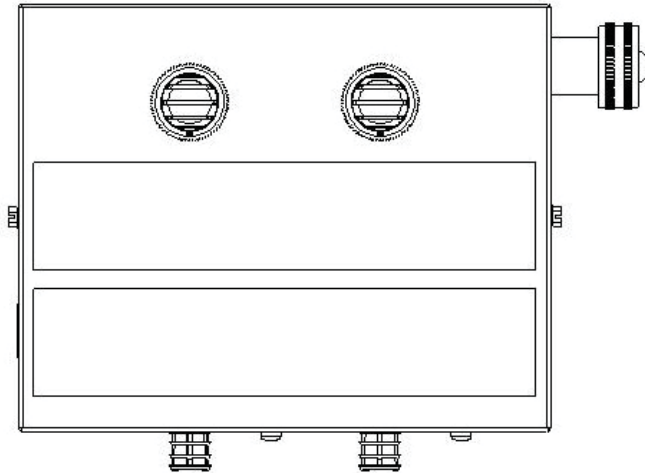


NUBLEND

Caliber Dispensing System



Overview

The Caliber Dispensing System with a stainless steel cover is the simplest and most cost effective way to dispense super-concentrated cleaning chemicals. This closed system prevents chemical contact, tampering and waste to help customers manage cost. Controlled dilution guarantees consistent results, and allows for ready-to-use products that deliver the best performance in the industry.

Applications

The Caliber Dispensing System is designed for use in various industrial and institutional applications and is the best choice when incoming water is less than 6gpm. It has dedicated fill ports for products that mix at 1 GPM and 4 GPM. Push the left (red) button for filling auto scrubbers and mop buckets. Push the right (blue) button for filling bottles and jugs. This model includes Action Gap backflow prevention, a standard water hose connector on either the left or right side for incoming water flow and an assortment of metering tips designed to meet various dilution ratios. The unit can be installed on a wall to minimize floor space, or a cart for mobile use.

Warnings



All installations must conform to local plumbing codes and use approved backflow prevention devices. A pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other state that requires the use of a pressure indicating tee.

ALWAYS WEAR PROTECTIVE CLOTHING AND EYEWEAR WHEN WORKING WITH CHEMICAL PRODUCTS.

