

CHEM-FLEX™ - CHEMICAL INJECTORS



CHEM-FLEX™ CHEMICAL INJECTORS

Injectors are color-coded based on the water flow needed for each individual application, and combine with color-coded chemical metering tips to proportion the precise chemical mix ratio.

CHEMICAL-RESISTANT:

The heart of our Aqua-Lab™ Chemical Dispensing Systems, Chem-Flex™ Injectors are one of the most chemical resistant injectors on the market. These long lasting injectors are manufactured using Kynar® Venturi inserts, stainless steel connections, a Hastelloy spring, a Teflon check ball, and an exclusive XFC o-ring material.

DURABLE:

Dual material construction combines the excellent corrosion and chemical resistance of Kynar® with the mechanical strength of stainless steel.

RELIABLE:

Because of their Kynar-molded wetted surface, Chem-Flex Injectors can last 2-4 times longer than injectors machined from stainless steel or brass.

THREADED INJECTORS 3/8" NPT X 3/8" NPT CONNECTIONS



QUICK CONNECT INJECTORS PC2 X 3/8" NPT CONNECTIONS



SPECIFICATIONS

Max Pressure Inlet	NPT up to 1000 PSI (69 bar)
	PC2 up to 500 PSI (34 bar)
Max Pressure Outlet	333 PSI (23 bar)
Temperature Range	33°F - 175°F (.5°C - 79°C)
Maximum Wrench Torque	30 ft-lbs (41 N-m)

CHEM-FLEX™ - CHEMICAL INJECTORS



SINGLE HOSE BARB

For diluting one chemical with water.



DUAL HOSE BARB






















For diluting two chemicals with water. Ideal for adding a color or scent to your solution.






























TRIPLE HOSE BARB

For diluting three chemicals with water. Ideal for adding a color and scent to your solution or for on-site blending of chemistry.

THREADED INJECTORS - 3/8" NPT X 3/8" NPT CONNECTIONS

COLOR	FLOW ORIFICE	FLOW RATE @ 200 PSI (13.9 bar)	SINGLE BARB	DUAL BARB	TRIPLE BARB
Red	0.057 (1.45 mm)	1.0 GPM (3.8 LPM)	 118057	 129057	 139057
Orange	0.070 (1.78 mm)	1.5 GPM (5.7 LPM)	 118070	 129070	 139070
Gray	0.083 (2.11 mm)	2.0 GPM (7.6 LPM)	 118083	 129083	 139083
Blue	0.086 (2.18 mm)	2.25 GPM (8.5 LPM)	 118086	 129086	 139086
Light Green	0.098 (2.49 mm)	3.25 GPM (12.3 LPM)	 118098	 129098	 139098
Purple	0.117 (2.98 mm)	4.5 GPM (17.0 LPM)	 118117	 129117	 139117
Dark Green	0.125 (3.18 mm)	5.5 GPM (20.8 LPM)	 118125	 129125	 139125

QUICK CONNECT INJECTORS - PC2 X 3/8" NPT CONNECTIONS (For exclusive use with Aqua-Lab™ Chemical Dispensing Systems)

COLOR	FLOW ORIFICE	FLOW RATE @ 200 PSI (13.9 bar)	SINGLE BARB	DUAL BARB	TRIPLE BARB
White	0.029 (0.74 mm)	0.25 GPM (1.0 LPM)	 618029	-	-
Yellow	0.040 (1.02 mm)	0.5 GPM (1.9 LPM)	 618040	 629040	-
Tan	0.051 (1.39 mm)	0.75 GPM (2.8 LPM)	 618051	 629051	 639051
Red	0.057 (1.45 mm)	1.0 GPM (3.8 LPM)	 618057	 629057	 639057
Orange	0.070 (1.78 mm)	1.5 GPM (5.7 LPM)	 618070	 629070	 639070
Gray	0.083 (2.11 mm)	2.0 GPM (7.6 LPM)	 618083	 629083	 639083
Blue	0.086 (2.18 mm)	2.25 GPM (8.5 LPM)	 618086	 629086	 639086
Light Green	0.098 (2.49 mm)	3.25 GPM (12.3 LPM)	 618098	 629098	 639098
Purple	0.117 (2.98 mm)	4.5 GPM (17.0 LPM)	 618117	 629117	 639117
Dark Green	0.125 (3.18 mm)	5.5 GPM (20.8 LPM)	 618125	 629125	 639125

METERING TIPS

METERING TIPS

Color-coded tips are used to control the amount of chemical that is mixed with the water and the strength of the chemical solution.

