

IntelliSpense™



5101284 Air Powered Analog Dispenser

Operating Manual and Users Guide

Overview

The **IntelliSpense™ 5101284 Analog Timed Air Dispenser** is an economical general purpose dispenser, versatile and simple to use. For **operator** or **automatic** use in manual or automatic modes for timed air deposits, dots, beads or potting. **Easy to read gauges.**

The **IntelliSpense™ 5101284 Analog Timed Air Dispenser** is an ideal dispensing unit when used as a free standing unit or with any of our robotic platforms. With uncompromising accuracy, this cost-effective analog dispenser can operate as a fully automated unit or it can be used with operator assisted (optional) hand switch or (included) foot pedal control.

In addition, input signals from a robotic platform can signal the dispenser to dispense by sending a simple I/O signal from a robot or a PLC. It is a light and compact unit, with a very low cost, even though it has many of the features of many expensive dispensing systems. It is one of our most popular dispensers.

Package Contents

Each IntelliSpense™ Air Analog Dispenser Package contains the following items :

- **IntelliSpense™** Air Analog Dispenser
- Power Cord
- Air Pressure Connector
- Barrel Adapter (30cc and 55cc both fit this adapter.)
- Needle assortment
- Foot Pedal and/or (optional) Finger Switch

IntelliSpense™ Analog Timed Air Dispenser

Specification

Size:	5 ¾" W X 8 5/8" L X 2 ½" H
Weight:	3 ¾ Pounds
Input Power:	110 VAC And 220 VAC
Voltage:	24 VDC
Air Input:	70 To 100 Psi (5.0 to 7.0 Bar)
Air Output:	1 To 100 Psi (0.1 to 7.0 Bar)
Counter:	Analog Timer 0.01 - 99.00 Sec
Vacuum:	Adjustable
Control:	Continuous or Momentary

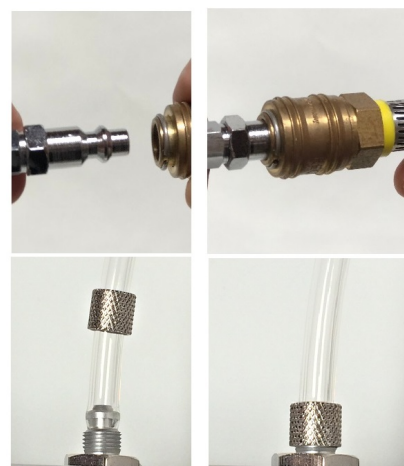
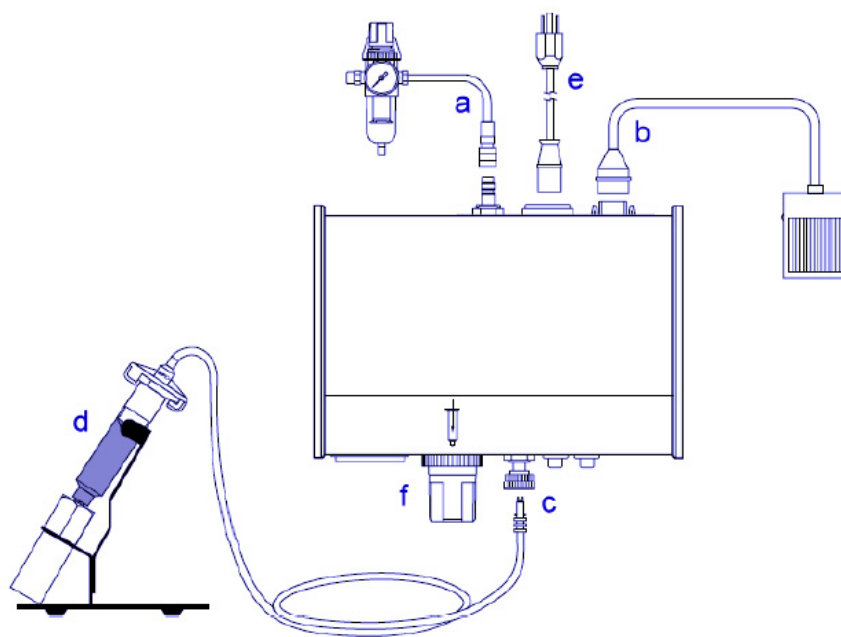
Part #	Description
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5101284	IntelliSpense Analog Timed Air Dispenser with *starter kit.
9991439FS	Finger switch (optional)

