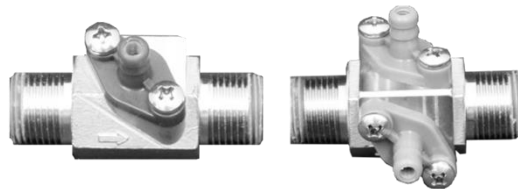


# ROCKET

## High Performance Injectors Technology by DEMA

### 211 & 221 Series Injectors



## Overview

The DEMA Rocket injector is designed as a fully customizable, easy to service injector for all your in-line cleaning needs. It is more than capable of operating under a greater range of pressures and provides an extreme variety of dilution ratios from 1:6 to 1:1441 depending on flow rate and nozzle size. Complete serviceability is available by incorporating a removable metering barb, nozzle and other internal components. Only the best materials used such as Aflas, Hastelloy, 316 grade Stainless Steel, Teflon and polypropylene.

## Warnings

This product is designed only to be used as described in this instruction sheet. Adhere to all warnings and cautions identified in this document.



**WARNING:** Installations must conform to all local and national plumbing codes and use approved backflow prevention and pressure relief devices where required.



Always read MSDS for all chemicals used and follow personal protective guidelines.

## Packaging, Operating Requirements

In this package*	
1 – Rocket Injector	
1 – Instruction Sheet	

\*Each unit is packaged individually.  
Metering tips and tubing are not included.

	Minimum	Maximum
Operating Temperature	-	150 F
Operating Pressure <sup>(1,2)</sup>	40 psi	500 psi <sup>1</sup> /3000psi <sup>2</sup>
Installation Torque		20 in-lb

<sup>1</sup>500 PSI OPERATING PRESSURE: RYTON NOZZLES & PLASTIC BARBS  
<sup>2</sup>3000 PSI OPERATING PRESSURE: RYTON NOZZLES & STAINLESS STEEL BARBS

## Parts List

Nozzle and Barb Repair Kits Part No.			
Single Barb		Dual Barb	
21.057	21.070	22.057	22.070
21.083	21.086	22.083	22.086
21.098	21.116	22.098	22.116
21.125	21.136	22.125	22.136

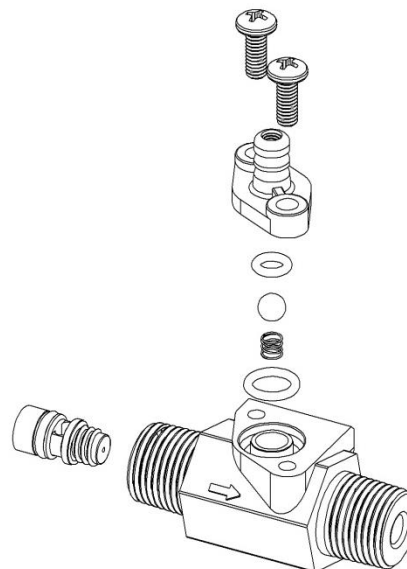
*Last three digits identify nozzle size*



Check Valve Kits Part No.	
Single Barb	Dual Barb
21.001	22.001



Metering Barbs	
Part Number	Color
21.01RD	Red
21.01OR	Orange
21.01GY	Grey
21.01BL	Blue
21.01LG	Light Green
21.01PR	Purple
21.01DG	Dark Green
21.01SS	Stainless Steel
21.01BR	Brown



# Installation

## Placement in the water line:

- The injector may be installed in a horizontal or vertical line and with the metering barb in any position below, above, or to the side. Water flow must be in the direction of the arrow on the injector body. If the thread size is different from the line size, use pipe bushings or reducers as required. Injector selection is based on flow, not line size. Flow requirements are listed in the table below.

## Connection to chemical supply:

- Install a ceramic weight by sliding the plastic tubing through the ceramic weight. Drop the end of the tubing with the strainer and ceramic weight into the fluid product container. Cut the tubing to any convenient length and slip the open end over the metering barb. The container may be more than 8 feet below the injector (extra tubing required) but injection capacity will be less. Do not place the container above the injector unless the injector is under pressure when not in use. This will prevent free siphoning.

## Metering Tip Chart

Flow Rate (GPM) @ 200 PSI	1.1	1.7	2.4	2.6	3.4	4.3	5.3	6.1	
Metering Barb Color	Red	Orange	Gray	Blue	Light Green	Purple	Dark Green	Brown	
Nozzle Size	0.057"	0.070"	0.083"	0.086"	0.098"	0.116"	0.125"	0.136"	
Metering Tip Color	Copper	1:277	1:426	1:582	1:715	1:812	1:1108	1:1441	1:1420
	Pumpkin	1:179	1:283	1:389	1:440	1:603	1:709	1:878	1:948
	Burgundy	1:157	1:260	1:366	1:395	1:519	1:608	1:777	1:845
	Lime	1:114	1:197	1:274	1:299	1:408	1:459	1:601	1:633
	Tan	1:101	1:178	1:207	1:269	1:366	1:418	1:545	1:543
	Orange	1:87	1:136	1:170	1:201	1:259	1:389	1:405	1:475
	Turquoise	1:85	1:135	1:169	1:200	1:257	1:277	1:404	1:401
	Pink	1:50	1:74	1:103	1:114	1:152	1:185	1:229	1:254
	Lt. Blue	1:38	1:58	1:71	1:90	1:119	1:146	1:182	1:191
	Brown	1:34	1:56	1:66	1:86	1:113	1:133	1:172	1:185
	Red	1:28	1:42	1:60	1:64	1:87	1:110	1:132	1:143
	White	1:24	1:37	1:56	1:58	1:76	1:95	1:114	1:129
	Green	1:22	1:33	1:46	1:48	1:68	1:82	1:103	1:116
	Blue	1:17	1:25	1:35	1:31	1:53	1:64	1:75	1:86
	Yellow	1:11	1:17	1:23	1:24	1:33	1:43	1:51	1:60
	Black	1:8.7	1:13	1:19	1:19	1:25	1:31	1:40	1:42
	Purple	1:6.4	1:6.5	1:9	1:10	1:13	1:16	1:19	1:22
Gray	1:6.3	1:5.9	1:7.8	1:8	1:10	1:12	1:15	1:16	
NO TIP	1:6.1	1:5.1	1:6.4	1:6.5	1:7.4	1:7.6	1:9.5	1:11.1	