Caliber Dispensing System Assembly and Pack Out

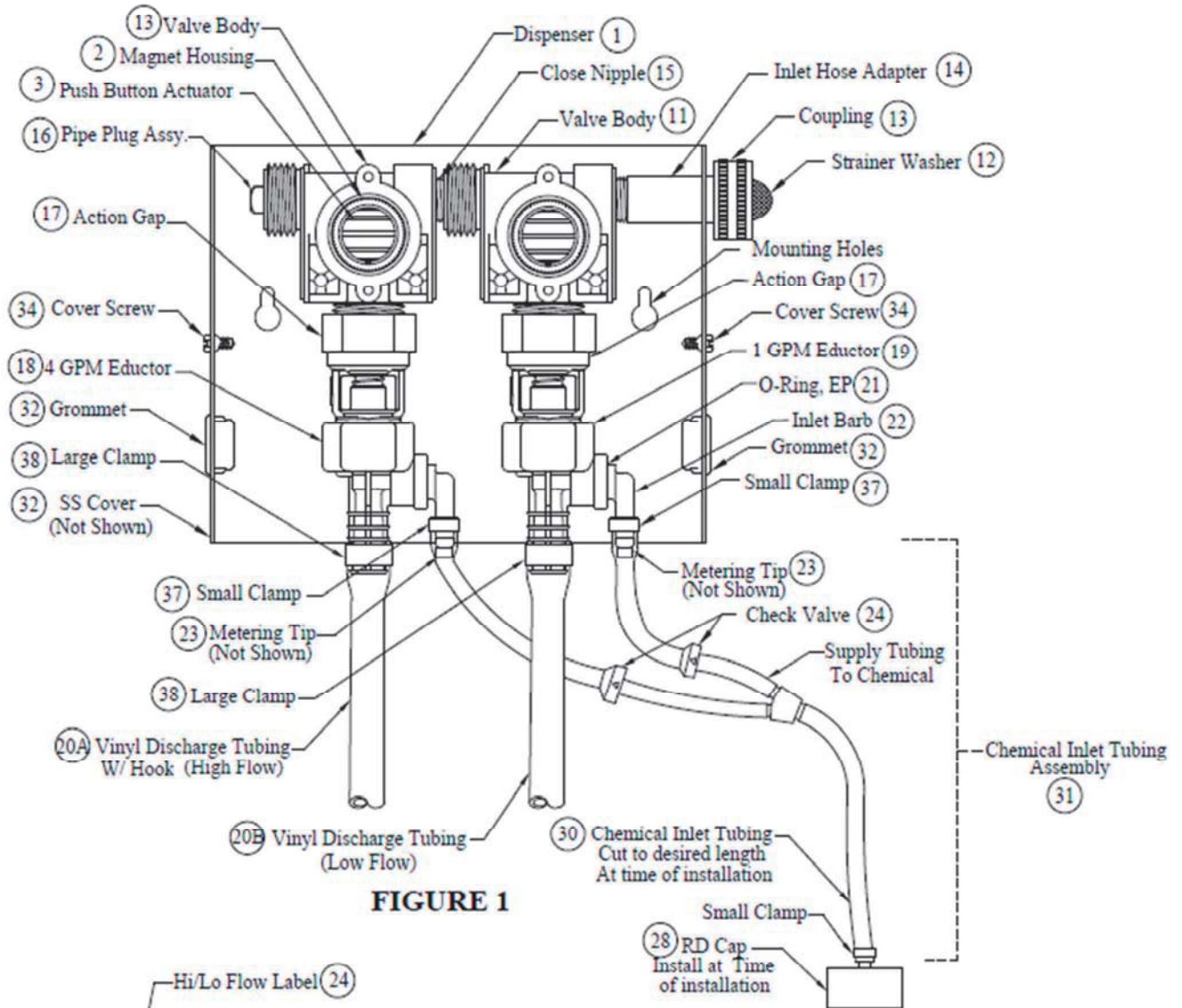


FIGURE 1

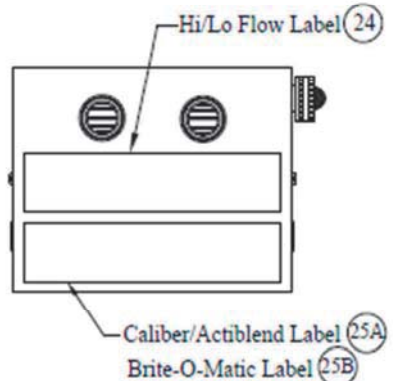


FIGURE 3

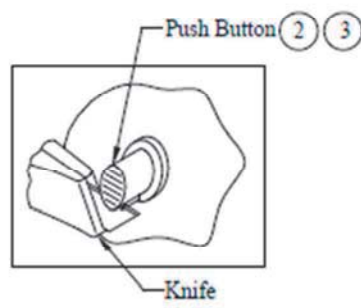


FIGURE 2

Item	Pack-Out Includes:
23	Metering Tip Kit
26	Ceramic Weight
27	Foot Valve
28	RD Cap
30	Chemical Inlet Tubing
35	Screw and Anchor kit
36	Water Supply Hose
37	Small Clamps
38	Large Clamps
39	Instruction Sheet

Caliber Dispensing System Parts List (Refer to Fig. 1 and 2)