The *IntelliSpense*™ 5101284 Analog Timed Air Dispenser Setup

- Connect the Air Pressure Connector on the back of the system to the nearest air compressor line.
- Connect the Foot Pedal on the back of the system or (optional) Finger Switch on the front of the system.
- Fill the dispensing barrel with adhesive into the correct barrel adapter.
- 30cc/ml Adapter (also fits 55cc/ml) is included, 3, 5, and 10cc/ml are also available.
- Connect the chosen syringe adapter to the front of the system.
- If you are using the optional Finger Switch, place switch onto the dispensing barrel or foot pedal, connect the Power Cord on the back of the system and switch the power on, making sure all the display and light indicators are working properly.
- Auto-adjusting power supply will accommodate 110V-230V voltage.
- Select the appropriate needle from the starter kit and adjust air pressure and vacuum until you have appropriate size dots or beads.
- **Pull out regulator and adjust air pressure** until desired pressure is set; **push in and lock to set the pressure.**

Table 1



Timer Dip Switch Settings (located inside box)

PCB main board	Timer Knob 0	Timer Knob 10	Setting
1on	.1 sec	1.3 sec	Default
2on	1 sec	13 sec	
3on	10 sec	36 sec	
4on	30 sec	50 sec	
1 and 2 on	50 sec	70 sec	
3 and 4 on	70 sec	90 sec	
All on	90 sec	110 sec	

Remove the cover of the unit by removing the top two screws on the back of the unit and pulling the cover toward you. Locate the Dip Switch Box Controls at the bottom of the interior of the unit near the bottom. They will be numbered as shown above. Adjust them to accommodate the timed shot range you require as shown, with the timer set to 0 and all switches off. The factory default setting as shown is .1 sec to 1.3 seconds, with 1 on. With 2 on, you will multiply the switch setting by a factor of 10. Set the switches to allow for the shot size you need.

Table 2

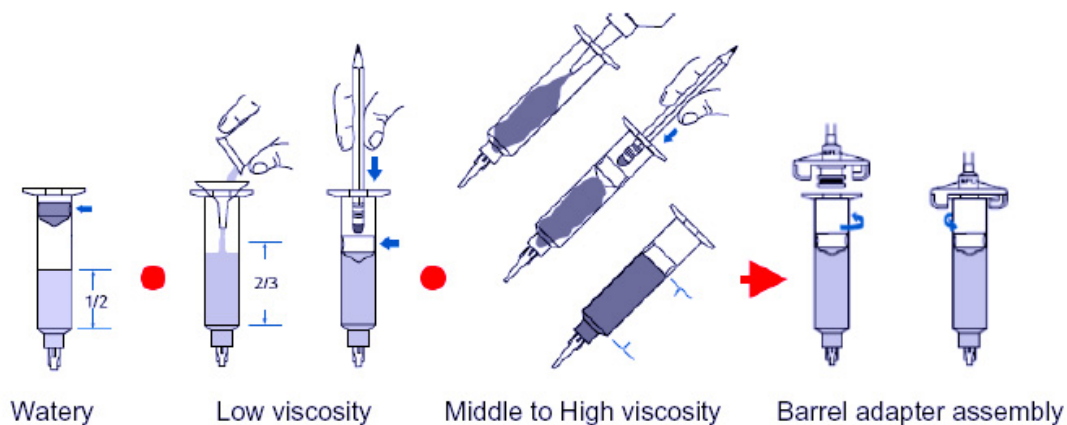
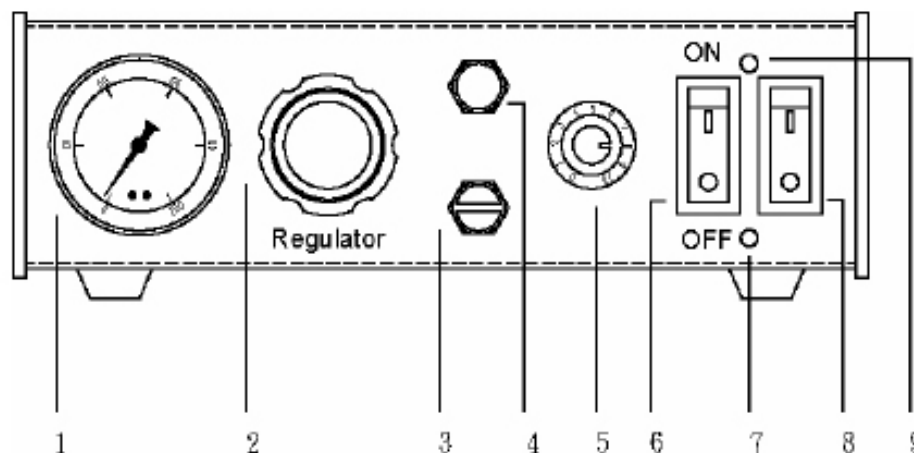


