

DATA SHEET

SPRAY NOZZLES



**Polyamide
Models:**

31943, 31944, 31945



FEATURES

- High quality spray nozzle with ceramic orifice for extended life.
- Built-in check valve to prevent dripping when not in use.
- 304 stainless steel screen.
- Free pass area is 40% larger than conventional nozzles.
- Provides uniform fine droplet for misting and atomizing at high efficiency.

SELECTION

There are three (3) different sizes to choose from. Select a nozzle from the Nozzle Performance Chart to match the flow and pressure requirements of the system.

INSTALLATION

The misting/atomizing nozzle is designed for stationary mounting in any position. Position nozzle for desired impact and coverage towards the target. All three (3) nozzle sizes have a standard 1/4"NPT(M) threaded end for easy installation. Use tape or pipe sealant on the adjoining threaded NPT(F) fitting and tighten the nozzle onto the fitting.

SPECIFICATIONS

	U.S.	Metric
Model 31943 (Red)		
Flow	0.025 gpm	0.095 lpm
Pressure	1000 psi	69 bar
Spray angle	80°	80°
Inlet port	1/4" NPT(M)	1/4" NPT(M)
Weight	0.152 oz.	4.30 g
Dimensions	0.61 x 1.06"	15.5 x 27 mm
Model 31944 (Green)		
Flow	0.035 gpm	0.189 lpm
Pressure	1000 psi	69 bar
Spray angle	80°	80°
Inlet port	1/4" NPT(M)	1/4" NPT(M)
Weight	0.148 oz.	4.23 g
Dimensions	0.61 x 1.06"	15.5 x 27 mm
Model 31945 (Purple)		
Flow	0.08 gpm	0.303 lpm
Pressure	1000 psi	69 bar
Spray angle	80°	80°
Inlet port	1/4"NPT (M)	1/4"NPT (M)
Weight	0.148 oz.	4.22 g
Dimensions	0.61 x 1.06"	15.5 x 27 mm

OPERATION

This misting/atomizing nozzle is defined as an impeller type nozzle. It is designed to atomize water flow into tiny droplets by forcing water through a small orifice. To prevent dripping when spraying stops, this misting/atomizing nozzle has a built-in check valve. It is also considered a cleanable nozzle where a screen holder and screen can be removed to clean out foreign debris.

MAINTENANCE

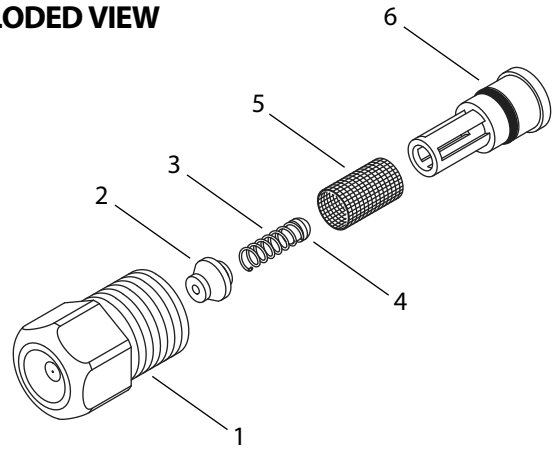
A loss in system pressure is often the result of a dirty, worn or improperly sized nozzle. Remove spray nozzle from equipment. Pull screen holder from main body and inspect o-ring, screen holder, screen, poppet and spring for foreign material or damage. Clean out or replace with new spray nozzle.

PARTS LIST

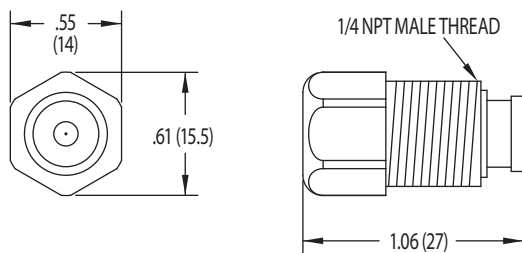
ITEM	P/N	MATL	DESCRIPTION	QTY
1	—	PA	Body w/ceramic orifice	1
2	—	PLM	Closer	1
3	—	S	Spring	1
4	—	NBR	Poppet	1
5	—	S	Screen	1
6	—	POP	Holder, Screen w/O-Ring	1

MATERIAL CODES (Not Part of Part Number):
 NBR = Medium Nitrile (Buna-N) PA = Polyamide,
 PLM = Unspecified poly POP = Polypropylene S = 304 SS

EXPLODED VIEW



DIMENSIONALS



TROUBLESHOOTING

No flow from nozzle	<ul style="list-style-type: none"> • Nozzle plugged • Low flow to pump • Internal filter clogged
Leaking	<ul style="list-style-type: none"> • Worn o-ring

NOZZLE PERFORMANCE CHART

Model	Color	Free Pass Dia. (mm)	GPM Nozzle Flow Rate at Various Pressures			
			507 psi 35 bar	725 psi 50 bar	1015 psi 70 bar	1450 psi 100 bar
31943	Red	0.2	0.02	0.02	0.03	0.03
31944	Green	0.3	0.04	0.05	0.06	0.07
31945	Purple	0.4	0.07	0.08	0.10	0.12

Model	Color	Free Pass Dia. (mm)	GPH Nozzle Flow Rate at Various Pressures			
			507 psi 35 bar	725 psi 50 bar	1015 psi 70 bar	1450 psi 100 bar
31943	Red	0.2	1.13	1.37	1.63	1.97
31944	Green	0.3	2.32	2.80	3.35	4.04
31945	Purple	0.4	4.09	4.97	5.92	7.13

IMPORTANT SAFETY INSTRUCTIONS

Relieve all line pressure in the inlet line to the pump and discharge line from the pump before performing any maintenance on the pump.

⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/cautions-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



CAT PUMPS

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