



# The Duplicator 2 Instruction Sheet

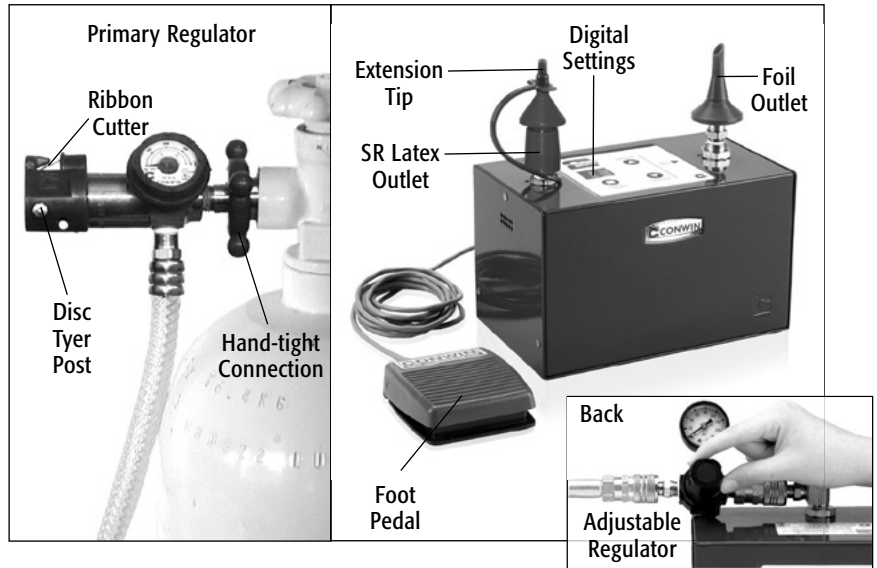
## Duplicator 2 Includes:

- 1 Duplicator 2 Inflator
- 1 Adjustable Regulator
- 1 Primary Regulator & Supply Hose
- 1 SR Latex Outlet
- 1 Extension Tip
- 1 Auto-Fill Foil Outlet
- 1 Foot Pedal
- 1 Power Cord



## Getting Started

- To prevent the risk of electrical shock, do not use the Duplicator 2 outdoors when weather conditions are wet. Never operate unit on a wet floor or work area.
- **IMPORTANT** - Before plugging Duplicator 2 into an outlet, refer to electrical rating listed on back of unit to verify that voltage is correct.
- If the Duplicator 2 malfunctions or is damaged, discontinue use and unplug unit from electrical outlet. Contact an authorized Conwin Service Center for details on how to receive service.
- Never attempt to repair the Duplicator 2 yourself. Opening the Duplicator 2 case will automatically void manufacturer warranty. Contact an authorized Conwin Service Center for all repairs.



Hand-tighten the regulator to a helium or nitrogen cylinder. Make sure the cylinder is properly secured in a safety stand or wall bracket prior to attaching the regulator.  
**Note: Do not open the valve until Step 6.**



Connect the supply hose to the adjustable regulator in the back of the unit.



Plug the power cord into the side of the unit and into an electrical outlet. (A power strip with surge protector is recommended.) The digital display will appear when unit has power.



Plug the foot pedal into the side of the unit.

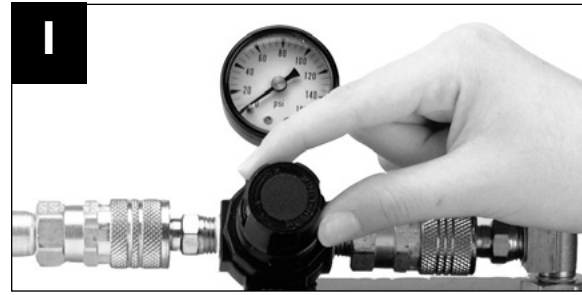


Hand-tighten the SR Latex Outlet to the Duplicator 2. See Accessory outlets featured on the back page.



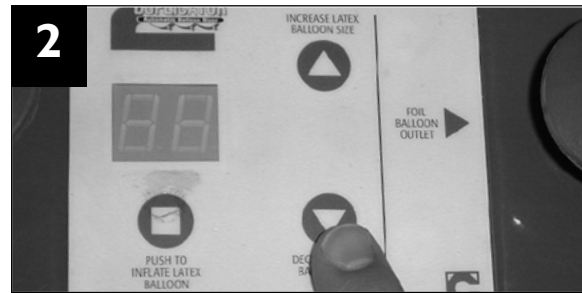
Slowly open the cylinder valve. Make sure the valve is fully opened (5 full turns). The cylinder pressure will read on the gauge located on the primary regulator. The inlet pressure will read on the adjustable regulator gauge located on the back of the unit.

## Latex Balloon Inflation



### Set the Adjustable Regulator

Reference the size setting chart (Fig.1) to set the Duplicator 2 to the appropriate pressure. The PSI setting on the chart corresponds to the inlet pressure on the adjustable regulator. To adjust the pressure, pull the black setting knob up to unlock and turn it clockwise to increase the pressure and the size of the balloon. Turn the knob counter-clockwise to decrease the pressure and reduce the size of the balloon. When the unit is set to the desired size, press the black knob down to lock it in place.