NOTE: Dilution Ratios are based on 200 PSI inlet pressure and 90 PSI outlet pressure. Dilution Ratios are based on drawing water or water-thin product through the metering tip. Different viscosities and temperatures will affect the draw rates and lower the amount of fluid inducted increasing the overall dilution ratio making the injectors (and ratio) leaner.

Flow Rate (GPM) @ 100 PSI	0.8	1.3	1.6	1.75	2.3	3.2	3.7	4.1	
Metering Barb Color	Red	Orange	Gray	Blue	Light Green	Purple	Dark Green	Brown	
Nozzle Size	0.057"	0.070"	0.083"	0.086"	0.098"	0.116"	0.125"	0.136"	
Metering Tip Color	Copper	1:202	1:384	1:399	1:467	1:714	1:797	1:945	1:996
	Pumpkin	1:169	1:305	1:346	1:387	1:546	1:499	1:787	1:635
	Burgundy	1:136	1:228	1:294	1:308	1:416	1:451	1:630	1:545
	Lime	1:103	1:151	1:242	1:229	1:268	1:329	1:473	1:426
	Tan	1:91	1:143	1:205	1:197	1:238	1:282	1:426	1:364
	Orange	1:61	1:79	1:170	1:136	1:190	1:268	1:270	1:341
	Turquoise	1:60	1:78	1:169	1:135	1:143	1:218	1:269	1:274
	Pink	1:36	1:55	1:75	1:77	1:95	1:135	1:171	1:179
	Lt. Blue	1:31	1:45	1:65	1:67	1:86	1:109	1:148	1:128
	Brown	1:27	1:35	1:55	1:58	1:76	1:101	1:125	1:116
	Red	1:21	1:30	1:45	1:48	1:60	1:82	1:102	1:101
	White	1:19	1:24	1:34	1:39	1:44	1:67	1:79	1:92
	Green	1:16	1:20	1:29	1:33	1:40	1:61	1:65	1:78
	Blue	1:13	1:15	1:24	1:26	1:35	1:46	1:51	1:63
	Yellow	1:9.4	1:11	1:18	1:20	1:26	1:29	1:39	1:49
	Black	1:8	1:8.9	1:12	1:13	1:16	1:23	1:27	1:30
	Purple	1:7.3	1:7.3	1:9.5	1:10	1:12	1:11	1:19	1:19
Gray	1:7.1	1:6.8	1:7	1:7.5	1:7.7	1:9.4	1:11	1:16	
NO TIP	1:7	1:6.2	1:6.1	1:6.7	1:5.7	1:7.8	1:8	1:11.1	

NOTE: Dilution Ratios are based on 200 PSI inlet pressure and 90 PSI outlet pressure. Dilution Ratios are based on drawing water or water-thin product through the metering tip. Different viscosities and temperatures will affect the draw rates and lower the amount of fluid inducted increasing the overall dilution ratio making the injectors (and ratio) leaner.

# Troubleshooting

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## **Unit fails to draw or draws incorrect induction of chemical after initial installation:**

1. Is the injector sized correctly to the equipment? Review application and installation requirements against nozzle specifications for correct installation.
2. Is the injector body installed with the arrow on the side in the direction of the water flow? If not, remove and reverse direction to have arrow pointing same as flow of water.
3. Is the metering tip seated firmly against metering barb? Check by turning metering tip clockwise until it won't turn any further. No threads of the metering tip should be visible when installed correctly.

## **Unit stops drawing chemical:**

1. Is the chemical pickup tube clogged? Check installed components such as a foot valve and any inline check valves installed to make sure they're free of obstructions.
2. Is the metering tip clogged? Remove and clean. Average life of a metering tip is between 6-12 months depending on chemicals used.
3. Is the injector check valve clogged? Remove metering barb to inspect check valve ball, spring and O-rings.

# Warranty

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## **Merchandise Returns**

No Merchandise will be returned for credit without DEMA'S written permission. Returned merchandise authorization number is required in advance of return.

## **Product Warranty**

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products that have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "o"-rings, diaphragms, PVC tubing, and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty is void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number must be granted in advance of returned units for repair or replacement (See "Merchandise Returns" above).