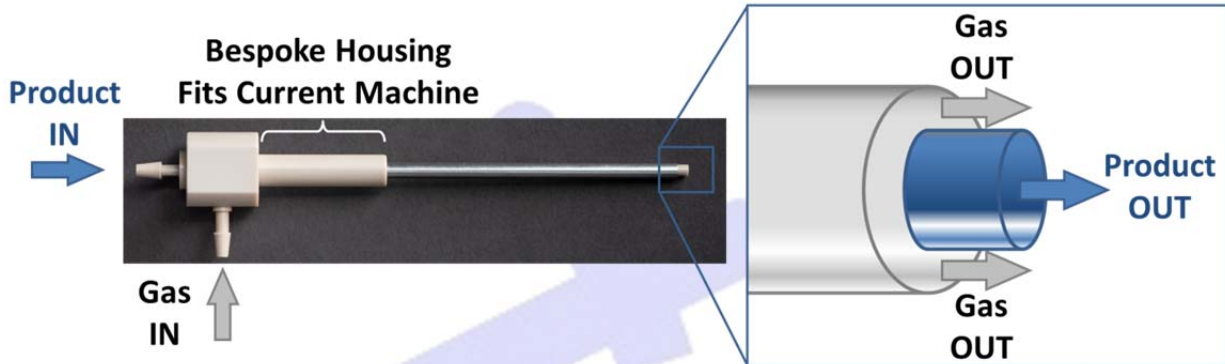


## CUSTOM-DESIGNED FOR FINAL FILLING APPLICATIONS WITH GAS OVERLAY

Introducing the latest product from GL Engineering: Co-Axial Filling Needles for gas overlay applications. The Co-Axial Filling Needles have two concentric needle shafts to enable simultaneous filling of a gas overlay (via outer tubing) and liquid product (via inner tubing).

GL Engineering's single-use Co-Axial Filling Needle consists of a custom-designed PEEK (polyetheretherketone) housing to fit the needle holder of any filling machine. The outer gas line tubing is 316L stainless steel and the inner product tubing can be either PEEK or 316L stainless steel.



The Co-Axial Filling Needles enable the filling of gas overlay liquid products without replacing the current filling equipment. The 2nd port on the Co-Axial Filling Needles allows for simultaneous gas addition as the liquid product at the same filling station.

GL Engineering's single-use Co-Axial Filling Needles are a cost-effective and unique alternative to conventional re-usable filling needles for gas overlay applications. The Co-Axial Filling Needle's housing diameter is manufactured to match the filling needle holder of existing filling lines and facilitates integration into the current equipment.

### TECHNICAL SPECIFICATIONS

The Gas Inlet Port is available in 90° or 45° configurations.

The Inner Tubing is available in 316L SS or PEEK.

#### 90° GAS INLET



PEEK Inner Tubing shown

#### 45° GAS INLET



316L SS Inner Tubing shown

#### Material of Construction:

(A)	Housing:	PEEK
(B)	Outer Tubing:	316L SS
	Inner Tubing:	PEEK or 316L SS

#### Dimensions:

Overall Length	5.440in (138.2mm)
Shaft Length:	4.212in (107.0mm)
Housing Length:	1.260in (32.0mm)

#### Standard Housing Diameters:

5/16in (8.0mm)	3/8in (10.0mm)	1/2in (13.0mm)
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#### Inner Tubing ID <sup>(1)</sup>:

0.8mm	1.5mm	2.5mm
1.1mm	2.1mm	3.5mm

(1) Diameters outside of listed values (up to 6.0mm) are available upon request

GL Engineering's innovative in-house manufacturing process uses no oils or adhesives. Needle straightness and overall concentricity are routinely inspected and critical dimensions are verified prior to lot-release.

The Co-Axial Filling Needles are available in a variety of sizes from 0.8mm up to 6.0mm to accommodate a range of filling volumes. For use in a disposable sterile filling system, it may be gamma irradiated.