

Slide Freedom Automatic Spray Unit Item # 43200

The Instructions are for Freedom Units made with the IDEC PLC unit

- Just plug and spray
- Easy to use, no hard wiring required
- Save money and save time
- Operate more productively
- Works with Slide aerosol cylinders (purchased separately)
- Works with Slide bulk/liquid products & the optional pressure pot (item #43200JP)

The new Freedom automatic spray unit is easy to program and works autonomously from all your equipment. You just plug it in and spray.

A proximity sensor placed near the mold cavity detects when the mold opens and signals the unit to deliver release. Nozzles can be attached with brackets (included) or optional magnetic mounting blocks (item # 43200M). You are free to position them anywhere to spray release to any point, such as trouble spots in the cavity, the entire face of the mold, both mold cavities, or even to create a "cloud" of release between the cavities.

The extremely compact control unit has protective rubber feet so it can sit on any flat surface, or it mount directly to the machine. And it can be plugged directly into any 110V, 15-amp circuit.

The Freedom unit comes complete with: easy-to-program control unit, two 10-ft spray hoses and with a spray nozzle affixed to each hose, 6-ft cord and proximity sensor, 10-ft hose to connect to the aerosol cylinder or pressure pot, and 10-ft power cord. The aerosol spray cylinder, liquid/bulk formula, or pressure pot are additional purchases.

****When utilizing the Freedom Spray Unit, it will also be necessary to purchase the Slide product of your choosing in the giant aerosol cylinder or bulk/liquid format. The Freedom Spray Unit is engineered to be chemically compatible with Slide's formulations. If you choose to use this spray system with a non-Slide product, we cannot guarantee that your product will work with and be compatible with the Freedom Spray Unit. No warranty claims will be accepted if non-Slide formulations are used with the Freedom Spray Unit.****

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System Set-Up Procedure

Mounting of Spray Unit:

The spray unit should be mounted or placed near the machine, in close enough proximity that will allow the spray hoses and sensor cable to be mounted on the machine easily. The spray nozzles are designed to be customer mounted using existing threaded taps on the mold block or using the optional magnetic bases (item # 43200M).

Mounting of the Proximity Sensor:

The proximity sensor may be mounted at the customer's discretion. A recommended mounting configuration would entail placing the sensor on the machine such that when the mold platen was in the fully open position, the platen is within ¼ inch of the face of the sensor.

Set-Up Sequence:

- 1)** Position control box on the machine in close proximity to the area where the spray nozzles are to be placed.
- 2)** Position or mount the spray nozzles on the machine or mold using existing threaded taps or with optional magnetic bases.
- 3)** Position or mount the proximity sensor to detect mold open position (or to sense periodic movement in a non-molding application).
- 4)** Connect supply hose to giant aerosol cylinder. Alternatively, fill the pressure pot and connect with the supply hose. If using pressure pot, connect the pot to the compressed air source. Do not exceed 50 psi of air pressure.
- 5)** Open the cylinder valve (if using a cylinder).
- 6)** Plug unit into power outlet.
- 7)** Turn PLC unit on and input desired timer and counter values by following the operation and programming steps below.

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Operation and Programming Steps



The above image demonstrates what the PLC display will show when the unit is initially turned on.

If changes to the factory settings are desired, enter the Program field by hitting the ESC button in the bottom left of the PLC. The below screen will then be displayed.



With Program highlighted, press the green OK button which will take you to the next screen image.

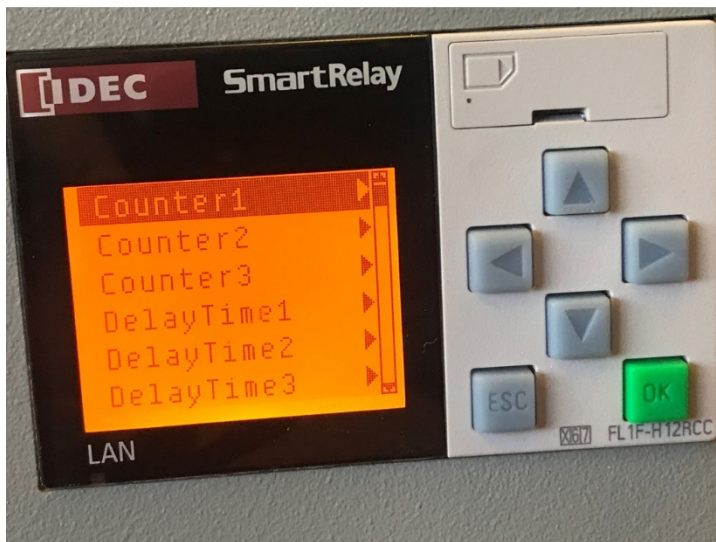
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Choose the Set Parameter option by highlighting and clicking OK. The next screen (shown below) will display Counter 1-3, Delay Time 1-3, and Spray Time 1-3.



The factory settings for all of the Counter features will be set at 3 cycles (as measured by the proximity switch).

The factory setting for all of the Delay Time features is set at 3 seconds (to allow parts to be ejected from the mold cavity before the spray is applied).

