



## Principles of Dispensing

### How to use an automatic dispenser

Choosing the right dispenser provides the right tool for the job, but it is important to follow a few general rules and principles to ensure trouble-free dispensing and to avoid the common errors that can be made when dispensing liquids and pastes.

### Effects of pressure and time on dot size

- Decreasing either the air pressure, time duration or tip size will decrease the dot size.
- Note the effect on dot size by applying different air pressure, time settings and tip sizes.
- Thicker, more viscous liquids, such as pastes or greases, will require either more pressure, longer time or a larger size tip.
- Increasing either the air pressure, time duration or tip size will increase the dot size.
- Thinner, less viscous liquids, such as cyanoacrylates or thinners, will require less pressure, shorter time or a smaller tip size.
- Higher pressure and/or short time cycle increases the dispensing speed and provides a higher output.
- Lower pressure and/or longer time cycle improves accuracy in deposit size.

### How to make consistent deposits

- The best angle to hold the barrel is between 45° and 80° degrees. The barrel should be lifted vertically to avoid spoiling the deposit.
- When making a dot, bring the tip into contact with the work surface at the angle illustrated. Depress the foot pedal to initiate the shot and keep the barrel in position until the cycle is complete.
- Remove the tip from the deposit by moving the barrel straight up. With the air pressure and time set, each successive deposit will be identical.

### Material handling

**Cyanoacrylates:** Handle carefully. Avoid all skin contact. Adjust the vacuum with extreme caution and do not allow the cyanoacrylate to run back through the airline to the dispenser. Always use a safety clip on the adapter hose when changing the tip to prevent dripping and material being sucked into the controller.

**Anaerobics:** The same precautions should be enforced as with cyanoacrylate.

**Epoxy:** Using normal methods, one-part epoxies can be dispensed without problems. When dispensing two-part epoxies, always remember that in the epoxy curing process the viscosity will change with time, thus affecting the dot size. The controls of the dispenser will need to be adjusted to compensate for the viscosity increase as the material ages.

**Solder and brazing pastes:** Precise control is achieved with dispensing. For precise micro shots of solder pastes, the positive displacement screw valve is recommended. Care must be taken when transferring or loading paste into barrels to avoid air entrapment.

**Silicones, masks & solder resists:** Use normal dispensing procedures.

**Adhesives:** All adhesives dispense well. By using a small tip, "stringing" may be eliminated.

**Lubricants:** All lubricants dispense well.