Table 3 - Recommended Air Pressure Settings

Adhesive Thickness	Air Pressure Setting
Watery*	0.1-1.0 kg/cm ² (0-15 PSI)
Low viscosity*	1.5-2.0 kg/cm ² (22-30 PSI)
Middle viscosity	2.0-3.0 kg/cm ² (30-45 PSI)
High viscosity	3.0-5.0 kg/cm ² (45-75 PSI)

Controller Settings



IntelliSpense™ Air Analog Dispenser Controls:

1. Pressure Indicator	Display the currently air pressure in the system
2. Pressure Regulator	Adjust the air pressure in the system, increase with clockwise and decrease with counter clockwise.
3. Barrel Adapter Port	Connect with barrel adapter, press down and rotate to adapt.
4. Vacuum Knob	Adjust the suck-back pressure in the barrel to prevent adhesive dripping, decrease with clockwise and increase with counter clockwise.
5. Timer Knob	Set the dispensing time when using timer (Please refer to Table 2)
6. Power Switch	System main power, switch on and the power light will light up.
7. Finger Switch Port	Connect with finger switch, insert to adapt.
8. Timer Switch	Timer controller, switch on and the power light will light up.

Operation

- A. Refer to Table 3 for appropriate needle and pressure setting. It is always best to start low and slowly raise the pressure. Pop the regulator gauge out to adjust, then push back in to lock it down.
- B. Start with low viscosity, or test with water. If the thin product drips, try using a small needle to decrease the area and allow the surface tension to hold. With thicker materials you want a larger diameter and lower pressure to stop drooling.
- C. Use the foot pedal to activate the dispenser until the adhesive fills up the needle and flows out the barrel smoothly.
- D. If the adhesive does not flow, increase pressure and/or the diameter of the tip.
- E. Place the barrel at a 45 degree angle to the process object and fit the needle on top of the dispensing point.
- F. Step on the foot pedal to activate the dispensing, remove to stop the dispensing. You can use the optional Finger Switch to activate the dispensing process as well. Do not plug in both at the same time. Use the Timer Switch and the Timer Knob to create a timed pulse of air for repeating dot shots or potting or fill applications.

Maintenance

The IntelliSpense™ Air Analog Dispenser is designed and built to be relatively maintenance free. To assure continued trouble-free operation, the following recommendations should be followed :

- a. Make certain air supply is clean and dry.
- b. Avoid turning barrels upside down or laying barrel so that material may run through air line to internal components.
- c. Avoid turning the vacuum too high and cause the generation of bubbles in the syringe. DO not use vacuum without the piston or the material to run back into the system. Vacuum is on as long as you are not dispensing, so the user should be moving at a rhythmic pace when using the vacuum.
- d. Air bubbles trapped in the syringe can be dispensed as a gap. Make sure you package the syringe to be air free, and that you are not introducing air with the vacuum.
- e. Avoid connecting air supply exceeding 100 PSI (7 kg/cm²). If you do, you can break the solenoid valve, regulator and gauge.
- f. Use Amyl Alcohol to clean outside surface of the main housing.
- g. Syringes are intended to be disposable. Reuse at your own risk. It is always suggested to look for a like new fitting between the pistons and the syringe barrels, and we also offer replacement syringe adapters.
- h. When adjusting the air pressure Pull Knob to release and adjust, and Push back in to lock down the pressure setting.

Troubleshooting

Problem	Possible Cause	Correction
Indicator or display does not light	<ul style="list-style-type: none"> • no power input • PCB main board damage 	<ul style="list-style-type: none"> • check power cord connection • turn on power • replace new PCB main board
Does not dispense	<ul style="list-style-type: none"> • foot pedal not plugged in properly • defective foot pedal • foot pedal port broken or loosen • defective Solenoid Valve 	<ul style="list-style-type: none"> • check connection • foot pedal needs to be repaired or replaced • remove the cover and check for broken or loosen • replace the valve and use the appropriate piston - do not turn the vacuum too high
System will not pressurize	<ul style="list-style-type: none"> • Insufficient air pressure • air pressure connector not plugged in • regulator defective 	<ul style="list-style-type: none"> • increase air supply pressure • check connection • replace pressure regulator
System will not pull vacuum	<ul style="list-style-type: none"> • vacuum setting is too low • barrel piston wrong size • adhesive too watery or full 	<ul style="list-style-type: none"> • increase vacuum volume • replace with appropriate piston • replace with different adhesive and fill only 3/4 full in the barrel
Inconsistent dispensing	<ul style="list-style-type: none"> • air bubbles in adhesive • dispensing needle not appropriate • dispensing needle clogged 	<ul style="list-style-type: none"> • decrease vacuum setting and de-gas the adhesive before filling • replace with different type of needle • replace needle

IntelliSpense™ Syringe Sizes

If you do not have a pre-filled syringe – Visit the IDS Store!