THREAD IN STANDARD



Standard Metering Tips Include:

Tan, Orange, Turquoise, Pink, Light Blue, Brown, Red, White, Green, Blue, Yellow, Black, Purple, & Grey.

PART NUMBER

1000643

THREAD IN ULTRA LEAN



Ultra Lean Metering Tips Include:

Copper, Pumpkin, Burgundy, & Green

PART NUMBER

3000470

SPIRAL METERING PLUGS



Example of metering plug assemblies



PART NUMBER

1001290

Hydra-Flex developed technology to meter chemical to greater ratios than even ultra lean tips allow. Pack includes (10) spiral plugs, to be inserted into chemical tube, just prior to injector.

3/8" Polyflow (LLDPE) tubing is required to ensure a seal between the tube wall and the Spiral Metering Plug.

OPTIMIZING YOUR SYSTEM

What Do Injectors Do? Increases or decreases the amount of water used.

What Do Metering Tips Do? Increases or decreases the amount of chemical in the solution.

What Do Nozzles Do? Determines the application pattern and back-pressure of the solution.

AQUA-LAB™ RECOMMENDED SETUP STARTING POINTS

APPLICATOR	INJECTOR(S) PART NUMBER/COLOR		
Scent Dispenser	618057 (1.0 GPM) (3.8 LPM)		
CTA Nozzles (For Showerhead, See Below)	618057 (1.0 GPM) (3.8 LPM)		
Foam Stick	618070 (1.5 GPM) (5.7 LPM)		
Mitter/Wrap Nozzles	618070 (1.5 GPM) (5.7 LPM)		
Undercarriage/Rust Inhibitor	618083 (2.0 GPM) (7.6 LPM)		
V Jet Or Flat Fan Nozzle Arch	618086 (2.25 GPM) (8.5 LPM)		
K12 Nozzle Arch	618086 (2.25 GPM) (8.5 LPM)		
K15 Nozzle Arch	618098 (3.25 GPM) (12.3 LPM)		
Hockey Puck	1 Row Of Holes 618051 (0.75 GPM) (2.8 LPM)	2 Rows Of Holes 618057 (1.0 GPM) (3.8 LPM)	3 Rows Of Holes 618070 (1.5 GPM) (5.7 LPM)
Showerhead	1 Row Of Holes 618057 (1.0 GPM) (3.8 LPM)	2 Rows Of Holes 618070 (1.5 GPM) (5.7 LPM)	3 Rows Of Holes 618083 (2.0 GPM) (7.6 LPM)
Rain Bar	1 Row Of Holes 618086 (2.25 GPM) (8.5 LPM)	2 Rows Of Holes 618098 (3.25 GPM) (12.3 LPM)	3 Rows Of Holes 618125 (5.5 GPM) (20.8 LPM)
Foam Curtain - Choose Foam Accessory Based On # Of Inputs/Foam Generators	Duo-Foam w/(2X) 618098 (3.25 GPM) (12.3 LPM)	Triple-Foam w/(3X) 618086 (2.25 GPM) (8.5 LPM)	Quad-Foam w/(4X) 618086 (2.25 GPM) (8.5 LPM)
High Flow Foam Curtain Application (10+ GPM (37.9+ LPM))	High Flow Device w/ 618086 (2.25 GPM) (8.5 LPM)		

Foaming Air: Start at 25 PSI (1.7 bar) (adjust based on unique application)

CHEMICAL DILUTION RATIO CHART

NOTE: Dilution ratios given below are based on drawing water through the metering tips and are meant as a starting point for system configuration. Results are expected to vary when drawing chemicals due to differences in viscosity and temperature. There may be slight variations of performance in injectors and metering tips that are unavoidable due to manufacture tolerances. Using the same tip color from site to site is a good starting point. However with the potential for variation from part to part it is reasonable to still need to do some adjustments from there.