### Set the Inflation Time

Reference the chart (see right) to determine the appropriate number of seconds required for the inflation cycle. The digital display will indicate number of seconds.



Place the balloon over the inflating outlet. Slightly roll the neck of the balloon over the inflating tip. This will insure the gas enters the center of the balloon and the round shape of the balloon is maintained during the inflation process. Tap the foot pedal or press the inflation button. It is important to inflate a test balloon at each adjustment until the desired size is produced.

Conwin's Duplicator 2 Inflators feature a raised button on the cycle switch to enable one-hand inflation. Workers can hold the balloon over the filling outlet and activate the inflation cycle by pressing the button with the base of their hand.



#### FOOT PEDAL

Tap the foot pedal to begin the inflation cycle. When the system automatically shuts-off, remove the balloons from the outlets without allowing any of the air to escape.

## Duplicator 2 Latex Balloon Settings Chart

The following settings should be used as guidelines for the Duplicator 2. Please note that size settings will vary based on user preference, balloon color and manufacturer. To adjust the size of balloon to your individual preference, it is necessary to inflate test balloons.

**PSI SETTINGS** refer to the gauge located on the adjustable regulator connected to the back of the Duplicator 2. The pressure setting controls the speed of inflation.

**SECONDS SETTINGS** refers to the tenth of a second increment readouts on the digital display on the face plate of the Duplicator 2.

**Important:** To insure consistent balloon sizing when using helium or nitrogen, check the size of the balloons every 1/3 of a cylinder of gas. If necessary, increase the size of the balloon by either increasing the time setting or the inlet pressure on the adjustable regulator.

(Fig. 1)

| BALLOON SIZE | HELIUM      | NITROGEN    | AIR COMPRESSOR |
|--------------|-------------|-------------|----------------|
| 5"           | 0.1 Second  | 0.2 Seconds | 0.2 Seconds    |
|              | 70 PSI      | 70 PSI      | 70 PSI         |
| 9"           | 0.5 Seconds | 1.4Seconds  | 1.4 Seconds    |
|              | 70 PSI      | 70 PSI      | 70 PSI         |
| 11"          | 0.9 Seconds | 2.5 Seconds | 2.6 Seconds    |
|              | 70 PSI      | 70 PSI      | 70 PSI         |
| 16"          | 2.7 Seconds | 7.5 Seconds | 7.6 Seconds    |
|              | 70 PSI      | 70 PSI      | 70 PSI         |

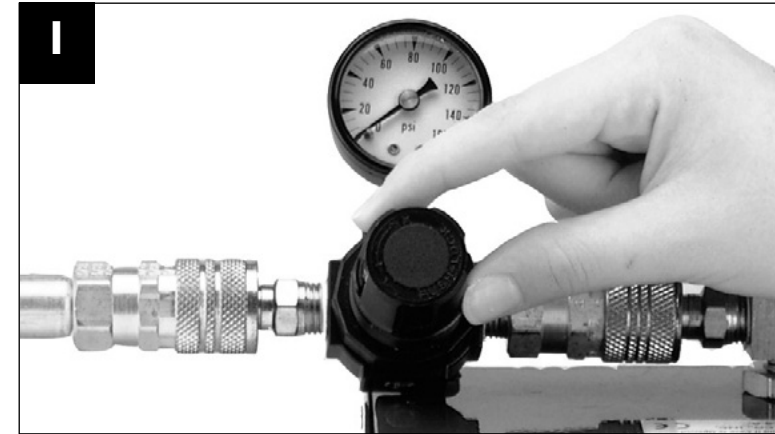
### Settings for 60/40 Helium/Air Outlet (optional)

The following settings should be used as guidelines when using the optional 60/40 Helium/Air Outlet with the Duplicator 2. The 60/40 Helium/Air Outlet is recommended for use with 16" or larger balloons. **Conwin #55413**

| BALLOON SIZE | 60/40 HELIUM/AIR OUTLET |
|--------------|-------------------------|
| 16"          | 4.7 Seconds             |
|              | 70 PSI                  |



## Foil Balloon Inflation



1) Set the Adjustable Regulator on the back of the Duplicator 2 to 80 PSI when inflating foil balloons.

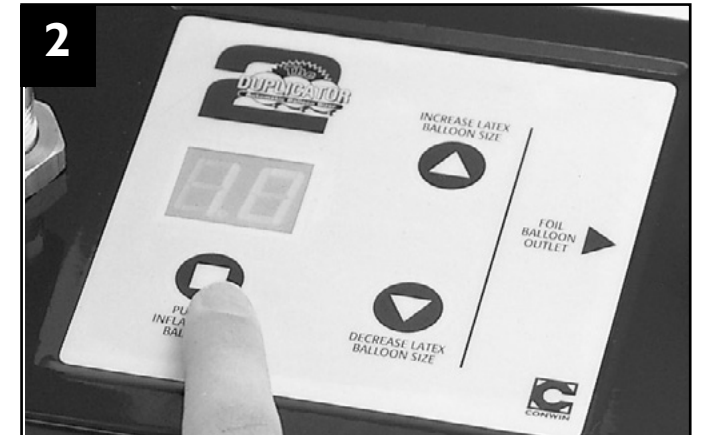
2) Place the foil balloon over the Foil Outlet. Pinch the neck of the balloon between thumb and forefinger and press down on the outlet. Support the foil balloon in an upright position until enough helium has entered the balloon to hold it up. This insures the neck of the balloon does not fold over and restrict the flow of helium. When the balloon has reached the proper pressure the Duplicator 2 will automatically shut off the helium flow.