Item	Description	Part Number	
		Dema	Nuance
1	Dispenser	681GAP.2.NUA	ZM255ABS900
2	Magnetic housing blue/red	66-139-2/66-139-3	
3	Push button actuator	66-140-1/66-140-2	
4	Magnet (not shown)	63-35	
5	Spring (not shown)	63-36	
6	Enclosing tube (not shown)	41-7-25	
7	Spacer (not shown)	63-37	
8	Kickoff spring (not shown)	41-1-8	
9	Plunger (not shown)	63-38	
10	Diaphragm, EP (not shown)	41-15-10	
11	Valve body	63-39	
12	Strainer washer	100-38	
13	Coupling	65-10-2	
14	Inlet hose adapter	93-44	
15	Close nipple	66-31	
16	Pipe plug assembly	66-153	
17	Action gap	16-30	
18	4 GPM eductor	61-22-3	
19	1 GPM eductor	61-99-2	
20A	1/2" ID x 6' long vinyl discharge tube with hook	89-30-9	
20B	1/2" ID x 9" long vinyl discharge tube	52-22-6	
21	O-ring, EP	63-78	
22	Inlet barb	63-79	ZM183
23	Metering tip kit	100-15K-NUA	ZM111
24	Hi/Low flow label	L1711	ZP5028
25A	Caliber/Actiblend label	L1712	ZP4867
25B	Brite-O-Matic label	L1726	ZP4973
26	Ceramic weight	61-107-2	
27	Foot valves	100-16E	
28	RD cap	62-62-13	WK60
29	Check valve	60-54	ZS126
30	Chemical inlet tubing	100-31-1	
31	Chemical inlet tubing assembly	40-497-1	
32	Grommet	61-11	
33	Stainless steel cover	24473-2	
34	Cover screw	68-9	
35	Screw and anchor kit	66-117	
36	Water supply hose 6' GHT	44-3-6	ZS02
37	Clamps, small, inlet tubing	16-9-3	
38	Clamps, large, discharge tubing	16-9	
39	Instruction sheet	I1196	QUA-CAL-001

Site Requirements and Basic Operation

All Installations must conform to local plumbing codes and use approved backflow preventers. Where applicable, pressure indicating tee is to be installed with existing faucets according to local plumbing codes in states that require the use of a pressure indicating tee.

HIGH FLOW			LOW FLOW		
Input water		Output (blended)	Input water		Output (Blended)
Min 0.75 GPM flowrate	Min 20psi Max 125psi	4 GPM	Min 0.75 GPM flowrate	Min 20psi Max 125psi*	1 GPM
<150 °F temperature			<150 °F temperature		

* Max operating pressure of dispenser is pressure the unit can handle. If pressure is above 70psi, dilution accuracy will be significantly impacted. Installations where 70psi water pressure or above is encountered, a pressure regulator is suggested.

Installation Tools

Power drill, 1/4" or 3/8" drive	1/8" and 1/4" Drill Bit	Utility knife
Screwdriver, straight blade	Screwdriver, Phillips 2	Wrench
Hammer	Pipe dope sealant (liquid sealant)	

Installation and General Use

1. Mounting and water supply:

Place dispenser in a convenient location not more than 6 feet above the chemical container (greater lifts will reduce injection capacities)

- Drill all of the holes into the drywall using a 1/4" diameter bit for use with the included #10 screw and anchor set. (If mounting the dispenser to wood and you do not plan to use the included anchors, drill 1/8" diameter holes.)
- Insert the anchors into drilled holes and hammer them into the wall until they are flush with face of wall
- Install the #10 screws with a Phillips screwdriver into the anchors so the screw heads are sticking out of the wall approximately 1/8"
- Mount the dispenser by inserting the screw heads through the keyhole slots in the base and tightening the screws
- The water inlet is equipped with a female garden hose fitting (with strainer washer) for attaching a water supply hose. The fittings may be removed to permit direct connection to a 3/8" NPT pipe. The unit is designed so water can be supplied to either side by interchanging the pipe plug and the female hose fitting.
- **Note: Apply pipe dope, hand tighten, and then turn 1-1/2 times with a wrench. DO NOT OVER TIGHTEN. WARNING: Do not use Teflon® tape to seal internal plastic threads as the extra thickness of the tape may cause the plastic to crack. Use a non-welding liquid sealant instead.**

2. Where Applicable, Pressure Indicating Tee Installation:

- Screw female quick disconnect to faucet and attach pressure indicating tee to female quick disconnect.
- Attach female end of reinforced hose to male threads of tee, then attach the male end to the female garden hose fitting at the water inlet of the Blend Center.