(Assumes feed pressure of 200 PSI (14 bar))

		#8-32 METERING TIPS									
Flow Rate (GPM) at 200 PSI		0.25	0.50	0.75	1.00	1.50	2.00	2.25	3.25	4.50	5.50
Injector Color →		White	Yellow	Tan	Red	Orange	Gray	Blue	Light Green	Purple	Dark Green
Nozzle Size →		0.029" (0.7 mm)	0.040" (1.0 mm)	0.051" (1.3 mm)	0.057" (1.4 mm)	0.070" (1.8 mm)	0.083" (2.1 mm)	0.086" (2.2 mm)	0.098" (2.5 mm)	0.117" (2.9 mm)	0.125" (3.2 mm)
Metering Tip	COPPER	1: 57	1: 104	1: 155	1: 195	1: 281	1: 406	1: 468	1: 629	1: 881	1: 1074
	PUMPKIN	1: 43	1: 82	1: 119	1: 126	1: 238	1: 348	1: 398	1: 554	1: 774	1: 946
	BURGUNDY	1: 34	1: 67	1: 97	1: 111	1: 207	1: 304	1: 347	1: 495	1: 690	1: 845
	LIME	1: 28	1: 57	1: 81	1: 100	1: 183	1: 270	1: 307	1: 447	1: 622	1: 764
	TAN	1: 28	1: 57	1: 81	1: 100	1: 183	1: 270	1: 307	1: 447	1: 622	1: 764
	ORANGE	1: 23	1: 44	1: 64	1: 78	1: 137	1: 196	1: 215	1: 314	1: 437	1: 536
	TURQUOISE	1: 17	1: 31	1: 45	1: 55	1: 91	1: 126	1: 134	1: 197	1: 274	1: 336
	PINK	1: 14	1: 24	1: 35	1: 42	1: 68	1: 93	1: 98	1: 143	1: 188	1: 224
	LIGHT BLUE	1: 11	1: 17	1: 24	1: 31	1: 47	1: 64	1: 66	1: 98	1: 136	1: 166
	BROWN	1: 10	1: 15	1: 22	1: 28	1: 43	1: 58	1: 59	1: 88	1: 122	1: 150
	RED		1: 12	1: 17	1: 23	1: 34	1: 45	1: 46	1: 69	1: 95	1: 116
	WHITE		1: 12	1: 16	1: 22	1: 31	1: 42	1: 43	1: 64	1: 88	1: 108
	GREEN		1: 11	1: 14	1: 20	1: 28	1: 37	1: 38	1: 55	1: 76	1: 94
	BLUE		1: 10	1: 12	1: 17	1: 23	1: 30	1: 31	1: 46	1: 63	1: 77
	YELLOW			1: 9	1: 12	1: 16	1: 20	1: 22	1: 31	1: 42	1: 52
	BLACK				1: 10	1: 13	1: 16	1: 17	1: 24	1: 33	1: 40
PURPLE				1: 6.6	1: 8.3	1: 9	1: 10	1: 13	1: 17	1: 21	
GRAY				1: 5.3	1: 6.7	1: 6.9	1: 7.6	1: 10	1: 13	1: 16	
OPEN				1: 4.9	1: 5.3	1: 5.2	1: 6.0	1: 6.1	1: 8.3	1: 10	