## Shutting Down the Duplicator 2



Close the cylinder valve or shut off the air compressor.



Release the pressure from the unit by pressing and holding the Foil Outlet until all of the gas has escaped. Disconnect the supply hose and adjustable regulator from the back of the unit. Remove regulator from the cylinder.

## Recommendations For Use With An Air Compressor

Most air compressors are factory set to automatically cycle on at 90 PSI and automatically cycle off at 120 PSI. The Duplicator 2 must have a steady supply of air or gas to produce equal size balloons. For accurate sizing, it is essential to work within the limits of the cubic foot per minute capacity of the air compressor.

#### Air Compressor Required Specifications

- Primary Moisture Filter
- 20 Gallon Storage Tank
- Cycle Pressure: 90 PSI On - 120 PSI Off
- Compressed Air Availability: 6.5 Cubic Foot/Minute @ 90 PSI

#### Important Guidelines When Using an Air Compressor

- Compressor must build up tank pressure before inflating balloons.
- The output setting on the air compressor should not exceed 80 PSI. If the compressor is set higher than 80 PSI, the Duplicator 2 will outperform the compressor's storage tank capacity.

- After each job, blow down the compressor to remove water collected in the tank during compression. The Dual Sizer will require factory rework and recalibration if moisture enters its system.
- Power surges will affect the accuracy of the Duplicator 2-line voltage must be steady at 120 volts. Use a power strip with surge protection.



# Optional Accessories for The Duplicator 2



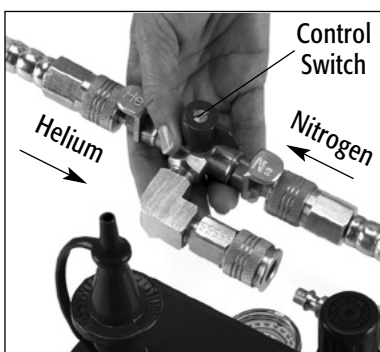
### HI-FLOAT® Outlet

The hand-tight HI-FLOAT® Outlet enables the user to inflate balloons filled with HI-FLOAT® neck up. This prevents any HI-FLOAT® from getting into the Dual Split-Second Sizer. Conwin # 36320



### 60/40 Helium-Air Outlet

The 60/40 Helium/Air Outlet enables the user to inflate 14" or larger balloons with a mixture of 60% helium and 40% air. The 60/40 Helium/Air Outlet easily attaches to the Dual Split-Second Sizer with a hand-tight connection. Conwin # 36310



### He/N2 Quick Switch

The He/N2 Quick Switch allows the user to switch from helium to nitrogen by turning the knob. Exclusively designed to be used with Conwin's Duplicator 2 and Dual Split-Second Sizer models that feature the second stage regulator separate from the supply line and primary regulator. Conwin # 36350

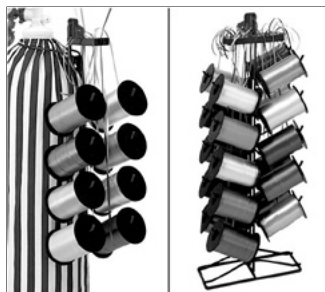


### The Insider Balloon Stuffing Tool

The Insider Balloon Stuffing Tool is an accessory item for Conwin's automatic sizing inflators. This fast and easy-to-use tool efficiently fills large balloons with the maximum number of small balloons. The Insider can be clamped to any convenient table or workstation. Conwin # 85900

## Related Products for the Duplicator 2

### Ribbon Dispensers



8 spool and 20 spool ribbon dispensers both feature a Clip-On Quick Cutter that easily cuts ribbon, balloons, arch line!

### Cylinder Safety Stand



The Cylinder Safety Stand features two Velcro® safety belts to support all size cylinders! A must for safety in the shop and on the job!

### 60/40 HI-FLOAT™ Adapter



The new 60/40 HI-FLOAT™ Adapter combines the benefit of the HI-FLOAT™ Outlet with the cost saving feature of the 60/40 Helium-Air Outlet!

### Air Compressor Hook-Up



The Air Compressor Hook-Up, with quick-disconnect fittings, allows user to operate Duplicator 2 up to 12-ft. away from the compressor!

## Service & Warranty

For assistance with service & repair issues, or for warranty information, please visit [ConwinOnline.com](http://ConwinOnline.com), or call (818)246.9233



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