3. Chemical supply tubing for containers that HAVE cap and inserts:

- Place the chemical containers below the blend center
- (NOTE: A lift of more than 6 feet will reduce injection capacities)
- Cut the tubing to desired length that will allow it to extend from the top of the chemical container to the eductor inlet barb. (See Figure 1).
- Insert tubing onto RD cap and secure with clamp. Screw cap into insert in container.

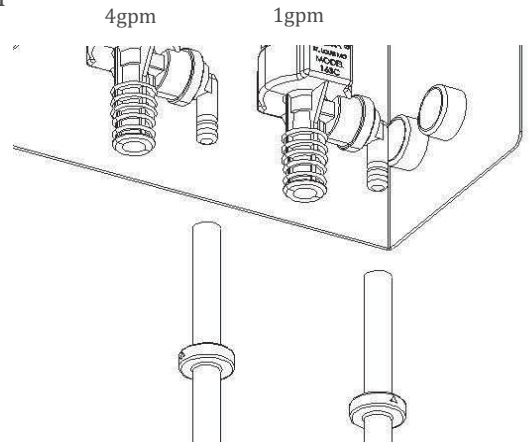


Figure 4

4. Outlet: (refer to Figure 4)

- For the 1 GPM eductor, attach discharge tubing to the eductor discharge barb and secure with clamp
- For the 4 GPM eductor, cut the 1/2" I.D. x 6' long discharge tubing to the desired length and attach tubing to the eductor discharge barb and secure with clamp
- **Note: Do not force tubing onto larger barbs on the eductor**

Metering Tip Charts, Tip Installation and Dispenser Priming

Chemical feed ratios are controlled by metering tips screwed into the eductors chemical inlet barbs. Select a tip using the following Metering Tip Chart

NUANCE SOLUTIONS UNIVERSAL TIP KIT							
Dispenser	CALIBER		TEMPO	Dispenser	ECLIPSE		EXPRESS
Flow (minimum inlet)	0.75 GPM		0.75 GPM	Flow (minimum inlet)	7 GPM		7 GPM
Flow (Blended output)	1 and 4 GPM		4 GPM	Flow (Blended output)	1 and 10 GPM		10 GPM
Pressure (PSI)	20 - 125		20-125	Pressure (PSI)	20 - 90		20-125
Tip Color	Mix Ratio		Mix Ratio	Tip Color	Mix Ratio		Mix Ratio
	1 GPM	4 GPM	4 GPM		1 GPM	10 GPM	10 GPM
Tan	102:1	427:1	427:1	Tan	102:1	1257:1	1257:1
Orange	75:1	320:1	320:1	Turquoise	60:1	750:1	750:1
Turquoise	60:1	256:1	256:1	Pink	43:1	416:1	416:1
Pink	43:1	170:1	170:1	Light Blue	52:1	341:1	341:1
Light Blue	33:1	128:1	128:1	Brown	42:1	278:1	278:1
Brown	28:1	114:1	114:1	Red	32:1	240:1	240:1
Red	22:1	85:1	85:1	White	27:1	200:1	200:1
White	18:1	73:1	73:1	Green	24:1	192:1	192:1
Green	16:1	64:1	64:1	Blue	15:1	128:1	128:1
Blue	13:1	51:1	51:1	Yellow	10:1	89:1	89:1
Yellow	9:1	34:1	34:1	Black	8:1	64:1	64:1
Black	6:1	26:1	26:1	Light Orange	6:1	42:1	42:1
Purple	5:1	15:1	15:1	Purple	5:1	32:1	32:1
Gray	4:1	11:1	11:1	Gray	4:1	24:1	24:1
None	3.6:1	8:1	8:1	None	3.5:1	14:1	14:1
Metering tips determine dilution mix ratio for each chemical product. Changes in water inlet pressure and / or flowrate can affect output mix ratios such that they differ from these tables. Refer to product label for dilution recommendation							
Part Number	Dema 100.15K.NUA			Nuance Code ZM111			Rev: 5/17/2016

Metering Tip Installation

1. Screw tip into inlet barb of both of the eductor 90 degree elbows.

Installing the Chemical Tubing Assembly to a Chemical Tank that DOES NOT have cap & inserts