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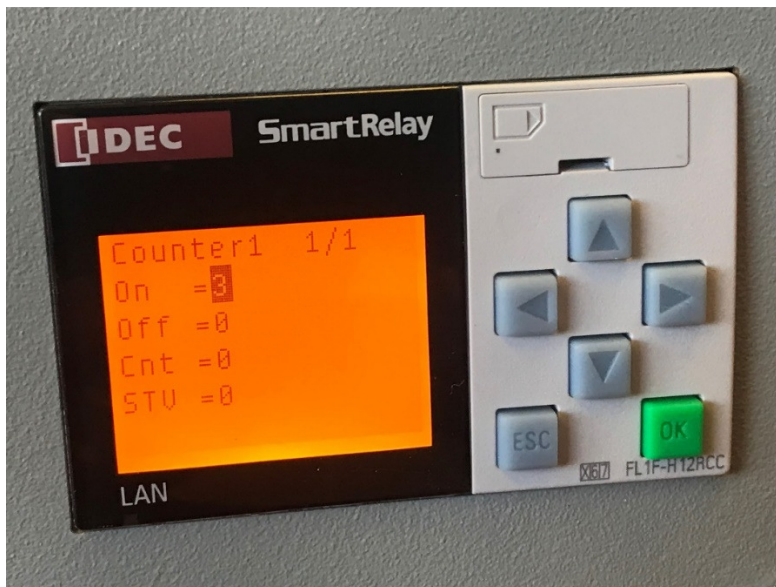
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And the factory settings for all of the Spray Time features is set to .3 seconds (the length of time that the spray will be released from the spray heads).

If the User desires to change or alter the factory settings, enter the Program feature as described above and update the settings accordingly by using the arrow buttons.

Each #1 feature is for spray head 1, and each #2 feature controls spray head 2. Each spray head can be set up and controlled with individual settings for the Counter, Delay Time, and Spray Time. The standard Freedom unit is delivered with 2 spray heads, so **there is no need to adjust any of the #3 settings.**



Adjust the On setting to the User's desired count. There is no need to adjust the Off, Cnt or STU settings.

To complete programming and return to the previous or home screens, hit the ESC button in the bottom left corner of the PLC unit.

If the Counter 1 or Counter 2 setting is set to Zero (0), then that particular spray head will enter a continuous loop of waiting for the

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Delay Time setting to expire and then spraying for the duration of the Spray Time setting. This will repeat indefinitely.

Proper Automatic Sequence of Operation

1. The proximity sensor detects machine cycles as they occur (mold open).
2. The control box PLC tracks the number of cycles (Counter 1 & Counter 2) between applications of material through the spray nozzles.
3. When the number of cycles selected is reached (and the proximity switch detects the mold open), the Delay Time 1 & Delay Time 2 begin timing before the spray nozzles actuate and release the spray.
4. Upon reaching the set Delay Time, the spray head valves will open and release the spray for the duration of time called for by the Spray Time 1 & Spray Time 2 settings.

The **Red Indicator Light** on the top of the spray unit serves two functions. When the pressure in the supply cylinder becomes low, the red light will turn on and illuminate steadily. This indicates that the cylinder is nearing empty and needs to be replaced. Depending on the Spray Time duration setting, there will be approx. 15-20 sprays remaining when light turns to a steady red. The **Red Indicator Light** will also illuminate when the spray heads are releasing spray. The light will turn on solid when the pressure pot is empty (if using the pressure pot option).

For Manual Spray Head Activation

From the main Time/Date screen, hit the left arrow button and release.

The below screen with 4 arrows will display on the screen. The top right of display screen will show 9/9:

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If at any point you land on pages 1-8 of 9, the manual spray feature will not work. Use the left or right arrow buttons to toggle until you get back to page 9/9.

To activate manual spray for all of the spray heads at once, press and hold the ESC button, then press the down arrow button. This manual spray function can be repeated as often as is needed to purge or clear unwanted air out of the supply hoses.

To return to the main Time/Date screen from the manual spray screen 9/9, just hit the right arrow button and then release it.

Spray Head Selection

The Freedom Spray Unit comes with 1 solenoid and spray nozzle head affixed to the end of each of the two 10-foot hoses. There are a total of two spray heads supplied with the standard Freedom Spray Unit.

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The spray nozzle size that has been included with the unit is:

1/8 MEG - 15035

The spray nozzle characteristics are explained as follows:

1/8 is the inlet connection size

MEG is the spray nozzle type (high impact)

15 is the degree angle of the flat spray pattern

035 is the capacity which at 50 psi is approximately 5.6 liters of flow per minute

If your process requires different or alternative spray tip angles or flow rates, please visit www.spray.com to buy replacement tips directly from this supplier.

Solenoid Function

For maintenance or repair suggestions for the solenoid units, please visit the manufacturers website for their recommendation:

<https://ph.parker.com/us/en/parker-2-way-normally-closed-1-8-npt-general-purpose-solenoid-valves/7121kbn1nf00n0d100p3>

The full part # for the Parker Solenoid valve used on this unit is:
Parker 2-Way Normally Closed, 1/8" NPT General Purpose Solenoid Valves | #7121KBN1NF00N0D100P3

If you prefer to find a local Parker office to work with, you can find their local locations by visiting the Parker site:

<https://www.parker.com/portal/site/PARKER/menuitem.98bf0856fd643a238c23b35b8320d1ca/?vgnextoid=894fb34395d2b210VgnVCM10000032a71dacRCRD&vgnnextchannel=894fb34395d2b210VgnVCM10000032a71dacRCRD&vgnnextfmt=EN&from=parkerstore&citype=ParkerStore>