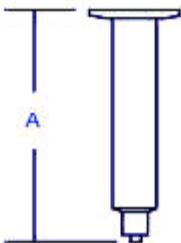
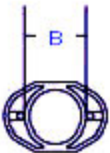
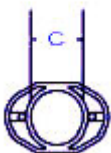
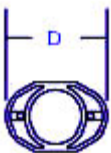

<http://www.dispensinglink.com/store>

Fill your empty syringe (F) from the back or from the tip, using a syringe filling system. Insert stopper (G) and make sure any air is expelled. For best results, use taper, use tip caps and end caps.

All Luer Slip and Luer Lock Syringes that have industry-standard Luer Nipples, which are 5/32" OD and 1/8" ID. IntelliSpense Needles will be functional with all *IntelliSpense™* Syringes, Manual, Pneumatic or Air Free, as well as any other brand of standard Luer Lock or Luer Slip Syringe.

1 CC is equivalent to 1 ml. 1 teaspoonful is equivalent to 5 ml (or 5CC). 3 teaspoonfuls are equivalent to 1 tablespoonful. 1 tablespoonful is equivalent to 15 ml (or 15CC). 1 ounce is equivalent to 30 ml (or 30CC).

Pneumatic Syringe Dimensions

					
Syringe Size (CC)	A Total Length	B Outside Diameter	C Inside Diameter	D Tab Length	E Tab Width
5	2.83"	0.56"	0.50"	1.24"	0.74"
10	3.58"	0.72"	0.62"	1.34"	0.89"
30	4.67"	0.99"	0.89"	1.76"	1.16"
55	6.91"	1.01"	0.89"	1.76"	1.16"

IntelliSpense™ Syringe Packages



The **Syringe Package** is shipped with syringe and wiper piston together - order **tip caps and end caps** separately. 5 and 10cc sizes require new adapter assembly.

Clear Syringe barrel and white wiper piston Syringe Package

Part #	Description
8880310	5CC clear - Box 40 - Bulk in Bags of 1,000
8880316	10CC clear - Box 30 - Bulk in Bags of 1,000
8880322	30CC clear - Box 20 - Bulk in Bags of 500
8880326	55CC clear - Box 10 - Bulk in Bags of 250



Black Syringe barrel and white wiper piston Syringe Package

Part #	Description
8880306	5CC Black - Box 40 - Bulk in Bags of 1,000
8880312	10CC Black - Box 30 - Bulk in Bags of 1,000
8880318	30CC Black - Box 20 - Bulk in Bags of 500
8880324	55CC Black - Box 10 - Bulk in Bags of 250



Amber Syringe barrel and white wiper piston Syringe Package

Part #	Description
8880308	5CC Amber - Box 40 - Bulk Bags of 1,000
8880314	10CC Amber - Box 30 - Bulk Bags of 1,000
8880320	30CC Amber - Box 20 - Bulk Bags of 500

IntelliSpense™ Syringes

Use End Caps, Needle Caps and Tip Caps with IntelliSpense™ Syringes to **seal the syringe barrel or needle between uses**, for shipping pre-packaged syringes, or to seal off any IntelliSpense™ valve. End Caps fit syringes according to the size of the syringe and are available in packs of 50 or in Bulk. **Polypropylene construction.**

End Caps fit according to the size of the syringe you are using. Available in packs of 50 or in 1K piece bulk-packed bags. Shown above and below, left, placed on a syringe. [Click here for printable pneumatic syringe dimensions.](#)



Part # Tip Caps for Syringes (Above)

9991329	Luer Lock Tip Cap (Box of 50)
9991329B	Luer Lock Tip Cap (-B quantity 1,000 piece bags)
8880335	3CC End Cap 50 Pack or -B bulk quantity (1,000 piece bags).
8880341	5CC End Cap 50 Pack or -B bulk quantity (1,000 piece bags).
8880347	10CC End Cap 50 Pack or -B bulk quantity (1,000 piece bags).
8880353	30/55CC End Cap 50 Pack or -B bulk quantity (1,000 piece bags).