1. Take the chemical feed assembly and slide each tubing end over both inlet barbs of the eductors. NOTE: The suction tube on the chemical tubing assembly is factory furnished at a coarse length that allows the installer to attach it to various size chemical tanks.
2. Place the chemical tank at the desired location.
3. Route tubing end to bottom of chemical tank to determine desired length.
4. If needed, cut excess tubing off end using a utility knife.
5. Attach weight and foot valve to end the tubing
6. Insert tubing end with foot valve into the chemical tank

Dispenser Priming

7. Connect male end of water hose to dispenser hose adapter.
8. Connect female end of water hose to customer water source.
9. Slowly turn water supply on to dispenser.
10. With water supply on to dispenser, activate each (high, low) water valve individually (figure 2) by pressing the colored push button actuator inward toward dispenser (you will hear a positive “click” when activated). Monitor chemical pick up tubes to confirm chemical is priming through the tube. Once chemical has reached the dispenser, wait approximately 5 seconds to ensure full prime. NOTE: Direct discharge fluid flow to a suitable container or drain, as required. DO NOT activate both water valves at the same time, unit will not operate as intended.

Using either blended low or high flow:

1. The process for activating the low flow and high flow eductors is identical to priming the system. Start by placing your container in the desired fill location. For low flow, place the quart bottle around the low flow discharge tube. For high flow, place the high flow discharge tube inside the container (mop bucket, etc.).
2. Slowly turn on the water supply to dispenser.
3. Activate push button actuator (low or high flow) by pressing button inward toward dispenser.
4. Fill container to required level.
5. Shut off the push button actuator by releasing the button. Make sure to give enough room in the quart bottle to allow the residual chemical in the discharge tube to drain into the bottle. NOTE: For high flow, allow for chemical mixture to drain into the container completely and place the tube in its deactivated position.

OPERATION:

The Caliber Dispensing System is now ready for use. Depressing a push button opens the valve, allowing water to flow through the chemical eductor that mixes chemical at the desired ratio.

Troubleshooting

CAUTION: TURN OFF WATER SUPPLY BEFORE SERVICING

Symptom	Probable Cause	Remedy
Eductor fails to draw chemical properly	<ol style="list-style-type: none"> 1. Insufficient water supply pressure 2. Cap or foot valve (if equipped) has dirt/chemical build-up. 3. Eductor metering tip clogged with dried chemical 4. Eductor has scale build-up 	<ol style="list-style-type: none"> 1. 20 PSI is the minimum required pressure Seek Plumber if necessary to increase water pressure 2. Soak in hot water to clean 3. Soak in hot water to clean 4. Remove eductor and soak in mild acid solution or remove and replace eductor
Water valve is not shutting off completely	<ol style="list-style-type: none"> 1. Water valve parts are dirty 2. Magnet doesn't fully return 3. Excessive water pressure 	<ol style="list-style-type: none"> 1. Inspect valve components for debris 2. Make sure magnet moves freely, replace dispenser if not resolved 3. Install pressure regulator
Threaded connections are leaking water	<ol style="list-style-type: none"> 1. The connection between the blend center and water supply line is too loose or rubber washer is missing 2. Backflow prevention devices and/or eductors are too loose 	<ol style="list-style-type: none"> 1. Shut water supply off first. Carefully tighten the female hose coupling on the blend center to the inlet water supply line. Do not overtighten 2. Tighten loose connection(s) if necessary. Do not over tighten if using tools
Eductor continues to draw chemical after water valve is closed	<ol style="list-style-type: none"> 1. Concentrated chemical is positioned higher than the eductor 	<ol style="list-style-type: none"> 1. Move the concentrated chemical so it is lower than the eductor

CAUTION: When servicing unit, be sure replacement parts have been installed according to drawing.

Warranty

Merchandise Returns

No merchandise will be returned for credit without Nuance Solution's written permission. Returned merchandise authorization number is required in advance of return.

Product Warranty

Nuance Solutions 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, caps and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of Nuance Solutions 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. Nuance Solutions 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).

NuBlend

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