		SPIRAL METERING PLUGS*									
Flow Rate (GPM) at 200 PSI		0.25	0.50	0.75	1.00	1.50	2.00	2.25	3.25	4.50	5.50
Injector Color →		White	Yellow	Tan	Red	Orange	Gray	Blue	Light Green	Purple	Dark Green
Nozzle Size →		0.029" (0.7 mm)	0.040" (1.0 mm)	0.051" (1.3 mm)	0.057" (1.4 mm)	0.070" (1.8 mm)	0.083" (2.1 mm)	0.086" (2.2 mm)	0.098" (2.5 mm)	0.117" (2.9 mm)	0.125" (3.2 mm)
Spiral Plug Length	3.00"	1: 251	1: 503	1: 754	1: 1006	1: 1509	1: 2012	1: 2263	1: 3269	1: 4526	1: 5532
	2.00"	1: 181	1: 363	1: 544	1: 726	1: 1089	1: 1451	1: 1633	1: 2359	1: 3266	1: 3991
	1.00"	1: 104	1: 208	1: 311	1: 415	1: 623	1: 831	1: 934	1: 1350	1: 1869	1: 2284
	0.75"	1: 82	1: 165	1: 247	1: 329	1: 494	1: 659	1: 741	1: 1071	1: 1483	1: 1812
	0.50"	1: 59	1: 119	1: 178	1: 238	1: 357	1: 475	1: 535	1: 772	1: 1069	1: 1307
	0.25"	1: 34	1: 68	1: 102	1: 136	1: 204	1: 272	1: 306	1: 442	1: 612	1: 748

*3/8" Polyflow (LLDPE) tubing is required to ensure a seal between the tube wall and the Spiral Meter Plug.

WARRANTY

BLAST-TEC™ PRO & BLAST-FORCE™ NOZZLES



Blast-Tec Pro and Blast-Force Nozzles are warranted to be free from defects in material and workmanship under normal use and service. "Normal use and service" means not in excess of the recommended pressures, temperatures and chemicals or handling fluids not compatible with component materials. This warranty shall not apply to any accessory which has been repaired or altered to affect the performance or reliability of the product.

Warranty does not apply to a) freight damage, b) freezing damage, c) damage caused by parts or accessories not obtained from or approved by Hydra-Flex, Inc., d) damage from misuse and/or misapplication, e) damage due to poor water quality, f) normal wear of moving parts, components affected by moving parts or surfaces meant to wear.

Period of warranty shall be 90 days from the date product is shipped from Hydra-Flex, Inc.'s facility. Liability of manufacturer under the foregoing warranty is limited to repair or replacement of that product at the option of Hydra-Flex, Inc., which according to our investigation was deemed defective at time of shipment. This warranty is in lieu of all other warranties, expressed or implied, including any warranty of merchantability and/or any and all other obligations or liabilities on the part of Hydra-Flex, Inc. Return merchandise authorization number, to return units for repair or replacement, must be granted in advance of return.

CHEM-FLEX™ INJECTOR



Chem-Flex Injectors are warranted to be free from defects in material and workmanship under normal use and service. "Normal use and service" means not in excess of the recommended pressures, temperatures and chemicals or handling fluids not compatible with component materials. Rubber and synthetic rubber parts such as "o"-rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. This warranty shall not apply to any accessory which has been repaired or altered to affect the performance or reliability of the product.

Warranty does not apply to a) freight damage, b) freezing damage, c) damage caused by parts or accessories not obtained from or approved by Hydra-Flex, Inc., d) damage from misuse and/or misapplication, e) normal wear of moving parts or components affected by moving parts.

Period of warranty shall be 1 year from the date product is shipped from Hydra-Flex, Inc.'s facility. Liability of manufacturer under the foregoing warranty is limited to repair or replacement of that product at the option of Hydra-Flex Inc., which according to our investigation was deemed defective at time of shipment. This warranty is in lieu of all other warranties, expressed or implied, including any warranty of merchantability and/or any and all other obligations or liabilities on the part of Hydra-Flex, Inc. Return merchandise authorization number, to return units for repair or replacement, must be granted in advance of return.

RETURNS

If you wish to return any product that is new and unused, please call for an RMA number within 60 days to receive credit with no restocking charge. After 60 days, a restocking fee of 15% or \$40 (whichever is greater) will apply.

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