Tapered Dispense Tips allow you to see where the fluid level is at all times with safe, semi-transparent, non-scratching ease. All-plastic construction and **UV Blocking Agent** for use with any material including light sensitive adhesives.



A **smoother flow of materials**, decreased resistance and friction in the syringe and **won't scratch substrates**. These tips are 1 1/4" in length and are rigid. For soft shafts, use the more pliant [Teflon](#) or [flexible tip](#). These tips are **used with most fluids** and are especially good with filled materials of all kinds. Unlike [steel needles](#), they have the added advantage of being **easy to cut**, to increase opening size for thicker beads or for ease of use if you are using different materials. Luer Lock hubs securely twist on and off.

Click on the part number for an expanded picture of each tip:

Order	Description (with ID in inches, Length 1.25 inches)
9991291	14 Gauge plastic Tapered Dispense Tips (.063") - Beige
9991292	16 Gauge plastic Tapered Dispense Tips (.048") - Silver
9991293	18 Gauge plastic Tapered Dispense Tips (.035") - Green
9991294	20 Gauge plastic Tapered Dispense Tips (.024") - Pink
9991295	22 Gauge plastic Tapered Dispense Tips (.017") - Blue
9991296	24 Gauge plastic Tapered Dispense Tips (.012") - Red

Warranty Policy

Manufacturer warrants the enclosed product against defects in material or workmanship on all components for one year from the date of shipment.

The warranty does not extend to wear & tear parts, or components damaged due to misuse, negligence, or installation and operation that is not in accordance with the recommended factory instructions. Unauthorized repair or modification of the enclosed product, and/or the use of spare parts not directly obtained from Manufacturer (or from factory authorized dealers) will void all warranties.

All Manufacturer warranties extend only to the original purchaser. Third party warranty claims will not be honored at any time.

Prior to returning a product for a warranty claim, a return authorization must be obtained from Manufacturer's customer service department. Authorization will be issued either via the telephone, facsimile, or in writing upon your request.

To qualify as a valid warranty claim, the defective product must be returned to the factory during the warranty period. Upon return, Manufacturer will repair (or replace) all components found to be defective in material or workmanship.

(Retain this for your records)

Product Information:

PRODUCT: _____

DATE OF PURCHASE: _____

Integrated Dispensing Solutions • 5311 Derry Avenue • Building D
Agoura Hills CA 91301 • Ph (818) 597-4300 • Fax (818) 597-4301
Email: service@dispensinglink.com

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Welcome to IDS.

We have warehouse and office facilities located in the Agoura Hills Industrial Park. Agoura Hills, CA.



We are a California Corporation, located just north of Los Angeles in the beautiful San Fernando Valley, near the beaches of Malibu and the soon to be open Port of Hueneme. Whether shipping to Port of Los Angeles or Point Hueneme, we have immediate access to deep water ports and cost effective container shipping.

Current IDS customers range from fortune 50 Industrials to small shops and cover US industry from A to Z: 3M, Advanced Medical Optics, Apple Computer, Battelle, Boeing, Cleveland Golf, Cannon, Dell, DuPont, Eastman Kodak, Fender Musical Instruments, Flextronics, Fox Studios, GE, General Motors, Goodrich, Harmon Automotive, Hewlett Packard, Hitachi, Howard Hughes Medical Center, ITT Canon, Intel, JBL, Jet Propulsion Labs, Johnson and Johnson, Kerry BioScience, Lawrence Livermore, Litton, Lockheed, Medtronic, MOOG, Motorola, Northrop Grumman, Ohio State University, PUR, Quest, Raytheon, Rockwell Automation, Sikorsky, US Navy, TP Orthodontics, TRW, UCLA Medical, Vanderbilt University, XPO, Yale and Zyvex...and many more.

IDS offers a complete one stop shop for assembly applications, from simple manual glue dispensing applications to dispensing robots and accessories, with fast delivery and knowledgeable service people. IDS is a favorite stop for engineers, assembly technicians and automation engineers, scientific and medical device users, lab techs and integrators. R&D, prototyping, small batch or assembly projects for almost any production environment can be easily and quickly supplied from our locations in Los Angeles and Chicago.

IDS carries all of the necessary equipment and accessories for industrial assembly applications and the widest variety of fluid dispensing options anywhere, from a simple hand syringe, an air powered syringe dispenser for solder paste or a valve dispense of UV adhesives to a unique air free dispensing system that employs advanced stepper motor technology, to our own ReadyMax UV systems and adhesives.