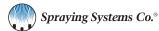
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- · Tightly directed round spray pattern
- Interchangeable caps to easily alter capacity
- · Caps color-coded for easy identification
- 1/4" NPT or BSPT (M) inlet connections
- Capacity range:
 5.2 to 45 scfm (142 to 1237 NI/min)
- Pressure range: 10 psi to 90 psi (.7 bar to 6 bar)
- Material: 316 stainless steel





Air Stream





Spraying Systems Co.®_____ Experts in Spray Technology



P.O. Box 7900, Wheaton, IL 60189-7900 USA

 Tel: 1.800.95.SPRAY
 Intl. Tel: 1.630.665.5000

 Fax: 1.888.95.SPRAY
 Intl. Fax: 1.630.260.0842

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