

# STEPS FOR CREATING SHAPED TUBING



## 1 Select Shape of Tube

Define the final shape (e.g., oval, square, custom profile) based on design requirements.

## 2 SELECT ROUND TUBING (Type 304 or 316 Stainless Steel)

Choose the appropriate stainless steel grade for the application.

## 3 CREATE OR ORDER CARBIDE DIE

**Important Note:** The die is typically made or ordered *immediately after selecting the starting material size*. This ensures the die opening is slightly larger than the tube's outer diameter to prevent scraping during insertion.

## 4 POLISH THE ROUND TUBE

**Engineer's Note:** For shaped jobs, polish the tube *before* drawing. Shaped tubes cannot be polished effectively after the draw.

## 5 SWAGE THE TUBE END

Reduce the diameter of one end of the tube so it can fit through the draw die.

## 6 FEED THE TUBE THROUGH THE DIE

Draw the tube through the carbide die to reshape it. This process may cause curvature due to the forces involved.

## 7 STRAIGHTEN THE TUBE

After drawing, straighten the tube to correct any bending. This is essential for accurate post-processing.

## 8 FINISH THE SURFACE

Apply any additional surface treatments (e.g., passivation, coating) as required.

## 9 INSPECT THE FINAL PRODUCT

Perform quality checks for dimensions, surface finish, and structural integrity.

## 10 CUT, PACKAGE, AND PREPARE FOR DELIVERY

Cut the tube to specified lengths, package securely, and prepare for shipment.