

SPINWELD FITTINGS HINTS AND TRICKS

The Spin Welding Process

Spin welding is the process of friction welding premoulded fittings to containers or tanks at high RPM. When done properly, the fitting becomes an integral part of the moulded article and may be almost as durable as the moulding itself.

The fitting and the moulding must be manufactured from compatible materials. All Vanglobe Spinweld fittings are moulded using a UV stabilised Hexene co-polymer LLDPE base resin. This material has a Melt Index of approx. 3.0-3.5 g/10min (MI_{2/190}) with an annealed density of approximately 0.938 g/cm³.

Spin Welding Considerations

Please consider the following when Spin Welding:

- Select the area of the container where you wish to place the fitting. It is recommended you pick an area as flat as possible, where both the fitting and driving tool can turn freely.
- Drill a hole in the container slightly larger than the pilot of the fitting using the proper size hole saw. The fitting must be able to rotate freely.
- On small fittings (½" and smaller) a 1 HP electric router can be used. On fittings ¾" to 1½" in size we recommend a 1 to 1½ HP electric router. At least a 3 HP electric router should be used on fittings 2" and larger. All electric routers should achieve 18,000 to 25,000 rpm's.
- Place the fitting pilot in the hole of the container. Holding the router in your hands and having the driving tool attached to the fitting, turn on power and apply slight pressure so that molten plastic starts to flow around the outside diameter of the fitting. You will develop a technique as to how to apply pressure. The melting process will only take a short time. Turn off power and keep driver in position with applied pressure until the molten polymer has hardened. This will ensure a good bond.
- After approximately 1 minute you may apply testing procedures, such as tapping with a hammer or prying lever.
- The use of hand drills or drill presses is not recommended as these tools do not typically reach the required RPM to achieve efficient material bonding.
- The use of pneumatic routers is also not recommended
- The presence of pigments are thought to have little if any effect on the Spin Welding Process

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